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Teachers' Knowledge and Use of Evidence-Based Teaching Practices for Students with Emotional and Behavior Disorders in Saudi Arabia

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Abstract
During the last decade, scholars and policymakers have emphasized the importance of using evidence-based practices in teaching students with disabilities. One barrier to using these practices might be teachers' lack of knowledge about them. This study investigated teachers' knowledge and use of evidence-based teaching practices (EBTPs) for students with emotional and behavior disorders (EBDs) in Saudi Arabia. The study survey was completed by 333 general and special education teachers. Generally, participants reported medium knowledge and use of EBTPs for students with EBDs. However, participants reported low use of peer-mediated and self-mediated interventions. Female participants were more knowledgeable than male participants. Major, educational level, and years of teaching experience were not significantly related to their knowledge of EBTPs. The results indicated a strong positive relationship between knowledge and use of EBTPs. The findings of this research are discussed.
Keywords: evidence-based practices, research-based interventions, teaching methods, effective practices, behavioral problems, emotional and behavior disorders

1. Introduction

Educators worldwide frequently suffer from dealing with students with behavior and emotional disorders (EBDs) (Gulchak, & Lopes, 2007). These students demonstrate a number of internalizing and/or externalizing behaviors that lead to an inability to learn that cannot be explained by intellectual, sensory, or health factors but inhibit the students' abilities to establish and sustain positive social relationships with others (Reid, Gonzalez, Nordness, Trout, & Epstein, 2004). In the United States, it was estimated that around 1% of school-age children have EBDs, representing roughly 8% of all students with disabilities (Gulchak, & Lopes, 2007). Most of these students (nearly 82%) are enrolled in regular school settings. Several previous research reports indicated that students with EBDs do poorly in academics (Trout, Nordness, Pierce, & Epstein, 2003). The findings of a meta-analysis review of the academic status of students with EBDs indicated that they had significant deficits in academic accomplishment (Reid et al., 2004). They perform one to two years below their grade level in elementary school and this discrepancy worsens in high school, where these students perform nearly 3.5 grade levels below their peers (Ryan, Reid, & Epstein, 2004). Generally, their academic performance was significantly lower than their peers without disabilities across all subjects (Reid et al., 2004). In addition, they seemed to perform similar to their peers with learning disabilities (LD) in arithmetic and written expression (Trout et al., 2003). However, they demonstrate low scores in reading and math, low rates of graduation, high course failure and grade-retention rates, and a low percentage of post-secondary school attendance, compared to their peers with other high-incidence disabilities (Reid et al., 2004; Trout et al., 2003). This may not be surprising since more than 50% of these students will possibly also meet some eligibility criteria for LD (Ryan et al., 2004).

Yet, previous researchers and educators have mainly focused on dealing with students with EBDs by addressing inappropriate behaviors with the idea that reducing the number or intensity of unacceptable behaviors would enhance a student's academic performance. Academic failure and problem behavior are closely related and strong evidence suggests a reciprocal relationship between them (Trout et al., 2003; Ryan et al., 2004). However, research has revealed that academic underachievement is one of the most influential predictors of challenging behaviors. In opposition, research has also revealed that academic success is related to a decrease in challenging behavior. (Reid et al., 2004). Fortunately, in recent times there has been more emphasis on addressing academic deficiencies in order to decrease inappropriate behaviors.

One of the most effective interventions for students with EBDs is evidence-based practices (EBPs) which are defined as "practices and programs shown by high-quality research to have meaningful effects on student outcomes" (Cook & Odom, 2013, p. 136). When EBPs have been implemented with fidelity, they have meaningfully enhanced the performance of students with EBDs. Therefore, it is important that teachers look for EBPs and include them in their daily instruction (Torres, Farley, & Cook, 2012). In addition, American legislation (i.e. the No Child Left Behind Act [NCLB] and the Individuals with Disabilities Education Act [IDEA]) have reflected the importance of identifying and using the EBPs both in general and in special education (Cook, Tankersley, Cook, Landrum, 2008). As a result, several studies have been conducted to identify EBPs for students with EBDs (e.g. Ryan et al., 2004; Mooney, Ryan, Uhing, Reid, & Epstein, 2005; Pierce, Reid, & Epstein, 2004;

Ryan, Pierce, & Mooney, 2008). Generally, these interventions can be divided into three groups: (a) student-mediated, (b) teacher-mediated, and (c) peer-mediated (Ryan et al., 2004). Previous studies found that peer-mediated interventions and teacher-mediated interventions were successful across all academic content areas (Ryan et al., 2004; Pierce et al., 2004) and grade levels (Ryan et al., 2004) for students with EBDs. The evidence suggested that self-mediated interventions largely resulted in positive effects on academic outcomes for these students (Mooney et al., 2005).

However, research-to-practice gaps were noted. Identifying EBPs is a means to bridge this gap, but there is not enough evidence to suggest the gap has been meaningfully minimized (Cook & Odom, 2013). The research-to-practice gap is especially problematic in the field of special education since highly effective teaching practices assist students with EBDs to reach their potential. (Cook et al., 2014). However, special educators have reported using ineffective instructional interventions with comparable or greater frequency than some research-based interventions (Cook & Odom, 2013). Previous research indicated that elementary special education teachers adopt new interventions without considering whether they are research-based (Test, Kemp-Inman, Diegelmann, Hitt, & Bethune, 2015). Using instructional interventions that lack an empirical basis might be related to disappointing outcomes of special education services (Burns, & Ysseldyke, 2009).

Researchers suggested several barriers to implementing EBPs exist in schools. First, teachers mistrust educational research and believe that it cannot inform them about teaching effectively (Burns, & Ysseldyke, 2009; Hornby, Gable, & Evans, 2013). In addition, teachers do not have easy access to research. Educators may prefer informal sources of information to identify instructional practices instead of using research (Burns, & Ysseldyke, 2009). Experienced teachers and existing practices in schools are seen as the most important sources of information about how to teach effectively (Hornby et al., 2013). Teachers also lack time to look for EBPs and have limited knowledge regarding them (Cook & Odom, 2013). Previous research suggested that improving teachers' knowledge, attitudes, and beliefs about EBPs could increase implementation of EBPs in school (Jones, 2009).

Previous researchers studied teachers' knowledge and use of EBPs. For example, Burns and Ysseldyke (2009) studied the reported use of EBPs in teaching students with disabilities by surveying special educators and school psychologists to investigate the prevalence of these practices in special education. The results indicated that direct instruction (i.e. EBP) was often used in special education whereas the perceptual-motor training (i.e. non-evidence-based practices) was rarely used. Nevertheless, some non-evidence-based practices, such as modality instruction and social skills training, were reportedly occasionally used. Special educators reported using these practices with about the same frequency as they used applied behavior analysis (i.e. EBP). Stormont, Reinke, and Herman (2011a) examined whether special and general education teachers can identify evidence-based and non-evidence-based behavior practices for students with EBDs, and how several teachers' characteristics are related to selecting EBPs. The results revealed that the majority of participants agreed or strongly agreed that the practices indeed are evidence-based for decreasing behavior problems. Overall, general education teachers had lower agreement ratings for evidence-based practices and higher agreement ratings for non-evidence-based practices than did special education teachers. In addition, general education teachers reported less confidence in their intervention selections. An undergraduate level of education was related to higher agreement ratings for non-evidence-based practices than was a graduate level. In a similar study, Stormont, Reinke, and Herman (2011b) investigated the knowledge of general educators regarding 10 evidence-based behavioral interventions for children with emotional and behavioral problems. Overall, participants had not heard of 90% of these interventions. Positive behavioral interventions and supports were the only evidence-based behavioral interventions that 78% of participants recognized.

Yet, there are now a few research projects about teachers' knowledge of EBPs for students with EBDs. Previous research focused mainly on evidence-based behavioral interventions for these students and ignored evidence-based teaching practices (EBTPs). The literature review revealed no study of this issue had been conducted in Saudi Arabia. In addition, Test et al., (2015) indicated that teachers may express strong support for using research-based interventions, but rarely implement these practices in their classrooms. Therefore, the current study was conducted to measure teachers' knowledge and use of EBTPs in school and the relationships between them. This study tried to answer the following research questions: What is the teachers' level of knowledge and use of EBTPs for students with EBDs? Are there significant differences in teachers' knowledge of EBTPs for students with EBDs based on gender, major (i.e. special education vs. general education), educational level, and years of teaching experience? Is there a significant relationship between knowledge and use of EBTPs for students with EBDs?

2. Method

2.1 Participants

In this study, 333 participants (72% male, 23% female) completed a survey measuring teachers' knowledge and use of EBTPs for students with EBDs. Of these participants, 47% and 53% respectively were certified in general education or special education. Participating teachers' teaching experience ranged from less than five years to

more than ten years, with the majority of participants (71%) with more than five years of teaching experience. With regard to participants' level of education, a few (4%) of those who responded had associate degrees, and most (81%) had completed bachelor's degrees whereas 15% had master's degrees or above. Table 1 demonstrates the frequencies and percentages of participants' demographic information.

Table 1. Participant Characteristics.

Variables	Levels		Major		Total
			Ge. Ed.	Sp. Ed.	
Gender	Male	n	113	127	240
		%	47	53	100
	Female	n	43	50	93
		%	46	54	100
Teaching experience	Less than 5 years	n	29	64	93
		%	31	69	100
	Between 5 and 10 years	n	51	68	119
		%	43	57	100
	More than 10 years	n	76	45	121
		%	63	37	100
Level of Education	Associate	n	12	2	14
		%	86	14	100
	Bachelor	n	121	149	270
		%	45	55	100
	Master and above	n	23	26	49
		%	47	53	100
Total		n	156	177	333
		%	47	53	100

2.2 Measures

Participants were asked to fill out a package of surveys requiring approximately 10-15 minutes. The package contained measures of teachers' demographic characteristics, knowledge, and use of EBTPs for students with EBDs. It included the following measures:

The Demographic Information Survey. Participants were asked to respond to a series of demographic questions by choosing the options that described their gender, major (i.e., general or special education), years of teaching experience, and highest level of education.

Knowledge and Use of EPTBs Survey (KUEBTPS). Survey item development was based on a literature review of recent study findings on EBTPs for students with EBDs (Ryan et al., 2004; Mooney et al., 2005; Pierce et al., 2004; Ryan et al., 2008). The KUEBTPS measured two different categories -- knowledge and use of EPTBs and contained 35 items and 3 parts: peer-mediated interventions, self-mediated interventions, and teacher-mediated interventions. Each part included several EBTPs with brief definitions. For example, in part one (i.e. peer-mediated interventions), participants were asked to rate their level of knowledge and use of peer assessment, defined as using peers "to assess the products or outcomes of learning of other students of similar status" (Ryan et al., 2004, p.332). Participants rated their level of knowledge and use by selecting high (4 points), medium (3 points), low (2 points), or none (1 point), in which high scores indicated greater knowledge and use of EBTPs. The face and content validity was established based on feedback from several expert faculty members in the Special Education Department at King Saud University. The faculty members verified that the survey items were important to assess teachers' knowledge and use of EBTPs for students with EBDs. In addition, the coefficient alphas for each category (knowledge and use) demonstrated high internal consistency reliability, with estimates of .95 for knowledge of EBTPs and .936 for use of EBTPs. Consequently, the KUEBTPS could be a valid and reliable survey for assessing the knowledge and use of EBTPs for students with EBDs.

2.3 Procedures

Several schools were selected in Riyadh, Saudi Arabia. Then, the special or general education teachers were contacted to distribute and collect the surveys at each site. Participants were given the study package that included the Demographic Information Survey and the Knowledge and Use of EBTPs Survey. A cover page gave participants general information about the current study and provided instructions for filling out the surveys. The next pages included survey items. Participants were informed that their participation in the study was confidential and voluntary. Of the 400 distributed surveys, 380 were returned. Of these, 47 were not used because of significant missing data, resulting in an overall usable response rate of 83%.

2.4 *Data Analysis*

Data were analyzed using Statistical Package of Social Science for Windows Version 22. Descriptive statistics (i.e., mean scores and standard deviation [SD]) and three inferential statistics were used to answer the research questions. The mean scores and SD were used to find the knowledge and use of EBTPs for students with EBDs. The intention was to use two independent sample t-tests, ANOVA, and Pearson correlation; however, the statistical assumptions for these tests were violated. Therefore, the nonparametric tests (i.e. Mann-Whitney test, Kruskal-Wallis test, and Spearman's rank order) were used. A Mann-Whitney test was conducted to assess the differences between two groups (i.e. male vs. female; special education vs. general education). The differences between level of education and years of teaching experience were examined using the Kruskal-Wallis test. The Spearman's rank order was used to assess the association between the knowledge and use of EBTPs. All statistical analyses were conducted at an alpha level of 0.05.

3. Results

Table 2 displays the mean scores and SD of participant ratings of knowledge and use for each EBTP, the three types of the teaching interventions, and for all items. The mean scores of knowledge of EBTPs ranged from 2.58 to 3.20 with a mean score of 2.96 and a SD of .57. As for the mean scores of use of EBTPs, the results indicated that they ranged from 2.16 to 3.09 with a mean score of 2.69 and a SD of .54. This revealed that participants had medium knowledge and use of EBTPs. In addition, participants demonstrated medium knowledge and use of EBTPs regardless of the types of teaching interventions (i.e. peer-mediated, self-mediated, and teacher-mediated) with the exception that participants indicated a low use of peer-mediated and self-mediated interventions (M = 2.15; M = 2.45). The most commonly known EBTPs across the three types of interventions stated by participants were modeling, rehearsal, and feedback (M = 3.20), verbalizing math problems (M = 3.16), token reinforcement system (M = 3.15), cooperative learning and incorporating student interest (M = 3.14), and trial-and-error versus time delay (M = 3.13). The most commonly used EBTPs across the three types of interventions indicated by participants were modeling, rehearsal, and feedback (M = 3.09), token reinforcement system (M = 3.05), trial-and-error versus time delay (M = 3.04), incorporating student interest (M = 2.99), and sequential prompting (M = 2.97). This would suggest that modeling, rehearsal, and feedback, token reinforcement system, incorporating student interest, and trial-and-error versus time delay were the most commonly known and used EBTPs among participants. All these practices were from the teacher-mediated interventions category.

The other research questions assessed differences in participants' knowledge of EBTPs based on several variables. Table 3 shows the results of the Mann-Whitney test, which indicated that the gender of participants did significantly relate to their knowledge of EBTPs. Female participants (Mdn = 3.19) had more knowledge of EBTPs than male participants did (Mdn = 2.94), U = 6745, p = .000, r = .31. This difference was medium.

Table 4 shows the results of the Mann-Whitney test, which indicated that the major of participants did not significantly relate to their knowledge of EBTPs, U = 13099, p = .420, r = .04.

Table 5 shows the results of the Kruskal-Wallis test, which indicated that the years of teaching experience of participants did not significantly relate to their knowledge of EBTPs, $\chi 2(2) = 5.242$, p = 0.073.

Table 6 shows the results of the Kruskal-Wallis test, which indicated that the educational level of participants did not significantly relate to their knowledge of EBTPs, $\chi 2(2) = .327$, p = 0.849.

Finally, the results indicated that the correlation coefficient ($\rho = .624$, $p = .000$) was statistically significant. There was a strong positive relationship between the knowledge of EBTPs and the use of these practices, $\rho(331) = .624$, $p = .000$.

Table 2. Mean and SD of knowledge and use of EBTPs

Evidence-based Teaching Practices	Knowledge		Use	
Peer-Mediated Interventions	M	SD	M	SD
Class-wide peer tutoring (CWPT)	3.01	.784	2.54	.862
Cooperative learning.	3.14	.849	2.67	.894
Cross-age tutoring	2.75	.952	2.16	.917
Peer tutoring.	3.06	.873	2.54	.971
Peer-assisted learning strategies	3.09	.807	2.59	.952
Peer assessment	2.77	.962	2.29	.971
Peer modeling	2.89	.912	2.50	.990
Peer reinforcement	2.84	.899	2.45	.976
Total Knowledge for category 1	2.94	.656	2.15	.613
Self-mediated interventions	M	SD	M	SD
Self-monitoring	2.73	.943	2.39	.962
Self-evaluation	2.86	.949	2.56	.967
Self-instruction	2.77	.915	2.39	.965
Goal setting	2.58	.936	2.29	.967
Strategy instruction	2.94	.910	2.64	.955
Total Knowledge for category 2	2.77	.771	2.45	.776
Teacher-mediated interventions	M	SD	M	SD
Verbalizing math problems.	3.16	.864	2.93	.894
Cubicles	2.82	1.06	2.47	1.11
Structured academic tasks	3.11	.874	2.88	.920
Modeling, rehearsal, and feedback	3.20	.825	3.09	.811
Adjusting task difficulty	3.06	.836	2.90	.876
Previewing	2.87	.877	2.71	.871
Sequential prompting	3.12	.815	2.97	.869
Mnemonic instruction	3.04	.877	2.92	.857
Taped words and drill instruction	2.61	.956	2.27	.949
Trial-and-error versus time delay	3.13	.829	3.04	.853
Intertrial interval duration	2.94	.883	2.72	.904
Incorporating student interest	3.14	.848	2.99	.868
Teacher versus child control of choice of task and reinforcement	3.09	.840	2.90	.853
Token reinforcement system	3.15	.885	3.05	.892
Use of free time	3.06	.829	2.92	.829
Academic contracting	2.98	.941	2.74	.981
Written feedback	2.98	.880	2.86	.892
Bonus contingency in token program	3.02	.857	2.88	.895
Total knowledge for category 3	3.02	.592	2.85	.566
Total knowledge for all	2.96	.567	2.69	.539

Table 3. Results of Mann-Whitney U Tests Related to Knowledge of EBTPs by Gender

Gender	N	Mean rank	Sum of Rank	*U*	*P*	r
Male	240	148.60	35665	6745	.000	.31
Female	93	214.47	19946			

Table 4. Results of Mann-Whitney U Tests Related to Knowledge of EBTPs by Major

Major	N	Mean rank	Sum of Rank	*U*	*P*	r
General Education	156	162.47	25345	13099	.420	.04
Special Education	177	170.99	30266			

Table 5. Results of Kruskal-Wallis Test Related to Knowledge of EBTPs by Years of Teaching Experience

Years of teaching experience	N	Mean rank	X^2	*P*
Less than 5 years	93	183.94	5.242	.073
Between 5 and 10 years	119	167.42		
More than 10 years	121	153.57		

Table 6. Results of Kruskal-Wallis Test Related to Knowledge of EBTPs by Educational level

Educational level	N	Mean rank	X^2	*P*
Associate	14	161.29	.327	.849
Bachelor	270	168.46		
Master and above	49	160.61		

4. Discussion

The purpose of the current study was to measure and identify differences among participants regarding their knowledge and use of EBTPs for students with EBDs in Saudi Arabia. There were 333 general and special education teachers who participated in the study. The first finding indicated that, overall, participants had medium knowledge and use of EBTPs for students with EBDs. This differed from other research findings in the literature that found participants had high knowledge of EBPs for students with disabilities (Paynter, Keen, 2015; Stormont et al., 2011a). It also conflicted with another study, which found participants had never heard of 90% of a list of evidence-based interventions for students with emotional and behavioral problems (Stormont et al., 2011b).

Although participants revealed medium knowledge of EBTPs across the three types of teaching interventions, the results indicated low reported use by participants of peer-mediated and self-mediated interventions. A possible reason for this finding is that the teachers might prefer evidence-based interventions mediated by them over other interventions mediated by others. They might think that interventions mediated by teachers could result in higher outcomes for their students and also could save the teachers time and effort since they were not required to observe the intervention implemented by targeted students or peers and provide feedback about their implementations. Moreover, the results indicated that participants know and use some EBTPs more than others. For example, modeling, rehearsal, and feedback were the most known and used EBTPs. The majority of participants know and use a token reinforcement system, incorporating student interest, trial-and-error versus time delay, and sequential prompting.

The finding of the group comparisons on knowledge of EBTPs indicated that female teachers were more knowledgeable than male teachers were. This finding could be important since there is single-gender education in Saudi Arabia, with female teachers educated in separate colleges and teaching in separate schools. This might suggest that female teacher education programs pay more attention to EBTPs and might have in-service programs allocated to improving female teachers in this area. Another explanation could be that female teachers are better prepared and encouraged regarding EBTPs than are male teachers.

Contrary to the previous results, the major of participants did not significantly relate to their knowledge of EBTPs. Surprisingly, no significant differences were found between special and general education teachers. This finding is inconsistent with previous research that found special education teachers were more knowledgeable than general education teachers were (Stormont, 2011a). This may be explained by assuming that most of the interventions are taught in teacher education programs and in-service training programs both for general and for special education to teach typical students and students with disabilities. For instance, a token reinforcement system, cooperative learning, and peer touring are usually taught for pre-service and in-service teachers regardless of their majors and they are encouraged to use them with their students. As a result, both special and general education teachers have similar knowledge about these practices.

The results indicated that the educational level of participants did not significantly relate to their knowledge of EBTPs. This result is supported by previous research conducted by Stormont (2011a) who found no significant association between educational level and identifying EBPs. A possible explanation for this is that undergraduate and graduate programs provide courses that focus on EBPs and how to implement them in classrooms.

Years of teaching experience was not significantly related to teachers' knowledge of EBTPs. Novice teachers and teachers with extensive teaching experience had similar knowledge of EBTPs. This might be related to the fact that in-service teacher training and teacher education programs informed participants regarding EBTPs and improved their knowledge. Therefore, they have similar knowledge. Spending years in teaching may not improve teachers' knowledge regarding EBTPs unless they had been exposed to training in this area and had tried some EBTPs and found them effective on students' performance.

Finally, the results revealed a strong relationship between knowledge of EBTPs and the use of these practices. Participants with high knowledge of EBTPs reported high use of these interventions in their classrooms.

This finding is consistent with previous research that found a significant association between knowledge and use of EBPs for students with autism (Paynter, Keen, 2015). One possible reason is that participants use only EBTPs that they know well and know their effectiveness with their students. However, this study measured reported knowledge and use of EBTPs. Therefore, the results may not reflect actual knowledge and use of these practices. Indeed, some participants stated that they know and use them when in fact they may have misunderstood and rarely use them in their classrooms. Teachers may know general information about the practices and use them, but the intervention fidelity might be questionable.

5. Implication

The results suggested that male participants had lower knowledge and use of EBTPs and there was a significant relationship between knowledge and use of EBTPs. This may highlight the importance of increasing the knowledge of EBTPs for pre- and in-service teachers. Male teacher preparation programs should particularly include more information about EBTPs so male teachers' knowledge and use would be increased. When teachers know more about EBTPs, they use them in the classroom. Teacher education programs should focus on offering courses that give students opportunities to learn these practices and implement them with real students. Individual schools and school districts should also hold more training sessions that inform teachers about EBTPs and how to identify and use these practices. According to Zentall and Javorsky (2007), in-service training programs are useful in preparing educators for including students with behavior problems. Jones and Chronis-Tuscano (2008) found that in-service training programs improved teachers' knowledge and use of evidence-based behavior methods. Moreover, there should be manuals for EBTPs that assist teachers in identifying these practices. Such manuals should define each practice, explain the importance of using that practice, and list materials that teachers need to implement the practices.

In addition to pre-service and in-service training programs, Jones (2009) found that teachers use the Internet as a major source for finding and using instructional strategies and it is the only source for improving the teaching of some teachers. Thus, professionals and authorities may use the Internet to develop trustworthy websites to disseminate EBTPs in order to close the gap between research and practice (Test et al., 2015). Trusted websites can increase teachers' knowledge and use of EBTPs. Little and King (2008) indicated that online modules assisted pre-service and in-service teachers in implementing EBTPs in their classrooms. Trusted websites should include brief and detailed information about EBTPs that would assist teachers in selecting and using these practices. Using pictures and video clips that show how to implement EBTPs could facilitate teachers' implementation and increase the fidelity of implementation. Websites can also have discussion boards so that teachers can share their experiences regarding implementation of EBTPs in the classroom and support each other. The sites could also include materials or forms that teachers may need to use some EBTPs.

Finally, it was obvious that teachers know and use teacher-mediated interventions more than other types. This would suggest that teachers should be provided more information to increase their knowledge about peer-mediated and self-mediated interventions. Increasing teachers' knowledge about this type of interventions would help teachers use these practices in their classrooms. Pre-service and in-service training programs should pay more attention to the importance of using peers and self-management strategies in teaching students with special needs.

6. Limitations and Future Research

The current study revealed vital findings regarding the knowledge and use of EBTPs for students with EBDs in Saudi Arabia. Nevertheless, there are limitations to the results of this study. First, the participants were teachers selected from only one city. This limits the results and may not generalize to other teachers in different cities in Saudi Arabia nor other professionals working with students with EBDs. While the participants were selected from only one city, they were selected from the capital city of Saudi Arabia and therefore could be a representative sample of Saudi teachers since residents in the capital city come from different cultures and backgrounds across the country. However, future research replicating the current study should include participants from different fields and from numerous cities across the nation. It might explore the parents' knowledge and use of EBTPs for their children with EBDs.

A second limitation of this study was that participants voluntarily completed the survey. This may have led to participants with more knowledge and use regarding EBTPs for their children with EBDs than other teachers who did not complete the survey. Moreover, this study did not use different methods to collect data from participants. In fact, the results of the study reflected the self-reported knowledge and use of EBTPs of the participants, which might not reflect the actual behavior of participants in the classroom. Some participants may have reported high use of the interventions, but actually rarely use them. With this in mind, future research may consider using classroom observations to see what actual practices are used and assess the intervention fidelity. Interviews with participants may identify barriers to use of EBTPs and facilitate their implementation in the classroom. Finally, future research could examine the effect of in-service training programs on the knowledge and use of EBTPs.

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