

Attitudes toward co-teaching: Perspectives on general and special education teachers in Makkah



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ABSTRACT

The aim of this study is to identify general and special education teachers' attitudes toward co-teaching in the city of Makkah and the differences in these attitudes according to some demographic variables, such as gender, academic qualifications, years of experience, specialization, and co-teaching training. Quantitative methods were employed. A 20-item questionnaire was used as the data collection tool. The study sample consisted of 404 male and female teachers chosen randomly (301 general education teachers and 103 special education teachers). The study findings revealed high scores ($M = 4.2693$) for the attitudes of general and special education teachers. However, there were statistical differences in the teachers' attitudes based on specialization in favor of special education teachers specialized in learning disabilities. Statistical differences were also found regarding training, to the benefit of those who did not receive any training courses on co-teaching. However, no significant differences could be attributed to teachers' gender, academic qualifications, or years of experience. The findings highlight an urgent need to focus on the professional development of general and special education teachers. The Ministry of Education is urged to design comprehensive training programs to support these teachers on strategies for implementing co-teaching within their regular classes.

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1. Introduction

Special education is defined as specially designed instruction, at no cost to the parents, to meet the unique needs of a child with a disability, including Instruction conducted in the classroom, in the home, in hospitals and institutions, and in other settings; and Instruction in physical education (Riccomini et al., 2017). Special education receives great attention from the Kingdom of Saudi Arabia (KSA) Ministry of Education (MOE), which has adopted the inclusion policy of students with disabilities (SWDs) into the regular educational environment, and the provision of appropriate educational services for them.

In this context, the MOE has enhanced the quality of services and increased the programs offered to SWDs, with the Inclusive Education Program (IEP) being an integral part of the MOE's vision. The IEP was implemented in six model schools in Riyadh in

the academic year 1436/1437 H. as part of the first stage of qualifying general education schools to implement inclusive education so that students with special needs receive their education in mainstream schools and classrooms. This provides equal learning opportunities and educational services for all without exception, as the inclusion of SWDs in actual life helps reduce social and psychological differences (Aron and Loprest, 2012). To implement inclusive education in mainstream schools, it is necessary to apply educational practices that have proven effective in teaching SWDs in general education classrooms, including co-teaching, as teachers can thereby provide SWDs with the opportunity to learn and acquire skills in a mainstream classroom environment (Gately and Gately, 2001). Co-teaching is a teamwork-based teaching method designed to meet the diverse educational needs of students who have diverse learning abilities. It is defined as two or more individuals coming together in a collaborative relationship to share work in order to achieve what could not have been done as well alone (Wenzlaff et al., 2002). Roth and Tobin (2002) described co-teaching as teaching at one another's elbow and sharing responsibility for instruction.

This type of teaching aims to achieve full integration between general education and special

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education to serve all students while paying special attention to students who have disabilities, such as learning disabilities, intellectual disabilities, autism, and other types of needs, in line with the principle of inclusive education or inclusion. It enables all students to access the general education curriculum (MOE, 2020). To facilitate Co-teaching, a consensus needs to be reached between general and special education instructors regarding the roles and objectives of inclusion in the classroom (Zagona et al., 2017). Co-teaching is often discussed and recommended in educational programs as a way to develop instructional practices for special education (Stang and Lyons, 2008; Drescher, 2017), enhance teacher preparation programs (Graziano and Navarrete, 2012), and utilize the professional understandings of two teachers (Jenkins and Crawford, 2016).

2. Theoretical framework

2.1. Special education

Special education is a set of programs and strategies specifically designed to meet the educational needs of SWDs (Eissa and Borowska-Beszta, 2019). These services are characterized by their individual and inclusive nature and are targeted at meeting the needs of each student separately and addressing their shortcomings. They include schools' settings, tools, means, and methods, and are adapted with the help of the special education specialist to ensure that the educational environment is supportive and less restrictive to all individuals with disabilities (Özaydın et al., 2021). The importance of special education lies in the fact that it is designed in a way that considers the individual differences of students and helps individuals with disabilities discover and develop their abilities based on cooperation and shared responsibility between the school and the families (Benkohila et al., 2020). People with special needs fall within the two ends of the curve of the normal distribution of ordinary individuals. They have shortcomings, disabilities, or physical or mental delays that prevent them from adapting to the mainstream community and learning in a way that suits those (Kılıç et al., 2014). Hence, the concept of special education is concerned with meeting the needs of all categories of people with disabilities (PWDs) (Głodkowska et al., 2018).

People with special needs require someone who can understand their problems, know how to deal with them, discover their abilities, and help them develop and invest their abilities in the right way to effectively integrate them into mainstream environments to reduce the differences between them and ordinary individuals. They need to be provided with all kinds of support—psychological, educational, and social—to learn in an open environment, overcome disabilities, achieve their aspirations, and become active members of the building and serving their nation and society (Aktepe

et al., 2021). To meet the needs of people with special needs, the KSA provides diverse services, including special education services. General education curricula are adapted and verified, effective teaching aids are used, and mainstream school environments are modified to suit SWDs. Special education is classified into several categories, according to the Special Education Manual, including hearing, visual, mental, learning, and multiple disabilities, in addition to autism spectrum disorder (Istemic Starcic and Bagon, 2014).

2.2. Co-teaching

International laws and legislation that cater to PWDs emphasize the necessity of PWDs' inclusion in the mainstream educational environment. In the same vein, the Saudi MOE pays attention to the SWD category by providing appropriate services. Moreover, it adopts international conventions to serve them and meet their needs and consequently achieves the KSA Vision 2030, which seeks to empower PWDs and facilitate their inclusion and independence to help them succeed. Article 24 stipulates the right to education for PWDs without discrimination on the basis of the principle of lifelong equal opportunities for all individuals (MOE, 2020). Inclusive education is one of the qualitative trends that provides equal educational opportunities for all students without discrimination in mainstream schools, using the latest and best educational practices to meet the needs of all students (Aron and Loprest, 2012). Co-teaching is among the most prominent applications used in the inclusive educational environment and is based on cooperation between general and special education teachers within mainstream classrooms. It facilitates the inclusion of SWDs in typical and less restrictive environments, including the general education environment (Aba-Hussein and Al-Hussein, 2016).

The method of co-teaching is relatively new, as it emerged in the 1980s. It can be defined as a teaching method used in general education classes with SWDs since it is based on cooperation between two or more teachers responsible for the educational process within the mainstream classroom, which ensures the inclusion of SWDs with their ordinary peers in the mainstream classroom environment. Good planning, preparation, and implementation of the co-teaching method by both general and special education teachers are essential to obtain positive results (Walther-Thomas et al., 1996).

Sharing educational responsibilities between general and special education teachers in instruction planning includes distributing the roles among teachers, choosing appropriate educational methods and aids within the classroom to meet all students' needs, employing effective methods of classroom management, and assessing students' performance using various evaluation methods. General and special education teachers facilitate better educational outcomes for SWDs. Notably, co-

teaching reduces the teaching burden of co-teachers (Chitiyo, 2017).

Despite the great benefits of co-teaching, many obstacles prevent the effective application of co-teaching from enriching and benefitting students, teachers, and the educational process. Among these obstacles are a lack of school venues and environments that can facilitate its application, poor preparation and low-level prior training for both general education teachers and teachers of SWDS, and insufficient awareness programs aimed at the assimilation of the concepts of co-teaching, its models and requirements, and the roles required for both general and special education teachers. Other obstacles include insufficient time and poor cooperation between general and special education teachers in planning and preparing lessons in advance, negative attitudes toward children with disabilities, and ignorance of their needs and their traits. Moreover, a lack of awareness on the part of school leaders and their ignorance of co-teaching practices are key obstacles that prevent teachers from using the co-teaching method in public education schools (Solis et al., 2012).

Bagbas (2018) identified several obstacles that prevent teachers of students with learning disabilities in the primary stage from using co-teaching when teaching SWDs. They include the difficulty of determining the time required for each teacher to apply co-teaching; non-preference for this type of teaching method; the relevance of the nature of co-teaching to the curriculum and the roles of teachers; lack of mutual respect; the existence of a performance gap between regular students and those with learning disabilities; the absence of a research database to support co-teaching and its application practices; the poor technical and administrative support by the school; the unqualified use of co-teaching; and the failure to sufficiently attend training workshops on the use of co-teaching.

Special education teachers are also important specialists in teaching children with disabilities. Their roles include being constantly aware of new developments/findings related to their specialization, always striving to develop themselves, and being familiar with some information about all general education curricula so that they are ready to assist SWD as needed. Moreover, they should be familiar with teaching methods that may differ from one stage and one subject to another and be able to employ educational aids to make learning more effective, taking into account the individual differences among students. They must consistently plan their lessons daily and organize the educational environment. Lastly, special education teachers must be able to use modern technical aids and employ them in teaching in an effective manner (Robinson, 2017).

Cooperative work between general and special education teachers is essential for the application of the co-teaching method. There are basic competencies that apply to both general and special education teachers for the success of their

cooperative work. For instance, all teachers must be aware that students have abilities and vary in performance and individual differences. Therefore, a special program must be designed for each student based on his/her needs, strengths, and weaknesses. All teachers must be familiar with everything related to co-teaching, its applications, methods, and classroom management in a way that gives them an equal opportunity to apply this method. As mentioned earlier, co-teaching requires the cooperative work of several teachers; thus, effective communication skills, social skills, and flexibility are among the key factors that promote successful work among teachers (Murawski and Lochner, 2018).

The study of attitudes is important in the field of humanities and education, as there is a relationship between positive or negative attitudes and the level of educational practice of certain strategies for teaching students. Further, identifying the attitudes toward a certain subject helps in recognizing the different needs of teachers. The surrounding environment also directly and significantly affects the attitudes and opinions of teachers (Al-Omari and Afia, 2020).

Mitchell and Olson (1981) defined attitude as "the ideas and beliefs one possesses about a certain topic." Anke et al. (2012) defined it as "the responses of individuals to any topic, which vary according to environmental factors and experience. Such responses are either approval or avoidance." Gurgur and Uzunur (2010) argued that negative and positive attitudes, opinions, and beliefs of general and special education teachers have a direct impact on the extent of the success or failure of the co-teaching practice. Positive attitudes help in the effective application of co-teaching, which positively affects the achievement of both regular students and those with disabilities. Hamilton-Jones and Vail (2014) indicated that the attitudes of special education teachers are positive toward the effectiveness of using co-teaching with SWDs.

The use of co-teaching has an effective and positive impact on SWDs in the inclusion environment, as it helps them enhance their understanding and assimilation of information and abstract concepts in particular. Moreover, co-teaching improves the academic achievement of SWDs. It can even be argued that the benefit is not limited to the academic aspect alone, as co-teaching helps people with disabilities reduce feelings of isolation and increase feelings of confidence, comfort, and psychological stability (Baeten and Simons, 2014).

Many teachers have little or no experience engaging in co-teaching (Castañeda-Londoño, 2017). Such a lack of experience with co-teaching causes a disagreement between educators' beliefs about its positive impact and their personal instructional practices which results in beginning teachers entering a classroom with only a conceptual understanding of what it means to co-teach (Heo and Mann, 2015).

Based on the researchers' work experience with public primary schools as teachers of special and general education, an organizational gap was identified between public education and special education: SWD either study in mainstream classrooms without the support of a specialized teacher or individually in the resource room with the help of special education teachers. This clearly indicates a need for co-teaching. To ensure the optimal integration of general and special education teachers and the effective inclusion of students in mainstream classes, there is a need to adapt the curricula, set up the classroom environment, and use educational aids that meet the needs of all students in the mainstream classroom.

The aim is to identify general and special education teachers' attitudes toward co-teaching in the city of Makkah and the differences in these attitudes according to some demographic variables, such as gender, academic qualifications, years of experience, specialization, and co-teaching training.

2.3. Hypotheses

H.1. General and special education teachers have clear attitudes toward co-teaching in the city of Makkah.

H.2. Gender has no effect on general and special education teachers' attitudes toward co-teaching.

H.3. Years of experience have no effect on general and special education teachers' attitudes toward co-teaching.

H.4. Academic qualifications have no effect on general and special education teachers' attitudes toward co-teaching.

H.5. Specialization has no effect on general and special education teachers' attitudes toward co-teaching.

H.6. Training courses related to co-teaching have no effect on general and special education teachers' attitudes toward co-teaching.

3. Methods

To meet the purpose of this study the researchers used survey methodologies with general and special education teachers. The researchers describe the survey content and development, identification of survey recipients, and completion of quantitative analyses of relevant variables (Blair et al., 2014). Using the descriptive survey approach, the attitudes of general and special education teachers in the fields of learning and intellectual disabilities and autism were identified at the primary stage in public schools in the city of Makkah. A questionnaire was used as a tool to collect data from the study sample.

3.1. Study sample

The study sample was randomly comprised of 404 primary-stage male and female teachers of general and special education teachers in the city of

Makkah (301 general education teachers and 103 special education teachers) according to the statistics of the General Administration of Education in Makkah Al-Mukarramah Region of the MOE (2020) (Table 1).

Table 1: Demographic information of the participants

Variable	Variable Category	N	Percentage
Gender	Males	113	28.0
	Females	291	72.0
	General	301	74.5
Specialization	Disabilities	69	17.1
	Intellectual	26	6.4
	Autism	8	2.0
Qualification	Bachelor	295	73.0
	Diploma	86	21.3
	Master	17	4.2
Experience	PhD	6	1.5
	≤ 5 years	40	9.9
	6 – 10 years	101	25.0
	11 - years	96	23.8
	≥ 12 years	167	41.3
Co-teaching training courses	No courses	191	47.3
	< 5 courses	69	17.1
	≥ 6 courses	144	35.6

3.2. Data collection instrument

A 20-item questionnaire was developed particularly for this study with the aim of assessing the attitudes of general and special education teachers in the fields of learning disabilities, intellectual disability, and autism in the primary stage in public schools in Makkah Al-Mukarramah toward co-teaching. It consists of two parts, section A is general information, while Section B consists of questions. The first contained the primary data of the general and special education teachers in public primary schools in the city of Makkah based on gender, years of experience, specialization, academic qualification, and training courses related to co-teaching. The second part consisted of the questionnaire's questions.

3.3. Reliability and validity

Average Variance Extracted (AVE) value shows that all reflective constructs have AVE values > 0.50. Hence the CV is valid and acceptable All questions that measure construct have met the conditions of the CV. Moreover, the results of the Composite Reliability (CR) data show that all values were above 0.8. This refers to high reliability. The results of Cronbach's Alpha (CA), show high reliability. The data can be seen in Table 2.

Table 2: Convergent validity and reliability

	AVE	CR	CA
Questionnaire	0.788	0.826	0.765

AVE Average Variance Extracted; CR Composite Reliability; CA Cronbach's Alpha

3.4. Pilot testing

Using the self-report, structured questionnaire, pilot testing has been conducted to ensure that respondents understand all items.

3.5. Data analysis

To achieve the goal of this study, Frequency (Percentage) and Mean [Standard Deviation], Independent sample t-test, ANOVA, and Multiple comparisons were used.

4. Results

H.1. General and special education teachers have clear attitudes toward co-teaching in the city of Makkah: To test this hypothesis, the researchers calculate frequencies, percentages, arithmetic averages, standard deviations, and ranks for the first dimension. Based on the data analysis, as shown in

Table 3, the general arithmetic mean of the general and special education teachers' attitudes toward co-teaching was $M = 4.2693$ ($SD = 0.542$), which indicates a high and positive levels of attitudes of both general and special education teachers toward co-teaching.

H.2. Gender has no effect on general and special education teachers' attitudes toward co-teaching: To determine the differences between male and female teachers of general and special education toward co-teaching in the city of Makkah due to the gender variable (males and females), the t-test for two independent groups is used. As shown in Table 4, t-value is -1.430; a p-value of more than 0.05 indicates that there is no, in fact, enough variance in the sample to account for possible mean differences.

Table 3: Frequency (Percentage) and mean (Standard deviation) for general and private education teachers toward co-teaching

No	Phrase	Use level						W	M	SD	Rank	Level
		F	Strongly agree	Agree	To some extent	Disagree	Strongly disagree					
1	I think working with a more experienced teacher will make me more confident	F	266	106	29	1	2	91.34	4.57	0.68	1	Very high
		%	65.8	26.2	7.2	0.2	0.5					
2	I believe that collaborative work between general and special education teachers through co-teaching will help develop my skills	F	222	136	34	10	2	88.2	4.40	0.79	6	Very high
		%	55	33.7	8.4	2.5	0.5					
3	I think I will plan to attend training courses on the co-teaching approach	F	195	137	61	11	0	85.54	4.28	0.82	12	Very high
		%	48.3	33.9	15.1	2.7	0					
4	I think I will plan to use co-teaching in the future	F	177	128	87	11	1	83.22	4.16	0.87	17	High
		%	43.8	31.7	21.5	2.7	0.2					
5	I believe that the different experiences and academic backgrounds of general and special education teachers enhance cooperation between them	F	186	163	44	9	2	85.84	4.29	0.79	10	Very high
		%	46	40.3	10.9	2.2	0.5					
6	I expect that the shared responsibility between general and special education teachers will reduce their teaching burden	F	184	151	58	10	1	85.1	4.25	0.81	14	Very high
		%	45.5	37.4	14.4	2.5	0.2					
7	I think that co-teaching is appropriate for teaching basic subjects such as mathematics and the "My Language" syllabus	F	119	102	109	59	15	72.43	3.62	1.16	20	High
		%	29.5	25.2	27	14.6	3.7					
8	I am ready to participate in the lesson planning process with another teacher	F	171	180	46	7	0	85.5	4.27	0.73	13	Very high
		%	42.3	44.6	11.4	1.7	0					
9	I believe that cooperation between general and special education teachers will help achieve teaching goals in a timely manner	F	198	164	34	8	0	87.33	4.37	0.72	8	Very high
		%	49	40.6	8.4	2	0					
10	I believe that co-teaching will reduce the negative perception of children with disabilities	F	239	122	38	5	0	89.46	4.47	0.72	2	Very high
		%	59.2	30.2	9.4	1.2	0					
11	I believe that co-teaching in regular classrooms achieves the principle of equal educational opportunities for ordinary students and people with disabilities	F	178	158	52	14	2	84.55	4.23	0.84	15	Very high
		%	44.1	39.1	12.9	3.5	0.5					
12	I believe that co-teaching helps meet individual differences between ordinary students and those with disabilities	F	172	165	47	15	5	83.96	4.20	0.87	16	High
		%	42.6	40.8	11.6	3.7	1.2					
13	I think classroom management through co-	F	164	156	68	10	6	82.87	4.14	0.89	18	High
		%	40.6	38.6	16.8	2.5	1.5					

14	teaching between general and special education teachers will be easier	F	109	155	115	20	5	76.98	3.85	0.92	19	High
	I think I can deal with students' academic problems during classroom teaching without help	%	27	38.4	28.5	5	1.2					
15	I believe that co-teaching will make the classroom environment a rich and supportive environment	F	178	169	50	6	1	85.59	4.28	0.75	11	Very high
	I believe that the co-teaching method requires the use of various teaching aids in the classroom	%	44.1	41.8	12.4	1.5	0.2					
16	I believe that the co-teaching method requires the use of multiple teaching strategies to meet the needs of all regular students and those with disabilities	F	214	167	21	2	0	89.36	4.47	0.62	3	Very high
	I expect that co-teaching requires the use of various assessment methods to evaluate the performance of ordinary students and those with disabilities	%	53	41.3	5.2	0.5	0					
17	I anticipate that co-teaching between general and special education teachers will achieve better learning outcomes	F	196	178	28	2	0	88.12	4.41	0.64	5	Very high
	I think that general and special education teachers complement each other	%	48.5	44.1	6.9	0.5	0					
18		F	191	176	33	4	0	87.43	4.37	0.68	7	Very high
		%	47.3	43.6	8.2	1	0					
19		F	187	171	35	8	3	86.29	4.31	0.77	9	Very high
		%	46.3	42.3	8.7	2	0.7					
20		F	226	136	36	6	0	88.81	4.44	0.72	4	Very high
		%	55.9	33.7	8.9	1.5	0					
Overall Mean								85.39	4.2693	0.542		Very high

Table 4: Independent sample t-test results

General and special education toward co-teaching	Gender	N	Mean	SD	T	Sig. (2-tailed)
	Males	113	4.2075	0.56	-1.430	0.154
	Females	291	4.2933	0.531		

H.3. Years of experience has no effect on general and special education teachers' attitudes toward co-teaching: To identify the differences between the attitudes of general and special education teachers toward co-teaching in the city of Makkah attributable to the experience variable (≤ 5 years, 6–10 years, 11–20 years, and ≥ 21 years), the researchers used ANOVA considering Years of experience as the

independent variable and attitudes toward co-teaching as the dependent variable. The result of the ANOVA as shown in Table 5, shows that the F-value is more than the alpha level of 0.05. So, there are no statistically significant differences at the 0.05 level in the total score of the questionnaire that can be attributed to the experience variable.

Table 5: ANOVA results for attitudes toward co-teaching due to experience variable

	Sum of squares	df	Mean square	F.	Sig.
Between Groups	27.996	4	6.999	2.3881	.092 not sig.
Within Groups	79.873	399	0.2001		
Total	98,984	403			

H.4. Academic qualifications have no effect on general and special education teachers' attitudes toward co-teaching: To assess the differences between the general and special education teachers' attitudes toward co-teaching in the city of Makkah attributable to educational qualifications (Bachelor, Diploma, Master, and Ph.D.), the researchers used ANOVA considering academic qualifications as the

independent variable and attitudes toward co-teaching as the dependent variable. The result of the ANOVA as shown in Table 6, shows that the F-value is more than the alpha level of 0.05. So, there are no statistically significant differences at the 0.05 level in the total score of the questionnaire that can be attributed to the academic qualifications variable.

Table 6: ANOVA results for attitudes toward co-teaching due to academic qualifications variable

	Sum of squares	df	Mean square	F.	Sig.
Between Groups	22.534	4	5.633	1.7561	.085 not sig.
Within Groups	66.386	399	0.166		
Total	84,756	403			

H.5. Specialization has no effect on general and special education teachers' attitudes toward co-teaching: To assess the differences between the general and special education teachers' attitudes toward co-teaching in the city of Makkah attributable to the specialization variable (General education, learning disabilities, intellectual disabilities, and autism), the researchers used ANOVA considering specialization as the independent variable and attitudes toward co-teaching as the dependent

variable. The result of the ANOVA as shown in [Table 7](#), shows that the F-value is less than the alpha level of 0.05. So, there are statistically significant differences at the 0.05 level in the total score of the questionnaire that can be attributed to the specialization variable. [Table 8](#) shows that the difference is in favor of teachers with learning disabilities.

Table 7: ANOVA results for attitudes toward co-teaching due to specialization variable

	Sum of squares	df	Mean square	F.	Sig.
Between Groups	30.867	4	7.716		
Within Groups	112.386	399	0.2816	19,56	.013 sig.
Total	189,351	403			

Table 8: Multiple comparisons

Variables	Mean difference	Std. error	Sig.
General education vs learning disabilities	30.500	10.882	.011
Intellectual disabilities vs learning disabilities	32.321	11.758	.010
Autism vs learning disabilities	29.662	10.659	.013

H.6. Training courses related to co-teaching have no effect on general and special education teachers' attitudes toward co-teaching: To identify the differences between the general and special education teachers' attitudes toward co-teaching in the city of Makkah that are attributable to the training courses variable (no courses, less than 5 courses, 6 courses or more), the researchers used ANOVA considering training courses as the

independent variable and attitudes toward co-teaching as the dependent variable. The result of the ANOVA as shown in [Table 9](#), shows that the F-value is less than the alpha level of 0.05. So, there are statistically significant differences at the 0.05 level in the total score of the questionnaire can be attributed to the training courses variable. [Table 10](#) shows that the difference is in favor of those who were trained.

Table 9: ANOVA results for attitudes toward co-teaching due to specialization variable

	Sum of squares	df	Mean square	F.	Sig.
Between Groups	39.815	4	9.953		
Within Groups	167.387	399	0.493	19,56	.013 sig.
Total	198,351	403			

Table 10: Multiple comparisons

Variables	Mean difference	Std. error	Sig.
no courses Vs less than 5 courses	34.671	10.882	.011
no courses Vs 6 courses or more	38.387	16.758	.010

5. Discussion

This study was conducted to investigate general and special education teachers' attitudes toward co-teaching in Makkah. This area has rarely been investigated in Makkah, Saudi Arabia. The researchers shared an online survey with 404 general and special education teachers. This study's findings were interesting and will be beneficial for future studies intending to investigate the same problem.

This study's findings found that both general and special education teachers working at this school have a positive attitude toward co-teaching programs. The majority of the teachers stated that co-teaching is very important to ensure that students with special needs receive the needed support in the mainstream classroom and positively impacts their progress. According to teachers' perspectives and experience, co-teaching is beneficial for students with disabilities and general education students.

Co-teaching is an instruction delivery approach. It is requiring two licensed and qualified teachers to work together collaboratively to meet students' needs. One teacher is trained and has experience in teaching a large group of students, and the other is trained and has experience in supporting individuals and meeting students' needs ([Obeidat, 2020](#)).

Co-teaching relationships allow teachers to teach, plan, and assess together, so teachers will become more able to make appropriate and need-based modifications to the curriculum. This type of collaboration will embed teachers' skills and experience.

The results of the first question show that the attitudes level of general and special education teachers toward co-teaching was moderate-high ($M = 4.2693$). This finding may be due to the awareness of general and special education teachers of the importance of their partnerships in the educational process of teaching regular students and SWDs. There were no indicators of quality control for this type of program or its ineffectiveness, which makes

those in charge of these educational programs, including administrative, technical, and educational staff, unwilling to pay much attention to such services.

These results are consistent with the findings reported by Al-Khatib (2020), Strogilos et al. (2016), and Hamilton-Jones and Vail (2014), which indicate that the attitudes of special education teachers toward the use of co-teaching with SWDS are positive. They are also consistent with a study conducted by Bagbas (2018), which stated that the use level of the co-teaching method from the point of view of teachers of students with learning disabilities was 3.01 (moderate). Al-Dabbas and Al-Hussein (2019) also argued that teachers have a moderate level of willingness to use co-teaching.

The results indicate that there is no statistically significant difference that can be attributed to the gender variable. This result could be explained by the fact that the importance of co-teaching was not different between both genders, given that the school environment, cultural awareness, and the needs of students with disabilities for co-teaching are often similar. This result is inconsistent with the study of Al-Omari and Afia (2020), which showed differences in the attitudes of male and female teachers toward students with learning disabilities in favor of females.

However, the results of this study are inconsistent with those from the study by Al-Omari and Afia (2020), who indicated a high level of attitude among general education teachers and teachers of students with learning disabilities toward co-teaching. Similarly, Aba-Hussein and Al-Hussein (2016) demonstrated that their participating teachers' knowledge level of co-teaching was high, whereas its application was moderate.

The results indicate that there is no statistically significant difference that can be attributed to the years of experience variable. The results of the current study indicate that there is a reasonable awareness among general and special education teachers about the importance of co-teaching, as it was enthusiastically and well received by all educational experiences. This may be because most of the environments, professional qualifications, and training courses are often the same. This result is consistent with studies by Al-Omari and Afia (2020) and Friend (2008), who indicated that there were no statistically significant differences in the awareness of general and special education teachers about the importance of co-teaching based on the number of years of experience. The results indicate that there are no statistically significant differences at the 0.05 level in the total score of the questionnaire can be attributed to the academic qualifications variable. This finding may be attributed to the majority of the study sample members having a bachelor's degree, which limited the emergence of differences attributable to their educational qualifications. The vast majority of the teachers had studied in similar academic programs and had worked in similar

educational environments. This result is consistent with the conclusions offered by Al-Omari and Afia (2020), whose results indicated that there were no differences attributable to the variables of academic qualification but inconsistent with Al-Khatib (2020), who indicated that there were statistically significant differences due to the educational qualifications variable, in favor of the master's degree or higher.

There statistically significant differences at the 0.05 level in the total score of the questionnaire can be attributed to the specialization variable. Table 8 shows that the difference is in favor of teachers with learning disabilities. This finding can be attributed to the argument that teachers of students with learning disabilities are more skilled at working with their category of students whose disabilities are more reflected in their poor performance than is the case with regular peers. Accordingly, these students need more co-teaching than their regular peers. Moreover, teaching people with learning disabilities requires greater effort and different teaching methods to meet their needs.

This study is consistent with the conclusions of Takala and Uusitalo-Malmivaara (2012), whose results showed that there were differences between general and special education teachers in favor of the latter and with the study by Al-Dabbas and Al-Hussein (2019), who indicated that special education teachers were more willing to use co-teaching than general education teachers. However, the findings are inconsistent with those of Al-Omari and Afia (2020), who showed no differences in the attitudes between general and special education teachers toward co-teaching based on specialization. This can be ascribed to the field's need for recent educational practices that meet the needs of all students.

Course training has a positive effect on teachers' attitudes. This result can be ascribed to the argument that training courses may be insufficient and not related to co-teaching. The findings of the current study are consistent with those of several previous studies. For example, Al-Dabbas and Al-Hussein (2019) indicated that there were statistically significant differences in favor of teachers who had prior training. Pancsofar and Petroff (2016) indicated that more training courses and knowledge of the practice of co-teaching increase the application level. Pancsofar and Petroff (2016) found a relationship between teachers' willingness to co-teach and their training adequacy in using co-teaching with their students. It is indicated that there were statistically significant differences due to the variable of training courses, in favor of those who attended one training course (Austin, 2001). Attending courses related to the application of co-teaching increased awareness of the importance of co-teaching for regular students and SWDs. Further, teachers who had prior training were more receptive, enthusiastic, and positive about the application of the co-teaching method.

This finding is reinforced by previous studies in which teachers who shared instructional responsibilities reported that they enjoyed and

benefited from collegial exchanges of strategies to improve learning opportunities for students (Banerji and Baily, 1995).

6. Conclusion

Studies of future trends suggest that the inclusion of handicapped students in the general education classroom will increase and continue into the 21st century (Putnam et al., 1995). An awareness of the varied co-teaching models is important with the understanding to be intentional when selecting the right model for a specific lesson (Stein, 2018). Teachers' attitudes and readiness are significantly affecting the success of co-teaching, as it is the cornerstone of this process. When teachers are qualified, trained, have a positive attitude, and work collaboratively, co-teaching will be efficient and beneficial for students with special needs and general education students.

The findings of this study imply several recommendations, including the need to pay attention to the professional development of working general and special education teachers through the adoption of a comprehensive training program by the MOE (2020) to train and educate teachers about the co-teaching method and how to practice it in the regular classroom.

There is also a need to reconsider updating current university courses and the integration of co-teaching in the preparation of all teachers in all disciplines at the undergraduate level. Teachers at the undergraduate level should be provided with the opportunity to practice co-teaching by attending classes where it is applied to give them greater experience. Given the identified importance and effectiveness of co-teaching with students with disabilities, it is hoped that co-teaching will be applied at all educational levels and that the school environment will be rehabilitated accordingly.

Co-teaching ensures that students with disabilities receive education with their classmates within the regular classroom and in a less restrictive environment. Finally, the prominent role of the school administration, which oversees and directs such applications, cannot be overlooked. School leaders and educational supervisors should be offered courses on the importance, forms, and methods of applying co-teaching to support effective implementation at the school level.

Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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