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Teachers' Attitudes Toward the Educational Inclusion of Children with Disabilities in Omani Kindergartens

اتجاهات المعلمات نحو الدمج التربوي للأطفال ذوي الاعاقة في مرحلة رياض
الأطفال في سلطنة عمان

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Abstract

This study investigated the attitudes of female teachers ($N = 169$) toward the educational inclusion of children in kindergarten within the Sultanate of Oman. A Digital survey was conducted to gather insights into the teachers' perspectives across two domains: the learning environment (LE) and the Impact of Early Inclusion in Kindergarten (IEIK). The results indicate that teachers demonstrate strong support for the inclusion of children with disabilities in kindergarten, underscoring the importance of establishing a conducive learning environment. This includes recommendations for increasing the number of teachers, modifying school infrastructure, and adapting curricula to accommodate the diverse abilities of all students. A comparative analysis of the two domains reveals a greater endorsement among teachers for issues related to the physical environment over those pertaining to the non-physical environment. The study concludes with a discussion of the implications of these findings.

Keywords: Educational Inclusion, children with disabilities, Oman, Kindergarten, teachers' attitudes

مستخلص البحث

هدفت الدراسة الى استقصاء اتجاهات المعلمات نحو الدمج التعليمي للأطفال في رياض الأطفال في سلطنة عمان. تكونت عينة الدراسة من 169 معلمة وذلك عن طريق إجراء استبانة رقمي للتعرف على وجهات نظرهن في مجالين: بيئة التعلم (LE) وتأثير الدمج المبكر في رياض الأطفال (IEIK). وتوصل البحث الى عدد من النتائج اهمها الدعم القوي الذي عبرت عنه المعلمات نحو دمج الأطفال ذوي الإعاقة في رياض الأطفال من خلال توفير بيئة تعليمية مناسبة تتمثل في زيادة عدد المعلمين وتعديل المباني المدرسية وتكييف البرامج والمناهج بما يتناسب مع قدرات جميع الأطفال. وتشير المقارنة الشاملة بين المجالين إلى أن المعلمين يميلون إلى تأييد قضايا البيئة المادية أكثر من قضايا البيئة غير المادية. يناقش هذا البحث التفسيرات والآثار المترتبة على النتائج.

الكلمات المفتاحية: الدمج التعليمي، الأطفال ذوي الإعاقة، سلطنة عمان، رياض

الأطفال، اتجاهات المعلمات

Introduction

Every child is entitled to an educational opportunity that offers real-life experiences, regardless of their abilities. Quality education can support children with disabilities in developing their personalities, abilities, and attitudes. The Compulsory Education Act across the globe supports the attendance of children with disabilities in regular classes (Lucia, 1999). However, the Education Act is designed to help children with special requirements and does not mandate compulsory attendance of children with disabilities in standard classes. Nevertheless, various countries in the Eastern and Arab regions have taken the initiative to formulate specialized teacher training programs that will enhance the management of institutions accommodating children with learning abilities in all schools (Kotor et al., 2022; Friend & Bursuck, 2019; Al-Qaryouti et al., 2016).

Teachers play a crucial role in the performance and development of students worldwide. The attitudes of teachers toward educational inclusion can significantly impact children with learning disabilities, as they often face challenges in teaching these students. While all stakeholders have a role in promoting educational inclusion, educators are the primary drivers of this concept. Early childhood teachers are responsible for managing, adjusting, and leading kindergarten classes, and they directly interact with all students, including those with disabilities. Therefore, early childhood teachers bear the primary responsibility for including children with disabilities in their classrooms. The mindset of educators greatly influences the shift from rejecting children with disabilities to embracing and integrating them into the classroom. Research shows the importance of collaboration between teachers and parents in fostering an inclusive educational environment. When parents perceive that their children are receiving appropriate support and attention, it enhances their overall satisfaction and reinforces the commitment of teachers to inclusive practices (Al-Qaryouti et al., 2023). This collaborative relationship can further motivate educators to adopt inclusive strategies, thereby benefiting all students and promoting a more supportive learning atmosphere.

The increasing awareness of the importance of educating children with disabilities has led to a significant rise in integrated kindergartens. This investment ensures that all children, including those with limited intellectual or physical abilities, receive convenient and high-quality education. Article 1 of Chapter 1 of the child law of the Sultanate of Oman stipulates that a child with a disability is:

“a child who is suffering from an impairment of his or her sensory, physical or mental abilities, that is either congenital or resulting from a genetic factor, a disease or an accident that limits the capacity of the said child to fulfill his or her normal role in life and participate fully and effectively in the society on an equal basis with others” (Child Law, 2014, p. 4).

Considering this definition, it is important to recognize that children with disabilities have varying capacities, as indicated by medical reports.

Literature Review

The 2030 agenda of UNESCO aims to create more sustainable and equal communities, starting with inclusive educational systems (Medina-García et al., 2020; UNISCO, 2020). Kindergarten institutions that adopt the inclusion model seek to provide fair opportunities for students with disabilities to learn and interact with classmates, allowing them to fully develop their potential (Ethabti, 2015; Love & Beneke, 2021). The objectives of inclusion initiatives should be tailored to the unique interests, services provided, and level of preparation offered by integrating establishments. High quality (Tekin et al. 2021) and diverse services contribute to achieving more goals.

Inclusive education's goals are not easily achieved, and the system requires time to develop and expand. The commitment of all stakeholders in the educational process is necessary for the emergence of a unified education system that can meet the significant needs of all students.

Therefore, preparing general education teachers for inclusion programs is essential. This will guide teachers to consider the aims and priorities thoroughly to apply the program's strategies effectively to better cater to children with disabilities. Despite not feeling particularly positive about inclusion, teachers have indicated a willingness to change their behavior to encourage inclusion in their classrooms. Training on inclusion is essential for teachers to meet reform requirements and has a strong, favorable impact on teachers' attitudes to cognitive, affective, and behavioral dimensions (Love & Beneke, 2021; Ethabti, 2015; Friend & Bursuck, 2019; Hussien et al., 2015; Scanlon et al., 2022).

Teachers frequently encounter challenges when attempting to implement inclusive education practices. A primary concern is the insufficient professional development available to them. Research indicates that between one-quarter and one-third of teachers have not received any in-service or on-the-job training, despite being expected to accommodate students with disabilities and facilitate their academic success. Additionally, even teachers with relatively strong backgrounds struggle to allocate sufficient time to meet the needs of students with disabilities while ensuring that all students receive equitable attention and support. Another significant issue identified by a group of teachers pertains to the effects of overall class size, access to affordable resources and programs, and the ability to effectively manage and motivate students with disabilities (Westwood & Graham, 2003; Ahmed, 2018).

The impact of kindergarten teachers' attitudes on successful inclusion has been a topic of public debate in numerous research studies. Studies from various countries have been conducted to identify teachers' different views toward inclusion. Kotor et al. (2022) discovered that the quality of life and academic success of special needs children in schools may be significantly affected by the fact that most teachers have limited knowledge and understanding of children with special educational needs

(SEN), leading to more negative attitudes toward teaching these children in mainstream classrooms. In their study, many teachers in Ghana displayed unfavorable attitudes toward children with SEN and had insufficient information and understanding of how to teach them. Similarly, Ghouri et al. (2010) found that teachers' perspectives on the educational inclusion of kindergarten children with disabilities depend on critical factors such as their experience, training, and self-efficacy beliefs when working with handicapped children. Additionally, Moore (2005) noted that teachers with more extensive work experience in teaching demonstrate positive attitudes toward inclusion, unlike those with less knowledge and expertise.

Emam and Mohamed (2011) conducted a study on the relationship between teachers' self-efficacy and their attitudes toward inclusion in preschool and primary school settings for children with special educational needs (SEN) in Egypt. The study found that teachers with more experience had more positive attitudes toward inclusion, but their perception of self-efficacy in educating disabled learners was not influenced by experience. There were no significant differences in the perspectives of teachers in preschool and primary school. In another study, Ahmed (2018) examined kindergarten teachers' attitudes toward including children with disabilities in regular kindergartens in Khartoum. The findings showed that early childhood teachers had positive attitudes toward the inclusion of children with impairments with their peers.

Additionally, Al-Zyoudi (2006) investigated teachers' attitudes toward inclusive education in Jordan and the factors that influenced these attitudes. The study revealed that more than half of the participants supported the idea of children with disabilities being able to attend public schools. However, teachers' beliefs were influenced by the nature and severity of the disability, their teaching experience, and training. The focus was on the knowledge and skills that could motivate them as professionals. The study also highlighted the importance of training in fostering positive

attitudes toward inclusion. Moreover, Al-Qallaf et al. (2022) identified five categories of potential barriers to inclusion: barriers posed by teachers, social barriers, academic barriers, physical barriers, and psychological barriers. The researchers recommended that the government introduce new programs to better train pre-service teachers to address the challenges they may encounter in inclusive classrooms to promote a more inclusive mindset among teachers.

Khochen and Radford (2012) conducted a study to examine the attitudes of teachers and head teachers toward individuals with disabilities in traditional primary schools in Lebanon. The research survey was designed to gather insights from individuals with prior experience working with students with disabilities. Overall, the results showed positive attitudes toward the inclusion of children in mainstream schools. Additionally, Al-Qaryouti et al. (2016) aimed to attain kindergarten teachers' perspectives on the educational inclusion of children with disabilities in the Arab Gulf countries. The findings indicated that kindergarten teachers' attitudes toward inclusion were moderate across various aspects and overall dimensions of the questionnaire. The study confirmed that kindergarten teachers who had interacted with children with disabilities and had specialized training demonstrated more positive attitudes compared to teachers who had not interacted with children with disabilities and lacked specialized training.

In the Sultanate of Oman, Hussien et al. (2015) conducted a study to explore stakeholders' opinions on the best educational placement for students with disabilities. The study found that many Omani stakeholders preferred to educate students with disabilities in mainstream schools rather than in separate facilities. The research also indicated that stakeholders' preference for educating children in a regular school environment versus a separate facility differed depending on the type of disability.

Previous studies have demonstrated that teachers' attitudes toward inclusive and integrated education vary across different nations. While some

research indicates a generally optimistic perspective regarding inclusive education, other studies reveal a more pessimistic outlook. The majority of these investigations have primarily concentrated on teachers' views toward educational inclusion within mainstream schools, with comparatively little attention given to the kindergarten level.

Research Methodology

The study used a descriptive methodology to explore the study variables and assess their relationships without interfering with or controlling any conditions. The study aimed to investigate the attitudes of female teachers in Oman toward the educational inclusion of children with disabilities in kindergarten. Specifically, the study aimed to answer the following questions:

1. What are the attitudes of female teachers in Oman toward the inclusion of children with disabilities in kindergarten?
2. Do the mean scores of female teachers' attitudes toward the inclusion of children with disabilities in kindergarten differ significantly due to the teacher's qualification, specialization, experience, province location, students' category, students' age group, school cycle, job sector, school type, and number of students in the classroom ($\alpha \leq 0.05$)?

Data collection

The attitudes of teachers in this study were surveyed using an electronic questionnaire designed on the JotForm website. Teachers were invited to participate in the study, and the invitations were sent through the school's administration. Data collection took place during the second semester of 2021. The questionnaire can be completed in less than 15 minutes. A note saying "This field is required" appears if an answer is skipped to ensure that all items are responded to. It was emphasized in the introduction to the questionnaire that participation in the study was completely voluntary and that the teachers had the right to withdraw at any

time. It was also indicated that the data from this study were confidential and would be used for scientific research purposes only.

Statistical Analysis

Descriptive statistics were calculated for the items on the teacher's attitudes scale, and a related sample one-way MANOVA was used to address the research question. A follow-up univariate one-way ANOVA was conducted based on the results of the MANOVA to examine the teachers' attitudes toward educational inclusion (N = 196).

Participants

The data for this study was gathered from 196 teachers. It included information on eleven demographic variables: teachers' qualification, specialization, gender, province location, experience, student category, student age group, school cycle (level), school type, teacher job sector (public or private), and number of children in the classroom

Instrument

The study instrument was designed based on theoretical literature and recent research related to teachers' attitudes toward the inclusion of children with disabilities in kindergarten (Friend & Bursuck, 2019; Al-Qaryouti et al., 2016; Ethabti, 2015; Hussien et al., 2015; Emam & Mohamed, 2011; Avramidis & Norwich, 2002; Bryant et al., 2019).

A questionnaire with twenty-five positively worded items, using a Likert five-point scale (strongly agree = 5, agree = 4, neutral = 3, disagree = 2, strongly disagree = 1), was developed to assess female teachers' attitudes toward the inclusion of children with disabilities in kindergarten. The questionnaire's content validity was assessed by presenting it to five specialists in special education with PhDs, the early education, special education, and psychology specializations at Sultan Qaboos University and Nizwa University in Oman. The specialists recommended no significant

changes except for some language modifications on a few items. Additionally, the construct validity of the questionnaire was assessed using exploratory factor analysis through principal component analysis (PCA) with varimax rotation.

The Kaiser-Mayer-Olkin measure of sampling adequacy was found to be 0.947, indicating a satisfactory sample size. Bartlett's Test of Sphericity was significant ($\chi^2(300) = 4803.997$, $p = 0.000$), indicating that the correlations matrix among the responses on all items represents a singular matrix. The rotated component pattern revealed two factors greater than 1.5, explaining 65.337% of the total variance. Based on the rotated component matrix, three items (6, 12, and 15) were dropped from the questionnaire due to cross-loading in another component. The finalized version of the questionnaire consisted of twenty-two items equally distributed in two domains: the first domain included items (1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 14), referred to as the learning environment, while the second domain included items (13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25), referred to as the impact of early inclusive in kindergarten on different issues. Inter-correlations between the sub-scores on both domains and the combined total score were calculated to validate calculating a combined total score representing the teachers' attitudes toward the inclusion of children with disabilities in kindergarten. The results are displayed in Table 1.

Table 1

Inter-correlations among sub-scores on every domain and the total score (N = 196)

| Domain | | Learning Environment (LE) | Impact of Early Inclusive in Kindergarten (IEIK) | Total Score |
|--|-------------|---------------------------|--|-------------|
| Learning Environment (LE) | Environment | 1.0 | 0.708** | 0.894** |
| Impact of Early Inclusion in Kindergarten (IEIK) | | | 1.0 | 0.950** |
| Total Score | | | | 1.0 |

** Correlation is significant at the 0.01 level (2-tailed).

In Table 1, it was observed that the sub-scores for both domains were strongly correlated with the combined total score ($\alpha \leq 0.01$), and this correlation was higher than the correlation between the sub-scores themselves. Therefore, it is justifiable to combine the two sub-scores to calculate a total score that represents teachers' attitudes toward the inclusion of children with disabilities in kindergarten.

Cronbach's Alpha reliability coefficients for both domains and the combined total score were calculated and found to be reasonable, as indicated in Table 2.

Table 2*Reliability coefficients of the instrument components*

| Component | Number of Items | Cronbach's-Alpha |
|--|-----------------|------------------|
| Learning Environment (LE) | 11.00 | 0.92 |
| Impact of Early Inclusive in Kindergarten (IEIK) | 11.00 | 0.95 |
| Total Score | 22.00 | 0.96 |

Findings

The mean, standard deviation, and rank of female teachers' attitudes toward the inclusion of children with disabilities in kindergarten were calculated for each item in every domain to address the first research question. Results revealed strong agreement among teachers regarding all items in the first domain pertaining to the learning environment. This domain focuses on providing a suitable learning environment for children with disabilities in kindergarten, including increasing the number of teachers, modifying school buildings, and adapting programs and curricula to accommodate all children. Additionally, the overall degree of agreement among teachers regarding all items in the second domain, the impact of early inclusion in kindergarten, was relatively high, indicating positive attitudes toward the early inclusion of children with disabilities in

kindergarten. This positive impact encompasses humanitarian, psychological, social, economic, and academic achievement aspects.

Upon overall comparison between the two domains, it is apparent that educators demonstrate a greater inclination toward addressing physical environment issues in contrast to non-physical environment issues. This observation holds except for item 13 in the second domain, which is associated with the early inclusion of children with disabilities and its role in mitigating negative portrayals of these children.

The analysis of the results indicates a strong consensus among teachers regarding the content of item 3 in the initial domain, emphasizing the necessity of creating a secure and inclusive learning environment for all children, irrespective of their abilities. Item 3 garnered the highest mean agreement score among all items in the first domain. Following closely was item 2, which centered on the teachers' advocacy for increasing the number of educators in kindergarten classes to ensure equitable education for all children, regardless of their abilities. Conversely, despite the teachers' strong concurrence with the content of item 7, which pertains to the sense of relief experienced by teachers when instructing children with disabilities alongside their peers in kindergarten, this item obtained the lowest mean agreement score and was ranked last within its domain. Similarly, while the teachers exhibited strong consensus on the content of item 9, which addresses the advantages of integrating children with disabilities among their peers in kindergarten to introduce diverse professional experiences supporting universal learning, it ranked second to last within its domain.

In relation to the second domain, which focuses on the effects of early inclusion in kindergarten, the findings indicate that item 13 received the highest level of consensus among the educators, followed by item 17. Item 13 pertains to the role of early inclusion of children with disabilities in dispelling negative stereotypes of these children, while item 17 concerns the

positive influence of early inclusion on the academic performance of children with disabilities. Despite reaching a consensus on the content of item 25, which posits that early inclusion of children with disabilities in kindergarten has no impact on the classroom environment, it ranked lowest among the second-domain items. Similarly, although there was agreement that early inclusive education in kindergarten does not pose any danger (item 24), this item ranked second to last among the second-domain items.

To address the second question in this section, we computed the means and standard deviations of teachers' responses for each domain and the overall combined total score of the attitudes questionnaire across various categories of eleven demographic variables. These variables include teacher qualification, teacher specialization, teacher gender, province location, teacher experience, student category, student age group, school cycle, job sector, school type, and number of students in the classroom. The analysis indicates that teachers' attitudes mean scores vary based on the different categories of each demographic variable in both domains and the overall combined total score. One-way MANOVA was utilized to assess the statistical significance of the differences among the mean scores of teachers' attitudes concerning the demographic variables, as illustrated in Table 3. The results were found to be satisfactory.

Table 3

Results of one-way MANOVA of the teachers' attitudes toward the inclusion of children with disabilities in kindergarten as a function of all demographic variables (N = 196)

| Source | Dep. Var. | SS | Df | MS | F | Sig. | η^2 |
|--|-------------|------|------|------|------|---------|----------|
| Teacher Qualification (Wilks' Lambda = .935*) | LE | 4.06 | 2.00 | 2.03 | 6.11 | 0.003** | 0.06 |
| | IEIK | 2.12 | 2.00 | 1.06 | 1.48 | 0.23 | 0.02 |
| | Total Score | 3.01 | 2.00 | 1.51 | 3.47 | 0.033* | 0.04 |
| Teacher Specialization | LE | 1.54 | 3.00 | 0.51 | 1.48 | 0.22 | 0.02 |
| | IEIK | 2.66 | 3.00 | 0.89 | 1.24 | 0.30 | 0.02 |

| Source | Dep. Var. | SS | Df | MS | F | Sig. | η^2 |
|---|-------------|------|------|------|------|---------|----------|
| (Wilks' Lambda = .965) | Total Score | 1.87 | 3.00 | 0.62 | 1.41 | 0.24 | 0.02 |
| Teacher Gender (Hotelling's = .015) | LE | 0.93 | 1.00 | 0.93 | 2.67 | 0.10 | 0.01 |
| | IEIK | 1.51 | 1.00 | 1.51 | 2.11 | 0.15 | 0.01 |
| | Total Score | 1.20 | 1.00 | 1.20 | 2.72 | 0.10 | 0.01 |
| Province Location (Wilks' Lambda = .948*) | LE | 0.73 | 2.00 | 0.36 | 1.04 | 0.36 | 0.01 |
| | IEIK | 3.48 | 2.00 | 1.74 | 2.46 | 0.09 | 0.03 |
| | Total Score | 1.38 | 2.00 | 0.69 | 1.56 | 0.21 | 0.02 |
| Teacher Experience (Wilks' Lambda = .981) | LE | 0.94 | 2.00 | 0.47 | 1.35 | 0.26 | 0.01 |
| | IEIK | 2.48 | 2.00 | 1.24 | 1.74 | 0.18 | 0.02 |
| | Total Score | 1.62 | 2.00 | 0.81 | 1.83 | 0.16 | 0.02 |
| Student Category (Wilks' Lambda = 3.160*) | LE | 3.31 | 2.00 | 1.66 | 4.92 | 0.008** | 0.05 |
| | IEIK | 7.49 | 2.00 | 3.75 | 5.46 | 0.005** | 0.05 |
| | Total Score | 5.14 | 2.00 | 2.57 | 6.08 | 0.003** | 0.06 |
| Student Age Group (Wilks' Lambda = .980) | LE | 1.33 | 2.00 | 0.66 | 1.91 | 0.15 | 0.02 |
| | IEIK | 1.00 | 2.00 | 0.50 | 0.70 | 0.50 | 0.01 |
| | Total Score | 1.15 | 2.00 | 0.58 | 1.30 | 0.27 | 0.01 |
| School Cycle (Wilks' Lambda = .974) | LE | 0.94 | 2.00 | 0.47 | 1.35 | 0.26 | 0.01 |
| | IEIK | 3.00 | 2.00 | 1.50 | 2.11 | 0.12 | 0.02 |
| | Total Score | 1.74 | 2.00 | 0.87 | 1.98 | 0.14 | 0.02 |
| Teacher Job Sector (Hotelling's = .012) | LE | 0.75 | 1.00 | 0.75 | 2.14 | 0.15 | 0.01 |
| | IEIK | 1.33 | 1.00 | 1.33 | 1.86 | 0.17 | 0.01 |
| | Total Score | 1.02 | 1.00 | 1.02 | 2.30 | 0.13 | 0.01 |
| School Type (Wilks' Lambda = .933) | LE | 3.84 | 5.00 | 0.77 | 2.27 | 0.050* | 0.06 |
| | IEIK | 7.41 | 5.00 | 1.48 | 2.12 | 0.06 | 0.05 |
| | Total Score | 5.43 | 5.00 | 1.09 | 2.54 | 0.030* | 0.06 |
| Number of Students in Class (Wilks' Lambda = .973) | LE | 0.60 | 3.00 | 0.20 | 0.57 | 0.64 | 0.01 |
| | IEIK | 1.05 | 3.00 | 0.35 | 0.49 | 0.69 | 0.01 |
| | Total Score | 0.52 | 3.00 | 0.17 | 0.38 | 0.77 | 0.01 |

* $\alpha \leq 0.05$

** $\alpha \leq 0.01$

The data presented in Table 3 indicates statistically significant variances in the mean scores of teachers' attitudes within the learning environment domain (LE), with a moderate effect size (partial Eta squared = .060), and the overall combined total score, with a small effect size (partial Eta squared = .035), based on the teachers' qualifications (secondary, diploma, bachelor, or above). Conversely, no significant differences were observed in the mean scores of teachers' attitudes within the domain of the impact of early inclusion in kindergarten based on the teachers' qualifications. Additionally, statistically significant variances were found in the mean scores of teachers' attitudes within the domains of the learning environment (LE), the impact of early inclusion in kindergarten (IEIK), and the overall combined total score based on the category of students taught by the teacher. The effect size values for these three domains were determined to be small (partial Eta squared = 0.048, 0.054, and 0.059), respectively.

The findings demonstrate statistically significant variances in the mean scores of teachers' attitudes toward the learning environment (LE) domain and the overall combined total score based on the school type variable (public, private bilingual, international, private for communities, private monolingual, and Quran memorization). The effect size for the learning environment (LE) domain was small, while it was moderate for the overall combined total score, indicated by partial Eta squared values of 0.056 and 0.63, respectively. No significant differences were observed in the mean scores of teachers' attitudes toward the impact of early inclusion in the kindergarten (IEIK) domain. Additionally, Table 3 illustrates that there were no significant differences in the mean scores of teachers' attitudes across any domain or the overall combined total score based on variables such as teacher's specialization, gender, experience, and job sector. To investigate the significant differences revealed by MANOVA, a follow-up univariate one-way ANOVA was conducted, as detailed in Table 4.

Table 4

Results of univariate one-way ANOVA of the teachers' attitudes toward the inclusion of children with disabilities in kindergarten as a function of the teacher qualification, student category, and school type variables (N = 196)

| Independent Variable | Domain | Source | SS | Df | MS | F | Sig. | η^2 | |
|-----------------------|-------------|----------------|----------------|-------|-------|------|--------|----------|------|
| Teacher Qualification | LE | Between Groups | 4.06 | 2.00 | 2.03 | 6.11 | .003** | 0.06 | |
| | | Within Groups | 64.22 | 193. | 0.33 | | | | |
| | | Total | 68.28 | 195. | | | | | |
| | Total Score | Between Groups | 3.01 | 2.00 | 1.51 | 3.47 | .033* | 0.04 | |
| | | Within Groups | 83.67 | 193.0 | 0.43 | | | | |
| | | Total | 86.68 | 195.0 | | | | | |
| Student Category | LE | Between Groups | 3.31 | 2.00 | 1.66 | 4.92 | .008** | 0.05 | |
| | | Within Groups | 64.97 | 193.0 | 0.34 | | | | |
| | | Total | 68.28 | 195.0 | | | | | |
| | IEIK | Between Groups | 7.49 | 2.0 | 3.75 | 5.46 | .005** | 0.05 | |
| | | Within Groups | 132.53 | 193.0 | 0.69 | | | | |
| | | Total | 140.03 | 195.0 | | | | | |
| | Total Score | Between Groups | 5.14 | 2.00 | 2.57 | 6.08 | .003** | 0.06 | |
| | | Within Groups | 81.54 | 193.0 | 0.42 | | | | |
| | | Total | 86.68 | 195.0 | | | | | |
| | School Type | LE | Between Groups | 3.84 | 5.00 | 0.77 | 2.27 | .050* | 0.06 |
| | | | Within Groups | 64.44 | 190.0 | 0.34 | | | |
| | | | Total | 68.28 | 195.0 | | | | |
| Total Score | | Between Groups | 5.43 | 5.00 | 1.09 | 2.54 | .030* | 0.06 | |
| | | Within Groups | 81.25 | 190.0 | 0.43 | | | | |
| | | Total | 86.68 | 195.0 | | | | | |

* $\alpha \leq 0.05$

** $\alpha \leq 0.01$

The results of the follow-up univariate one-way ANOVA revealed statistically significant variances in the mean scores of teachers' attitudes toward the inclusion of children with disabilities in kindergarten, particularly in the learning environment domain (LE), based on teacher qualifications. The effect size was found to be mediocre for the learning environment domain and small for the overall combined total score. The findings indicated a positive correlation between the higher educational qualifications of teachers and their attitudes toward the inclusion of children with disabilities in kindergarten. The mean scores of teachers' attitudes across the three categories reflected a tendency to support the educational inclusion of children with disabilities in kindergarten.

Further analysis using Fisher's least significant difference (LSD) multiple comparisons test demonstrated that the disparities in attitudes were primarily attributed to the variance between the mean scores of teachers with a bachelor's degree or higher and those with secondary qualifications only ($p \leq 0.05$).

The study's findings indicate that there are significant differences in the mean scores of teachers' attitudes toward the inclusion of children with disabilities in kindergarten across different student categories. The impact of early inclusion in kindergarten (IEIK) and the learning environment (LE) domains, as well as the combined total score, showed small overall effect sizes. Teachers who teach both categories of students demonstrated more favorable attitudes toward the inclusion of children with disabilities, followed by teachers who teach students with disabilities only, and lastly, teachers who teach normal students only. However, it is worth noting that the mean scores of teachers' attitudes in all three categories leaned toward supporting the educational inclusion of children with disabilities in kindergarten.

Moreover, the Fisher's Least Significant Difference (LSD) multiple comparisons test identified significant differences in the attitudes of teachers instructing students with typical abilities compared to those teaching students from the other two groups ($p \leq 0.05$). Furthermore, the

overall combined total score indicated that teachers in international private schools exhibited the most favorable attitudes toward the inclusion of children with disabilities, followed by their counterparts in public schools, private bilingual schools, private monolingual schools, Quran memorization schools, and finally, private schools serving specific communities. This hierarchical order was also consistent within the learning environment domain. Nonetheless, the findings suggest that the mean scores of teachers' attitudes across all categories reflect a general support for the educational inclusion of children with disabilities in kindergarten settings.

The results of the Fisher's Least Significant Difference (LSD) multiple comparisons test indicate that the significant differences observed in the univariate ANOVA are attributable to variations in the mean attitude scores of teachers across different school types, including community schools, public schools, private bilingual schools, and international schools ($p \leq 0.05$). Additionally, the findings reveal significant differences in mean attitude scores between teachers in public schools and those in Quran memorization schools, as well as between teachers in international schools and those in both Quran memorization schools and private monolingual schools ($p \leq 0.05$).

In relation to the school type variable, the results suggest that teachers' mean attitudes scores toward the inclusion of children with disabilities in kindergarten vary significantly in the learning environment domain (LE) with a small overall effect size and in the combined total score with a moderate effect size. However, no significant differences were observed in the mean attitudes scores of teachers in the impact of early inclusion in the kindergarten (IEIK) domain.

The findings from the analysis of the learning environment domain (LE) revealed that teachers in international private schools exhibited more favorable attitudes toward the inclusion of children with disabilities in kindergarten compared to teachers in public schools, private bilingual

schools, private monolingual schools, Quran memorization schools, and private schools for communities. This trend was consistent when considering the combined total score. However, it is important to note that the mean scores across all categories indicated a general agreement among teachers regarding the educational inclusion of children with disabilities in kindergarten.

Furthermore, the Fisher's least significant difference (LSD) multiple comparisons test showed that significant differences in teachers' attitudes were observed between those teaching in community schools and those in public schools, private bilingual schools, and international private schools ($p \leq 0.05$). Additionally, significant differences were found between teachers in public schools and those in Quran memorization schools, as well as between teachers in international schools and those in Quran memorization schools and private monolingual schools ($p \leq 0.05$).

Moreover, the Fisher's least significant difference (LSD) multiple comparisons test for the combined total score revealed significant differences in the attitudes mean scores of teachers in international private schools compared to those in private monolingual schools, Quran memorization schools, and private schools for communities ($p \leq 0.05$).

Discussion

The study's data yielded valuable insights into the attitudes of female teachers regarding the educational integration of children with special needs in kindergartens. The results pertaining to the first question demonstrated a high level of agreement among the teachers on all items associated with the first and second domains of the study. This indicates the teachers' strong belief in the right of children with disabilities to receive education in a safe, inclusive environment alongside their peers, in line with international charters and laws. The teachers' unanimous agreement on all items in the first and second dimensions also emphasizes the significance of establishing foundational elements for the success of inclusion. It underscores the

necessity of providing a supportive material environment, appropriate tools, and instructional media and ensuring the safety and security of the children. Furthermore, creating conducive psychological and social conditions for all involved in the inclusion process is shown to have a positive impact on children with disabilities and their peers. These findings are consistent with previous studies by Ehabti (2015), Al-Qaryouti et al. (2016), and Khochen and Radford (2012), highlighting the importance of these factors for successful inclusion.

The findings pertaining to the second study question revealed no statistically significant variances associated with the teacher's specialization, gender, years of experience, or place of work. This outcome diverges from the conclusions drawn in certain studies (Ghourri et al., 2010; Moore, 2005; Al-Qaryouti et al., 2016) but aligns with the findings of Ahmed (2018). The outcome can be attributed to the level of awareness among teachers and their belief in the right of children with disabilities to receive education in the least restrictive environments. This factor serves as a catalyst for the integration of children with disabilities into kindergartens without encountering resistance from early childhood education practitioners. Furthermore, the role of the teacher as an agent of change, a role model, and a facilitator in the educational process can positively impact all children, fostering an environment where children accept their peers with disabilities (Hussien et al., 2015; Friend & Bursuck, 2019; Emam & Mohamed, 2011; Avramidis & Norwich, 2002).

The results also demonstrated statistically significant disparities based on the teacher's qualifications, with teachers holding a bachelor's degree or higher exhibiting more favorable attitudes in comparison to high school diploma holders. This finding aligns with Ahmed's (2018) conclusions. It can be attributed to the fact that individuals with higher qualifications have been exposed to courses during their university studies that are pertinent to children, their characteristics, individual variances, and

methods of interaction and communication. The results also showed that teachers who teach children with disabilities and their peers without disabilities had better attitudes than teachers who teach children with disabilities only or teachers who teach children without disabilities.

This result may be attributed to the fact that teachers who teach children with disabilities and their peers may notice the benefits accruing to children, whether in terms of learning or psychological and social adaptation, acceptance of children with disabilities by their peers, respect for difference, and the development of the concept of cooperation between children and helping each other. This result can be considered evidence of the need to start the inclusion process for children in the early stages of life so that children learn together and the differences between them dissolve (Bryant et al., 2019; Friend & Bursuck, 2019).

The results also indicated that the teachers' attitudes toward the inclusion of children with disabilities in kindergarten were in favor of the teachers who teach in international private schools, followed by those who teach in public schools, teachers who teach in private bilingual schools, teachers who teach in private monolingual schools, teachers who teach in Quran memorization schools, and lastly, the teachers who teach in private schools for communities.

The observed outcome can be linked to the nature of the qualifications and the cultural backgrounds of teachers in international schools. Most staff in these schools originate from diverse cultures, predominantly American, British, and European. Their undergraduate educational qualifications encompass modules focused on the characteristics and methodologies for teaching children with disabilities in standard classroom settings, as inclusive education is a prevalent practice within these cultural contexts. This emphasis is evident in their attitudes.

Limitations

The study's findings are subject to several limitations. Firstly, the study was confined to a single semester (the second semester), potentially impacting the composition of the study sample. To obtain a more comprehensive understanding, further research is necessary to compare teachers' attitudes toward inclusion across a larger and more protracted sample period. Extending the study's duration could facilitate this critical comparison. Secondly, the data collection relied on a questionnaire, possibly constraining the depth of teachers' introspections regarding their attitudes toward the inclusion of kindergarten children. Incorporating open-ended questions and amalgamating the questionnaires could engender a more profound discourse. Lastly, the study's conclusions were exclusively derived from reported attitudes via the questionnaire. Integrating qualitative data, such as interviews and observations, with the questionnaire could have furnished additional insights into both attitudes and actual behaviors toward students with disabilities.

Conclusion and Recommendations

The purpose of this study was to gain comprehensive insights into the attitudes of female teachers in Oman concerning the educational inclusion of children with special needs in kindergartens (KGs) in Oman. The study reveals that female teachers exhibit positive attitudes toward the inclusion of children with disabilities in KGs, provided that the learning environment is enhanced to accommodate their needs. Furthermore, the study demonstrates that female teachers perceive the integration of children with disabilities as beneficial for all children, as it supports both those with special needs and typically developing children in various ways. This study enriches the existing special education literature by offering in-depth perspectives into the attitudes and viewpoints of teachers toward a crucial demographic, kindergartners, which is considered the fundamental stage for lifelong learning and success.

The study's findings give rise to several theoretical and practical recommendations. Primarily, there is a necessity to prepare teachers working in kindergartens for the process of educational inclusion through specialized courses, enabling them to comprehend the necessity for inclusion and acquire the fundamental prerequisites for its success. This can be achieved through teacher training programs offered by universities to ensure that teachers are well-versed in the requirements of educational inclusion programs for children with disabilities in general education, which could be fostered by building portfolios that support their professional development starting early during their preservice education (Al Salmi, 2024). Additionally, there is a need to equip kindergartens with educational materials and aids that facilitate the learning process of children with disabilities at the kindergarten level. This should encompass the adaptation of indoor environments to meet the needs of children with disabilities and create a conducive, child-friendly setting that promotes integration with peers without hindrance. Furthermore, there is a call for further research on inclusion at the KG level, including studying the viewpoints of principals, parents of children with disabilities, and parents of children without disabilities. The study also recommends raising awareness among children and students in schools to cultivate positive attitudes toward peers with disabilities.

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Conflicts of Interest

The authors declare no conflict of interest.

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