

Assessing the Application of Evidence-Based Behavioral Intervention from the Teachers of Students with Intellectual Perspective

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Abstract

The current study sought to identify the extent to which teachers of students with intellectual disabilities apply evidence-based behavioral interventions. The researchers designed and developed a questionnaire to collect data from the sample of the study which consisted of (192) teachers (male and female). The findings of the study demonstrated that the behavioral interventions are highly applied by the teachers of students with intellectual disabilities. In addition, the findings have also indicated that there were no statistically significant differences for the application of behavioral interventions due to the gender variable except for the dimensions of (positive behavior support, the classroom management) in favor of female teachers. Further, it was found that there were no statistically significant differences due to the variable of educational experience. However, there were statistically significant differences due to the variable of educational experience for the dimension of (supporting the positive behavior) in favor of (6-10 years of educational experience), and the dimension of (obstacles) in favor of (more than 11 years of educational experience). Moreover, there were no statistically significant differences due to the educational qualification variable except for the dimension of (classroom administration and total degree) in favor of (bachelor's degree) and (login and exit strategy, self-management and challenges) in favor of (postgraduate studies degree). In addition, there were no statistically significant differences due to the variable of training courses, while there were differences in the dimensions of classroom management for (Bachelor degree), self-management, login and exit strategy, and challenges in favor of (postgraduate studies).

Keywords: *evaluation, application, behavioral interventions, intellectual disability, evidences*

1. Introduction

Intellectual disability has a negative influence on all aspects of the individuals' life. Such influence plays a significance role in making their education a great challenge, which requires paying great efforts, spending time, as well as delivering certain programs and appropriate interventions to overcome these challenges. Further, the individual with intellectual disability show a deficiency in the social and behavioral skills due to the nature of the intellectual disability that related to developmental aspects. In addition, the intellectual disability causes inappropriate behaviors that affect the process of building social relationships with others.

Individuals with intellectual disabilities characterized by the inability to carry out appropriate social behaviors at the appropriate time [7], which causes teachers to face obstacles in managing the students' behavior in the classroom.

In fact, due to the gap between scientific research and the field, where it may be difficult for teachers to find appropriate interventions to implement in the classrooms, so they tend to intervene or practice interventions that their students are familiar with [8].

The concept of evidence-based practices refers to clearly defined teaching methods that demonstrated in controlled research to be effective in achieving desired outcomes in a specific group of learners and under certain conditions [14].

There are several types of evidence-based interventions represented in positive behavior support. Teachers can provide proactive and preventive interventions for all students through a three-level preventive model that helps people with intellectual disabilities develop their social skills [13].

Positive Behavior Support and Intervention (PBIS) is also considered as one of the effective methods for improving social skills to individuals with behavior problems [13]. Moreover, PBIS has several levels; The first level is called the comprehensive level or the primary interventions. The primary intervention includes teaching, modeling, monitoring behaviors and rewards [9], as well as providing comprehensive interventions for all students in the school to ensure the emergence of desired behaviors [11]. The second level is called the target level for students at risk of behaviors' problem. The second level provides intensive based on the interventions provided to the students of the first level [9]. Additionally, the third level (also called the individual level) is the level through which students who did not respond to the efforts that were implemented in the first or second levels are identified [9].

Evidence-based interventions for students with intellectual disabilities are considered necessary for the sake of improving the learning outcomes. The aim of the evidence-based interventions is to guide teachers to adopt effective interventions and to identify their students' needs and achieve satisfactory results. When teachers combine their experiences with clear interventions. Teachers could

conduct experimental or quasi studies designed to determine whether the intervention leads to positive changes and increase the students' learning potential [2].

The evidence-based behavioral interventions are significant especially when drawing clear lines that guide the teacher in the appropriate way to provide the lesson in an easy matter and without wasting time.

The researchers through their work with individuals with intellectual disabilities noticed and through their work in the field of special education, with individuals with intellectual disabilities, have noticed the importance of the application of evidence-based behavioral interventions due to their direct impact on improving and developing students' abilities. The researchers also have observed the use of intellectual disability teachers of traditional interventions in teaching.

Further, due of the lack of studies and research related to evidence-based behavioral interventions for people with intellectual disabilities, the problem of the current study is formulated in the main question: *"What is the assessment of the application of evidence-based behavioral interventions from the teachers of students with intellectual disabilities' perspective?"*.

The following question is derived from the previous mentioned main question:

"What are the challenges that are faced by teachers of students with intellectual disabilities when applying evidence-based behavioral interventions from the teachers' perspective?".

2. The hypothesis of the study:

There are statistically significant differences at the significance level ($\alpha = 0.05$) to evaluate the application of teachers of students with intellectual disabilities to behavioral interventions based on evidence from the teachers' perspective according to the following variable: gender and educational experience.

3. Literature Review

A great deal of studies related to evaluating the application of teachers of students with intellectual disabilities have been reviewed by the researchers reviewed the studies related to evaluating the application of teachers of students with intellectual disabilities to assess the application of evidence -based behavioral interventions from the teachers' perspective.

Al-Hussein [2] conducted a study to identify the level of teachers' awareness of the use and effectiveness of evidence-based educational and behavioral practices when teaching students with attention deficit hyperactivity disorder (ADHD), and the relationship to a number of variables. The study consisted of (312) teachers, the findings of the study indicated that the level of participants'

awareness regarding the use and effectiveness of educational and behavioral practices based on evidence is average, as it was found that there are statistically significant differences due to the variables of gender, specialization, and the number of training programs. In addition, the findings of the study demonstrated that there is a positive correlation between teachers' use of evidence-based educational and behavioral practices, and the effectiveness of their use.

Al-Yafei [5] conducted a study that aimed to identify the extent to which autism teachers apply evidence-based practices in autism programs in Jeddah city in KSA. The practices referred to the tools are often used. The study concluded that the most prominent applied practices are (reinforcement, task analysis, modeling, and indoctrination). In addition, it found there were statistically significant differences attributed to the type of educational qualification of holders of a master's qualification in special education, while there are differences due to the variable of gender, number of years of experience, and educational stage.

Al-Qahtani [4] has also conducted a study to identify the extent to which special education teachers in private centers in Riyadh benefit from the results of scientific research, and any possible obstacles that prevent the teachers build their new thoughts based on the previous studies from the teachers' perspective. A questionnaire was designed and distributed to (117) participants; special education teachers, in the city of Riyadh. The results demonstrated that the degree to which the female teachers benefited from the results of the scientific studies. Actually, the female teachers' gained from the most prominent points that precede obtaining a high degree, and the female teachers learned to obtain the results of scientific research.

Aukes' [6] study aimed of determining the extent to which teaching experience affects both knowledge, application, and skill level in implementing evidence-based practices. A questionnaire distributed to (228) special education teachers. Among the teachers who participated in the study, there were (48) beginner teachers and (180) experienced teachers. The findings of the study indicated that there is a disparity in the use of evidence-based practice between beginner and more experienced teachers. In addition, the scores in knowledge, application and skill level tend to increase. The results of the study also confirmed the existence of a relationship a positive correlation between years of teaching experience and knowledge as the greater the experience, the positively correlated. Further, there is an increase in teacher knowledge and implementation of evidence-based practice and its reflection on its use with students with Autism.

Al-Daoud and Al-Hussein [1] conducted a study that aimed at identifying the attitudes of school workers towards the use of positive behavior support, and the obstacles to its application. The research conducted a questionnaire and

distribute to (275) workers. The results found that participants' attitudes toward the use of positive behavior support were positive. The most prominent obstacles facing these workers were the lack of sufficient knowledge of how to implement positive behavior support, the lack of training programs in the field of positive behavior support. Another obstacle is the lack of financial support necessary to implement it, and the lack of teacher preparation programs in universities to include courses related to positive behavior support. The findings indicated there is a lack of correlation between the attitudes of school workers towards the application of positive behavior support, and the obstacles to its application.

4. Method

The study aimed to identify the application of evidence-based behavioral interventions by teachers of students with intellectual disabilities. Therefore, the researchers used the descriptive-analytical approach due to its relevance to the nature of the study, which is concerned with describing the phenomenon, collecting and classifying information and data and expressing it quantitatively and qualitatively (Obaidat & others, [15]). The study included randomly (192) teachers of students with intellectual disabilities; (64) male teachers, and (128) female teachers in the academic year 2021. The teachers were working in integrated intellectual education programs in public education schools. The study included randomly (192) teachers of students with intellectual disabilities; (64) male teachers, and (128) female teachers in the academic year 2021. The teachers were working in integrated intellectual education programs in public education schools.

The researchers developed a questionnaire to collect data consisted of (56) items that measure the application of the teachers of students with intellectual disabilities to the evidence-based behavioral interventions from their perspective. The questionnaire divided on five main dimensions. The apparent validity of the questionnaire was verified by presenting it to a committee consisting of (12) arbitrators and specialists from the faculty members in the specialization of (special education). The step was taken to ensure the suitability and ability of performance to achieve the objectives of the study.

The questionnaire in its initial form consisted of (57) paragraphs, and after it was tuned, it included (56) paragraphs. The internal consistency of the tool was verified by applying it to a survey sample consisting of (30) male and female teachers, from outside the study sample. The values of the parson correlation coefficients for the relationship of dimensions of the questionnaire as a whole was calculated. In addition, the Cronbach's alpha coefficient was calculated as an indicator of internal homogeneity. The overall stability coefficient (Cronbach's alpha) was (0.938), which is a high percentage. D indicates

the stability of the tool. The stability coefficient was calculated using the half-segmentation method, where the stability coefficient was (the total stability coefficient of the half-segmentation was (0.773), which is very high and indicates the stability of the tool.

Based on the nature of the current study and the goals that it pursued to achieve, the data were analyzed using the Statistical Package for Social Sciences (SPSS) programs. The results were extracted according to the following statistical methods: Pearson correlation coefficient and Cronbach's alpha coefficient were used to calculate the validity, reliability of the study tool, frequencies and percentages of personal variables. Also, was used to calculate the averages Arithmetic and standard deviations of tool items and dimensions, bivariate analysis of the effect of independent variables on the dependent variable, and dimensional comparisons using Scheffe's method to detect differences sites.

5. Findings and Discussion

In summary, the current study sought to identify the extent to which teachers of students with intellectual disabilities apply evidence-based behavioral interventions. The results related to the first question "*What is the assessment of the application of evidence-based behavioral interventions from the teachers of students with intellectual disabilities' perspective?*", demonstrated the level of application of evidence-based behavioral interventions by the teachers of students with intellectual disabilities from their perspective was high, with a mean of (4.06) for the tool as a whole (See Table: 1):

Table (1): Arithmetic means and standard deviations of the study tool's dimensions, taking into account their order in descending order according to the arithmetic means (n = 192)

Level	Rank	Standard deviations	Arithmetic means	Dimension	Dimension's No.
High	1	0.44	4.59	classroom management	2
High	2	0.48	4.39	Positive Behavior Support	1
High	3	0.75	4.13	Login and exit strategy	3
High	4	0.82	3.96	Self-management	4
Medium	5	1.04	3.19	Challenges of applying evidence-based behavioral interventions by teachers of students with intellectual disabilities	5
High	-	0.41	4.06	The tool as a whole	

Where the second dimension (classroom management) came with an arithmetic mean of (4.59), and with a high degree, followed by the first dimension (support for positive behavior) with an arithmetic mean of (4.39), and with a high degree, and followed by the third dimension (login and exit strategy) with an arithmetic mean of (4.13), with a high degree, followed by the fourth dimension (self-management) with an arithmetic mean of (3.96), and at a high degree, and in the last rank is the fifth dimension (challenges of teachers of students with intellectual disabilities applying evidence-based behavioral interventions) with an average of (3.19), and a medium degree. The sub-question, presents the challenges facing teachers of students with intellectual disabilities in applying evidence-based behavioral interventions from their point of view in the Eastern Province, where the arithmetic mean of the dimension as a whole was (3.19), and to a moderate degree: (See Table: 2)

Table (2): Arithmetic means and standard deviations for items in the dimension "Challenges of teachers of students with intellectual disabilities applying evidence-based behavioral interventions" (n = 192):

Level	Rank	Standard deviations	Arithmetic means	Item	No.
Medium	1	1.35	3.67	Lack of training programs related to training in implementing evidence-based practices.	56
Medium	2	1.34	3.48	I have not received sufficient training on how to implement evidence-based interventions	53
Medium	3	1.28	3.33	I do not find sufficient support from school management in implementing evidence-based interventions	50
Medium	4	1.02	3.31	I'm having trouble defining an evidence-based intervention.	45
Medium	5	1.18	3.22	I don't have enough time to research and read research papers	48

Medium	6	1.06	3.19	I am having difficulty implementing evidence-based interventions	46
Medium	7	1.23	3.14	I don't have enough knowledge of what evidence-based interventions are	49
Medium	8	1.30	3.09	I have difficulty accessing research sources (such as scientific journals, refereed scientific books).	51
Medium	9	1.32	3.02	The classroom environment is ill-equipped to implement evidence-based interventions	55
Medium	10	1.39	2.98	Lack of cooperation from school teachers in implementing evidence-based interventions	54
Medium	11	1.23	2.97	I don't know how to use databases to find and read relevant research	47
Medium	12	1.24	2.92	I don't have the time to implement evidence-based interventions	52
Medium	-	1.04	3.19	The dimension as a whole	

The results regarding the variable (gender, educational experience), the study hypothesis focused on the presence of statistically significant differences at the significance level ($\alpha = 0.05$) to evaluate the application of teachers of students with intellectual disabilities to behavioral interventions from their point of view. The results indicated that there were no statistically significant differences ($\alpha = 0.05$) due to the effect of gender in the dimensions (log-in and exit strategy, self-management, challenges of applying evidence-based behavioral interventions by teachers of students with intellectual disabilities, total score), while there are significant differences Statistical significance at (α

= 0.05) in the dimension of "positive behavior support" and after "classroom management", where the differences came in favor of females. Also, there were no statistically significant differences ($\alpha = 0.05$) due to the effect of educational experience in the dimensions (classroom administration, total score), while there were statistically significant differences at ($\alpha = 0.05$) in the dimension of "supporting positive behavior, which was in favor of (out of 5). -10 years), the sign-in and exit strategy, which was in favor of (5-10 years), self-management, which was (5-10 years), the challenges of applying evidence-based behavioral interventions for teachers of students with intellectual disabilities, which was (More than 10 years old).

The results related to the main question showed that the evaluation of the application of evidence-based behavioral interventions by teachers of students with intellectual disabilities was high. Specialists and individuals interested in special education in general, and in dealing with students with intellectual disabilities in particular, which led to an increase in the efficiency of these teachers in the field of teaching students with intellectual disabilities, raising their efficiency in professional development and their keenness to apply evidence-based interventions to manage the behavior of this category. where the current study results similar to the study (Aukes, [6]) that indicted a high level of teachers' knowledge and application of evidence-based practices. On the other hand, the current study differed with the study of (Al-Hussein, [3]; Alyafei, [5]) that indicated a discrepancy in the application of evidence-based behavioral interventions.

The results of this second question showed that the challenges of applying evidence-based behavioral interventions by teachers of students with intellectual disabilities has reached an arithmetic average as a whole (3.19), and to a medium degree. The result due to the training courses are available, theoretical and not practical to teacher. Also, the teacher does not provide by workshop that he helps them on implementation of the evidence - based interventions and its effectiveness. The result is consistent with the study of (Al-Daoud and Al-Hussein, [1]; Al-Qahtani, [4]), that indicated there are high and medium challenges among teachers of students with intellectual disabilities that hinder the application of behavioral interventions based on Evidence.

The results of the hypothesis indicated that there were no statistically significant differences at ($\alpha = 0.05$) due to the effect of gender in the following dimensions: (log-in and exit strategy, self-management, challenges of applying evidence-based behavioral interventions by teachers of students with intellectual disabilities, total score). The researchers indicated that teachers of students with intellectual disabilities, regardless of their gender, join the same pre-service and in-service preparation and rehabilitation programs. While there are statistically significant differences at ($\alpha = 0.05$) in the dimension

(positive behavior support, classroom management) and the differences are among females, and the researchers attribute this to the fact that females are more interested in managing students' behavior in the classroom and more aware in proactive interventions before the behaviors occur. The problem is the females are also strong to establish positive relationships with their students, and this result agrees with the study (Al-Hussein, [3]), while it differed with the study (Al-Yafei, [5]).

The results also indicated that there were no statistically significant differences at ($\alpha = 0.05$) due to the effect of educational experience in the following dimensions (classroom administration, total score), while there were statistically significant differences in the following dimensions (positive behavior support, check-in and check-out, management subjective) for (5-10 years). The researchers attribute this to that teachers with average experience have the ability and flexibility to apply positive behavior support based on the characteristics of students with intellectual disabilities.

The results showed that there were statistically significant differences at ($\alpha = 0.05$) for the challenges of applying evidence-based behavioral interventions by teachers of students with intellectual disabilities for Saleh (more than 10 years old). The previous mentioned result is consistent with Aukes [6] study's findings that indicated a disparity in the use of evidence-based practice between novice and more experienced teachers, and this result differed with the study (Al-Yafei, [5]), which all indicated that there is a statistically significant effect of educational experience on the application of evidence-based behavioral interventions.

6. Conclusion

In conclusion, the current study aimed to identify the level of application of teachers of students with intellectual disabilities to evidence-based practices and the challenges they might face. The current study proposed the establishment of a national center to collect evidence-based interventions through coordination and cooperation between researchers and workers in the field of special education. In addition, future research need to conduct more studies of evidence-based behavioral interventions from the point of view to reduce the gap between scientific and the field using different sample, such as the management of schools and centers. Also, researcher suggests providing more training courses that help teachers dealing with scientific research, especially experimental or quasi-experimental or single-case designs. In addition, offering workshops training for the teachers to use an appropriate intervention, with the inclusion of these evidence-based behavioral interventions within their daily practices. The researchers suggest that the job performance criteria include, the criteria for applying evidence-based interventions.

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