

## The awareness and implementation of the response to intervention strategy among kindergarten teachers in managing behavioral problems in preschool

Hajar Almutlaq<sup>1</sup>, Fawaz Alhossyan<sup>2\*</sup>

<sup>1,2</sup>Department of Special Education, College of Education, Majmaah University, Al Majmaah, 11952, Saudi Arabia.

H.almutlaq@mu.edu.sa (H.A.) Fu.alhasiany@mu.edu.sa (F.A.).

**Abstract:** The Response to Intervention (RTI) strategy is a systematic and evolving approach designed to support children encountering behavioral and academic challenges. This study aimed to assess the level of awareness and implementation of the RTI strategy among kindergarten teachers in the central region of the Kingdom of Saudi Arabia. A descriptive methodology was utilized to answer the study's questions, with a sample consisting of 72 kindergarten teachers. Data were analyzed to describe levels of awareness, implementation, and challenges using appropriate statistical methods, including means and standard deviations. Pearson correlation coefficient was used to examine the relationship between variables, and Cronbach's alpha was calculated to confirm the reliability of the instrument. The results revealed that the level of awareness among teachers regarding the RTI strategy was high, while the level of implementation was moderate. Moreover, the findings indicated significant challenges that obstruct the effective application of the strategy in classroom settings. The study concluded with recommendations, such as the need to enhance training programs aimed at preparing kindergarten teachers with practical knowledge on RTI implementation, and highlighted the importance of providing continuous technical and administrative support to facilitate more effective practice.

**Keywords:** Behavioral intervention, Behavioral problems, Kindergarten; Teachers, Response to intervention, Strategy.

### 1. Introduction

Children experience rapid development across cognitive, sensory, social, linguistic, motor, and behavioral domains during the early years of life. This period is considered critical for shaping a child's personality, self-concept, and foundational capacities. As a result, there is a growing global emphasis and an essential educational imperative on providing appropriate early childhood education, which supports children's discovery, development, and preparation for formal schooling. In this context, the Saudi Council of Ministers, following the Ministry of Education's organizational guidelines, has mandated enrollment in early childhood education due to its importance in enhancing children's skills and preparing them for later academic stages [1]. Despite the opportunities offered by this developmental stage, numerous challenges may arise during the educational process. These challenges may stem from psychological or physical difficulties in the child, or result from environmental factors such as the family or school context, or deficiencies in professional preparation and instructional execution or a combination of these [2, 3]. It is important to recognize that a significant number of children exhibit delays or deficiencies in various developmental skills.

These challenges create obstacles not only for the child but also for educators, families, and peers, and can hinder the provision of appropriate learning opportunities. Among the leading causes of cognitive, communicative, social, motor, and behavioral challenges are various types of disabilities and developmental delays, which often manifest during early childhood [4]. As a result, early intervention strategies have become critical in addressing and improving children's behaviors during this key stage. One of the most evidence-based approaches is the Response to Intervention (RTI) model a data-driven

instructional and assessment strategy. RTI has been widely applied internationally to deliver inclusive education and meet children's learning needs intensively and systematically. It also serves as a preventive educational framework by providing early, targeted educational services, reducing the likelihood of escalating cognitive or behavioral issues [5].

The implementation of RTI has received considerable attention worldwide for its ability to support children at risk of academic failure [6]. It represents a multi-tiered model of early intervention that delivers effective educational support and systematically monitors student progress [7]. Although RTI is well established in many Western education systems, its adoption in early childhood education in Saudi Arabia remains limited. Understanding the level of awareness that kindergarten teachers have of RTI is essential, as their knowledge and professional skills directly influence the fidelity and success of such interventions [8].

In Saudi Arabia, kindergarten education plays a pivotal role in early childhood development, laying the foundation for future academic achievement [9]. However, during this phase of rapid growth, many children exhibit behavioral challenges that present difficulties for teachers in classroom management. Yet, studies in the Arab context remain limited regarding the extent to which teachers understand and apply behavioral intervention models in preschool settings, and how effective such models are in meeting young learners' diverse needs [10-12]. For example, Metcalfe, et al. [13] identified a significant correlation between behavioral problems in preschool-aged children and lower academic performance in later stages. These findings emphasize the importance of early identification and intervention for behavioral difficulties in young children.

Behavioral problems among preschool children represent a critical issue that significantly affects the quality of early childhood education. Research has consistently emphasized that this developmental stage forms the foundation for children's social, emotional, and cognitive growth [13]. Common behavioral issues such as aggression, tantrums, inattention, and defiance pose major challenges to children's learning and negatively impact their peers and teachers in the classroom [14, 15]. Moreover, the presence of such behaviors may serve as early indicators of future academic difficulties, highlighting the urgent need for timely and effective interventions [12].

In this context, various studies have focused on strategies for addressing behavioral problems in early childhood. Research has shown that training teachers in behavior modification techniques such as reinforcement, extinction, and punishment can effectively reduce disruptive behaviors and improve the overall classroom environment [10]. Other studies have found that enhancing teachers' emotional intelligence contributes to lowering the frequency of behavioral issues and managing classroom dynamics more efficiently [16]. Additionally, play therapy has proven to be an effective approach for reducing behavioral problems and fostering social interaction among young children [17].

Among the contemporary approaches to early intervention, the RTI model has emerged as a particularly effective strategy. RTI employs a structured, tiered framework to support children facing behavioral and academic challenges [7]. This model comprises three levels of intervention: Tier 1 involves universal strategies applied to all students; Tier 2 targets children exhibiting moderate difficulties requiring additional support; and Tier 3 offers intensive interventions for children with significant behavioral problems [6]. Studies have indicated that implementing RTI in early childhood settings can reduce behavioral issues and lessen the need for more intensive interventions in the future [18, 19].

However, the implementation of RTI in early childhood education continues to face several challenges. These include limited teacher awareness of the model, insufficient training on how to implement it effectively in classroom settings, and a lack of allocated resources to support this type of intervention [20, 21]. Research has shown that teachers who possess adequate knowledge of the RTI framework are better equipped to identify at-risk children and develop appropriate intervention plans, thereby enhancing the effectiveness of support services provided [22]. Despite the empirical evidence supporting the effectiveness of RTI in addressing behavioral problems, there is a noticeable scarcity of

Arabic language studies exploring kindergarten teachers' awareness and implementation of this model. Therefore, this study aims to examine the level of awareness among kindergarten teachers in Saudi Arabia regarding the RTI framework, assess how it is applied in managing children's behavioral issues, and identify the key challenges hindering its effective implementation.

Based on the foregoing, the problem of the study can be summarized in the following main research question: What is the level of awareness among kindergarten teachers in Saudi Arabia regarding the RTI strategy? To what extent do they implement this strategy in managing children's behavioral problems? And what are the primary challenges they face in its application?

### *1.1. Behavioral Problems Among Preschool Children*

There are established criteria to distinguish between typical and atypical behavior in preschool-aged children. Typical behavior aligns with the religious, cultural, and moral norms of the society, is appropriate for the child's developmental stage, does not cause harm to the child or others, and supports social, familial, and school adaptation. In contrast, atypical behavior significantly deviates from societal expectations, persists over time, causes distress or harm, and interferes with learning or social interaction [23]. Preschool marks a transitional phase as the child moves from the familiarity of home to a structured educational setting. Various psychological, familial, and health related factors can contribute to the emergence of behavioral problems during this period [24]. Common behavioral issues observed at this stage include hitting, pushing, yelling, and screaming, all of which hinder learning and classroom management [12]. Other frequent behaviors include tantrums, jealousy, defiance, hyperactivity, and distractibility [14, 15]. In addition, maternal parenting stress can lead to negative mother-child relationships and increase behavioral problems in preschoolers [25]. Also, long-term exposure to media has been found to increase learning and behavioral problems, anxiety, and psychosomatic issues among preschoolers Zoromba, et al. [26]. Metcalfe, et al. [13] reported a correlation between behavioral problems in preschool and later academic underachievement. Today, behavioral challenges remain a major barrier to effective learning and present an ongoing difficulty for kindergarten teachers [11].

### *1.2. Approaches to Managing Behavioral Problems in Preschool*

Repeated behavioral issues in preschool classrooms demand targeted intervention. A study found an association between developmental disorders, such as autism, and the occurrence of emotional and behavioral problems in preschoolers [27]. Electronic communication is considered a vital element that can influence enhancing preschoolers' behaviors throughout effective communication between teachers, parents, and peers [28]. Several studies have explored different strategies for managing and correcting these behaviors. For instance, Al-Mutairi [10] implemented a training program for kindergarten teachers on behavior modification techniques such as reinforcement, punishment, extinction, response cost, behavioral contracting, and overcorrection, resulting in a significant reduction in behavioral problems. Other research has highlighted the importance of emotional intelligence among kindergarten teachers as a predictor of behavioral issues. Training teachers to enhance emotional intelligence has been shown to improve classroom control [16]. In a meta-analytic study, child centered play therapy was found to significantly reduce behavioral problems among young children [17]. Additionally, Bulotsky-Shearer, et al. [29] demonstrated a clear link between classroom environment organization and the reduction of behavioral issues in preschool settings.

### *1.3. RTI in Early Childhood Education*

RTI is a multi-tiered educational framework designed to identify and support students at risk of academic failure through early and systematic interventions [7]. RTI incorporates evidence-based instructional practices, progress monitoring, and instructional adjustments. The three tiers of RTI include universal interventions (Tier 1), targeted group support (Tier 2), and intensive individualized interventions (Tier 3) [6]. This model has been widely adopted across various educational stages,

particularly in the United States [8]. Research supports RTI's effectiveness in improving academic outcomes and reducing the need for special education services by addressing learning difficulties early [6]. RTI is especially beneficial for students with learning challenges in reading and math [30]. Moreover, studies have shown that RTI can be effective in addressing behavioral challenges among preschool children [18, 19]. However, the integration of RTI into early childhood education settings remains underexplored, particularly in Arab educational contexts. There is growing interest in implementing RTI at the preschool level due to its preventive nature, as early interventions are critical in preventing long-term academic and behavioral difficulties [31, 32].

RTI enables early identification of developmental and learning delays and promotes inclusive education tailored to individual differences [32, 33]. Despite these benefits, challenges persist. These include a lack of teacher training and professional development in RTI implementation [18, 21] as well as insufficient knowledge among educators about its principles. There is also doubt regarding the model's appropriateness for younger children, whose developmental needs are more varied and less predictable [8]. These challenges highlight the need for localized research on how RTI can be adapted to preschool environments in Arab countries such as Saudi Arabia.

#### *1.4. Teachers' Awareness of the RTI Strategy*

Kindergarten teachers' awareness and understanding of the RTI model is essential for effective implementation. Several studies affirm that teachers' comprehension of RTI directly affects their ability to design and execute appropriate interventions [6, 30]. In early education, teachers' awareness of RTI enhances their capacity to identify at-risk children, select suitable interventions, and monitor progress effectively. Research displays that teachers who possess strong knowledge of RTI are more likely to apply effective teaching strategies and collaborate with professionals to ensure that children receive the support they need [22]. RTI functions as both a preventive and remedial model, helping mitigate the progression of developmental issues in preschoolers.

In a recent study, Al-Shahid [34] examined kindergarten teachers' awareness of early intervention programs using artificial intelligence and their impact on developing life skills among preschoolers. Results indicated a high level of awareness of the importance of early intervention, but also highlighted obstacles such as lack of technological tools, technical support, and administrative supervision. Another study by Al-Salman and Al-Hano [35] explored the application of RTI with children at risk for learning difficulties, showing that teachers employed practices consistent with RTI principles, such as recognizing individual differences and using positive reinforcement and sensory tools. Nevertheless, challenges such as limited teacher awareness, lack of family cooperation, and inadequate administrative support were also identified. Despite the growing global focus on RTI, Arabic literature remains limited in addressing preschool teachers' awareness of the model. Arab teachers often face unique cultural and educational challenges that influence their understanding and use of RTI. These include gaps in pre-service and in-service training, limited access to RTI resources, and systemic issues within early childhood education frameworks [20]. Understanding Saudi kindergarten teachers' awareness of RTI is vital to identify knowledge gaps and improve the quality of early interventions through targeted professional development.

Previous studies have recognized the emergence of behavioral problems among preschool-aged children, with the most common issues including aggression, classroom misbehavior, and inattention [13-15]. These behavioral issues negatively affect the educational process not only for the child but also for teachers and peers within the preschool environment. A review of the literature discovers several approaches to addressing these behavioral challenges, such as training teachers in behavior modification techniques [10] developing teachers' emotional intelligence to enhance classroom management [16] and using child-centered play therapy to reduce behavioral problems [17] enhancing preschoolers behaviors through supporting electronic communication between school personnel and parents [28]. Despite the recognized importance of early intervention and the development of individualized treatment plans to address behavioral and academic difficulties, studies specifically examining evidence-

based early intervention approaches such as the RTI model remain limited. Several studies have emphasized the value of RTI in supporting children at risk for developmental disorders and disabilities [6, 7, 30]. Teachers' understanding of behavior management strategies rooted in early intervention principles is essential for effectively delivering therapeutic support to children in preschool settings. However, Arabic-language research on RTI remains scarce [20, 22].

The current study distinguishes itself from prior research by descriptively assessing the awareness and application of the RTI strategy among kindergarten teachers, specifically in relation to managing and correcting behavioral problems among preschool children. Furthermore, it seeks to identify the challenges that hinder the effective implementation of this type of preventive and therapeutic intervention.

## 2. Methodology

This study employed a descriptive survey method, aiming to explore the level of awareness and the extent to which kindergarten teachers in the Riyadh and Qassim regions implement the RTI strategy, as well as the challenges they face in applying it within the classroom environment. This method is suitable for the nature of the study as it enables the description of the phenomenon as it occurs in reality and allows for the analysis of quantitative data related to the perspectives and perceptions of the study sample.

### 2.1. Participants

The study population consists of all kindergarten teachers working in both public and private schools in the Riyadh and Qassim regions during the academic year 1446 H. A random sampling method was employed to select the study sample, which consisted of 72 kindergarten teachers from both public and private schools in the Riyadh and Qassim regions. Participation in this study is entirely voluntary, and all participants were informed of their right to withdraw at any time without any consequences. All data and information collected was treated with strict confidentiality and used for scientific research purposes only.

### 2.2. Instrument

The primary tool for data collection was a survey on the awareness of kindergarten teachers in Riyadh Qassim regions regarding the RTI strategy. The survey consisted of 32 items, which were categorized into three main areas:

- 1- Awareness of kindergarten teachers regarding the RTI strategy (10 items)
- 2- The extent to which kindergarten teachers apply the RTI strategy to address behavioral issues (14 items)
- 3- The challenges faced by kindergarten teachers in implementing the RTI strategy (8 items)

### 2.3. Validity of the Instrument

To ensure the validity of the instrument, the initial version of the survey was presented to 10 experts in the fields of educational psychology and early childhood education. These experts provided feedback on the clarity of the items, their appropriateness for the target group, and their relevance to the study's objectives. The experts unanimously agreed that the phrasing of the items was clear and appropriate for the study's aims, with some suggestions to remove certain items and rephrase others to enhance clarity and alignment with the study's goals.

### 2.4. Internal Consistency

Internal consistency refers to the correlation between the items in the instrument that measure the same construct. In this study, internal consistency was assessed by calculating the correlation coefficient between the responses of 25 participants for each survey item and the overall score of the survey. The

results indicated a positive correlation, suggesting that the instrument is internally consistent and reliable for measuring the constructs it is designed to assess.

**Table 1.**

Correlation Coefficients Between Each Dimension and the Total Questionnaire Score.

Dimension	<i>r</i>	<i>p</i>
Awareness of RTI Strategy Among Kindergarten Teachers in Riyadh and Qassim	0.845	< 0.01
Implementation of RTI Strategy to Address Behavioral Problems	0.817	< 0.01
Challenges in Implementing the RTI Strategy	0.794	< 0.01

**Note:** *N* = 25. All correlation coefficients are statistically significant at the *p* < 0.01 level.

As shown in Table 1, the Pearson correlation coefficients between each dimension and the total score ranged from .794 to .845, all of which are statistically significant at the .01 level. This indicates strong internal consistency and supports the construct validity of the questionnaire dimensions.

### 2.5. Instrument Reliability

Instrument reliability refers to the consistency and stability of the questionnaire results under similar conditions. A reliable instrument consistently yields similar results when administered repeatedly to the same sample within equivalent contexts.

**Table 2.**

Cronbach's Alpha Coefficients for Questionnaire Dimensions.

Dimension	Number of Items	Cronbach's $\alpha$
Awareness of RTI Strategy Among Kindergarten Teachers	10	0.837
Implementation of RTI Strategy in Addressing Behavioral Issues	14	0.823
Challenges in Implementing the RTI Strategy	8	0.825
<b>Total Questionnaire</b>	<b>32</b>	<b>0.899</b>

**Note:** *N* = 25 (pilot sample).

As presented in Table 2, the Cronbach's alpha coefficients for the individual dimensions ranged from .823 to .837, while the overall reliability of the full scale was .899. These values indicate a high level of internal consistency, which confirms the reliability of the instrument for research purposes.

### 2.6. Statistical Analysis

To analyze the data, the researchers employed a range of descriptive and inferential statistical methods, including means, standard deviations, Pearson correlation coefficients, and Cronbach's alpha for internal consistency.

## 3. Results

The first research question was: *What is the level of awareness among kindergarten teachers in the Riyadh and Qassim regions regarding RTI strategy?*

To answer this question, means and standard deviations were calculated for the level of awareness among kindergarten teachers in the targeted regions. Table 3 presents the results.

**Table 3.**  
Means and Standard Deviations for Teachers' Awareness of the RTI Strategy.

No.	Awareness Item	Mean	SD	Level
1	RTI reduces the number of children diagnosed with disabilities and behavioral disorders.	4.23	0.982	High
2	RTI helps children interact better with one another.	4.18	0.986	High
3	I am fully aware of the purpose of implementing RTI.	4.11	0.986	High
4	RTI contributes to achieving academic goals in the kindergarten classroom.	3.99	0.803	High
5	I must actively participate for RTI to succeed.	3.59	0.801	High
6	RTI helps teachers improve student behavior.	3.58	0.824	High
7	RTI serves as an initial step in providing special education services.	3.49	0.801	Moderate
8	RTI may help support children in my classroom.	3.02	0.803	Moderate
9	RTI assists in identifying children with disabilities.	2.95	0.662	High
10	RTI helps uncover causes of behavioral issues in kindergarten classrooms.	2.93	0.669	High
	<b>Overall</b>	<b>3.87</b>	<b>0.652</b>	<b>High</b>

As shown, mean scores for teachers' awareness ranged between 2.93 and 4.23, with most items reflecting a high level of awareness, except items 7 and 8, which were rated at a moderate level. The overall mean score was 3.87, indicating a high level of awareness of the RTI strategy among kindergarten teachers in the Riyadh and Qassim regions.

The second research question was: *To what extent do kindergarten teachers in the Riyadh and Qassim regions implement the RTI strategy in addressing children's behavioral problems?*

To address this question, means and standard deviations were calculated for items related to the degree of RTI implementation by teachers. The results are presented in Table 4.

**Table 4.**  
Means and Standard Deviations for the Implementation of the RTI Strategy.

No.	Implementation Item	Mean	SD	Level
1	I provide early support to children with behavioral challenges.	4.33	1.378	High
2	I continuously assess children's academic and behavioral performance.	4.29	0.976	High
3	I deliver remedial lessons focusing on core skills such as reading, writing, and math for children facing difficulties.	3.99	0.944	High
4	I use targeted strategies to enhance delayed skills.	3.39	0.842	Moderate
5	I design individualized behavioral strategies to reduce unwanted behaviors in the classroom.	3.38	0.838	Moderate
6	I use behavior modification strategies such as positive and negative reinforcement to encourage desired behavior.	3.12	0.703	Moderate
7	I provide group sessions for children with similar support needs in specific skill areas.	3.09	0.769	Moderate
8	I adapt flexible strategies to meet the needs of children with shared characteristics.	3.09	0.769	Moderate
9	I implement cooperative learning that fosters interaction in an engaging educational environment.	2.92	0.642	Moderate
10	I offer individual or small group support to children with significant difficulties.	2.92	0.642	Moderate
11	I allocate additional time for individual instruction or supplemental activities based on children's needs.	2.88	0.603	Moderate
12	I maintain effective communication with parents to monitor children's progress and share strategies.	2.86	0.669	Moderate
13	I use continuous analysis of educational and behavioral data to modify or develop strategies.	2.82	0.652	Moderate
14	I use educational technology as a tool to support children's learning across subjects.	2.80	0.642	Moderate
	<b>Overall</b>	<b>2.93</b>	<b>0.659</b>	<b>Moderate</b>

As reflected in the table, the mean scores for RTI implementation ranged from 2.80 to 4.33. While the first three items were rated at a high level, the remaining items fell within the moderate range. The overall mean score was 2.93, indicating a moderate level of RTI implementation by kindergarten teachers in the Riyadh and Qassim regions.

This result suggests a noticeable gap between teachers' awareness of the RTI strategy and their actual implementation of it in addressing behavioral issues among children.

The third research question stated: *What are the challenges that hinder kindergarten teachers in the Riyadh and Qassim regions from implementing the RTI strategy?*

To answer this question, means and standard deviations were calculated for the items related to the challenges teachers face in implementing RTI. The results are presented in Table 5.

**Table 5.**

Means and Standard Deviations for the Challenges Hindering Kindergarten Teachers from Implementing the RTI Strategy.

No.	Challenge Item	Mean	SD	Level
1	Lack of essential tools required for early intervention.	4.14	1.378	High
2	Lack of awareness among administrators about the importance of early intervention in kindergarten.	4.13	1.368	High
3	Difficulty in activating RTI due to the absence of clear implementation steps.	4.12	1.371	High
4	Absence of a supportive and motivating environment for applying the RTI strategy.	4.09	0.901	High
5	Limited financial resources hindering RTI application.	4.07	0.988	High
6	Difficulty in activating RTI due to the absence of clear implementation steps. ( <i>duplicated item</i> )	3.98	0.803	High
7	I need training workshops in evaluating children's behavioral problems and providing therapeutic intervention.	3.41	0.869	Moderate
8	I feel I lack sufficient knowledge and skills in managing children's behavioral problems.	3.40	0.869	Moderate
	<b>Overall</b>	<b>3.97</b>	<b>8.552</b>	<b>High</b>

As shown in the table, the mean scores for the challenge items ranged from 3.40 to 4.14. Most of the items were rated at a high level, except for items 7 and 8, which received moderate ratings. The overall mean score for this domain was 3.97, indicating that kindergarten teachers in Riyadh and Qassim perceive the challenges to implementing the RTI strategy as high.

#### 4. Discussion

The findings of this study indicate that kindergarten teachers in the Riyadh and Qassim regions demonstrated a high level of awareness regarding RTI strategy, with a mean score of 3.87 on the first domain. This reflects a strong understanding among teachers of the significance of RTI in reducing the number of children who may be diagnosed with disabilities or behavioral disorders. Additionally, RTI was recognized for its potential to enhance social interaction among children and support academic objectives within kindergarten classrooms.

This elevated awareness may be attributed to increased access to awareness programs, workshops, and training materials that emphasize the importance of early intervention. Such exposure appears to have fostered a positive attitude among teachers toward adopting evidence-based educational practices. These results align with Al-Shahid [34] who similarly found high levels of awareness among early childhood educators regarding the benefits and applications of early intervention programs. However, the findings differ from those of Al-Salman and Al-Hano [35] who reported a low level of awareness concerning the RTI model, largely due to the absence of policies and training programs aimed at promoting teachers' knowledge and application of this approach.

Despite this strong awareness, results related to the second research question revealed that the actual implementation of RTI strategies for addressing behavioral issues was moderate, with a mean score of 2.93. This discrepancy between awareness and practice points to a gap between theoretical knowledge and practical application. Several factors may contribute to this gap, including a lack of hands-on training, the absence of clear procedural guidelines for implementing RTI within real classroom settings, and the additional workload that teachers often face.

As for the third research question, results indicated that teachers face a high degree of challenges when attempting to implement RTI, with an average score of 3.97. These challenges further support the observed gap between awareness and implementation. Key barriers included the lack of necessary tools



and materials, insufficient administrative support, the absence of a supportive learning environment, as well as limited financial resources and a lack of specialized training in behavioral assessment. These findings are consistent with those of Al-Salman and Al-Hano [35] who discussed the negative impact of inadequate supervision, insufficient resources, and limited professional training on the implementation of RTI. Other supporting literature includes Almutlaq and Alshiha [36]; Alqahtani [20] and Alaniz [21] all of whom emphasized the need for institutional reform to facilitate RTI adoption.

Generally, these results highlight the urgent need for organizational and systemic support. This includes the provision of appropriate resources, comprehensive teacher training, and effective collaboration between families and schools to ensure the successful and sustainable implementation of RTI in early childhood settings.

#### 4.1. Recommendations and Suggestions for Future Studies

In light of the findings from this study, several recommendations can be made:

1. It is essential to activate ongoing awareness programs aimed at kindergarten teachers, encouraging their participation in additional training courses and workshops that focus on the RTI model.
2. A comprehensive study should be conducted to identify the barriers and causes that prevent the effective and sustained application of the RTI model. Efforts should then be made to overcome these challenges and find practical solutions.
3. Providing targeted knowledge-based lessons about RTI strategies should be prioritized for both pre-service and in-service teachers to enhance their skills and understanding.
4. It is vital to maintain continuous and effective communication with colleges of education in Saudi Arabia to propose the inclusion of RTI-related materials in their curricula. This would ensure that teacher preparation programs are aligned with current needs and practices. Additionally, the researchers suggest conducting further studies on the topic, particularly focusing on exploring the challenges and reasons that hinder the effective implementation of RTI from the perspective of teachers.

#### Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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