

Parents' Level of Awareness of Early Intervention Processes for Students at Risk of Learning Disabilities in Early Childhood

Abdullah Ahmed Almulla¹

Abstract

The current research aims to identify parents' level of awareness regarding early intervention processes for students at risk of learning disabilities (LDs) in early childhood in Al-Ahsa city Governorate, Kingdom of Saudi Arabia. The research employs a descriptive methodology using a survey approach, which is the most suitable method, as it helps describe the phenomenon under study and its relationship with associated variables. Additionally, statistical methods were used to translate the results of the field framework. The researcher selected a random sample of parents from Al-Ahsa Governorate, Kingdom of Saudi Arabia, consisting of 75 parents, representing 62.5% of the total research population. An exploratory sample of 30 parents from the research community but outside the main research sample was also selected to conduct statistical procedures (validity-reliability) for the main research tool. The researcher excluded 15 incomplete questionnaires. To achieve the research objectives, a questionnaire was used the key findings showed significant agreement among the study participants regarding statements that received high evaluations, such as the role of preschool and special education teachers in providing individual support for children and the importance of providing therapeutic and rehabilitative services to individuals with special needs. The main recommendations emphasize the need to develop comprehensive and effective evaluation procedures for the symptoms of learning disabilities in early childhood in cooperation with the relevant authorities.

Keywords: *Early Intervention Processes, Early Childhood, Learning Disabilities*

INTRODUCTION

Learning disabilities present significant educational challenges for students at various academic levels. Defined as conditions that impede a student's ability to grasp or apply fundamental academic skills, such as reading, writing, mathematics, and linguistic comprehension, these disabilities necessitate specialized educational methods and tailored pedagogical interventions to meet the diverse needs of affected students.

Learning disabilities manifest as difficulties in acquiring, comprehending, and applying knowledge efficiently relative to peers of the same age and cognitive level. These challenges span multiple domains, including reading, writing, arithmetic, language, attention, memory, organization, and planning (Khatib & Hadidi, 2021). They are pervasive, affecting individuals at various life stages and varying in severity, with origins rooted in genetic, environmental, or combined factors. The impact of learning disabilities extends beyond academics to influence social and emotional well-being, often leading to reduced self-confidence, strained social relationships, and heightened frustration and anxiety.

Early detection and intervention are critical in managing learning disabilities. Identifying early signs and symptoms allows for timely support and intervention, preventing escalation. Effective strategies encompass individualized support, specialized training, and diverse learning techniques. Raising awareness about learning disabilities and providing appropriate support are crucial in enhancing the quality of life and academic success of affected individuals (Sabbah, 2015).

Understanding learning disabilities as real and significant issues, rather than attributing them to laziness or a lack of motivation, is essential (Dumra, 2015). The academic discourse surrounding learning disabilities emphasizes the importance of early intervention, individualized support, and the involvement of educators. Teachers, given their direct interaction with students and insight into curricula and student behavior, play a

¹Special Education Department, King Faisal University, Saudi Arabia, E-mail: aamulla@kfu.edu.sa

pivotal role in identifying and addressing learning disabilities. Their involvement in intervention programs is vital in implementing and evaluating effective strategies (Abu-Shokideem & Al-Hadedi, 2019).

The attention paid to learning disabilities globally highlights the necessity of early intervention. Research indicates that 5 to 10% of children experience developmental delays, underscoring the need for developmental screening and monitoring (Callanan, Signal, & McAdie, 2021). Comprehensive understanding and intervention strategies guided by theoretical frameworks are needed to accurately address learning disabilities and develop effective remedial education plans (Khawla, 2020).

Early intervention processes encompass educational, therapeutic, and preventive services for children from birth to age 6 who have special needs or are at risk of developmental delays. Scholars emphasize the effectiveness of early intervention programs in promoting child development and providing support for families (Al-Qadah, 2021). These processes involve assessing individual needs, creating supportive educational environments, and maintaining continuous communication with families to enhance student progress and academic success.

Early intervention is intended to provide immediate and preventive treatment during the foundational stages of a child's development and, thus, enhance motor, social, and language skills while helping families accept and support children with LDs (Al-Sibaih, 2022). Given the diversity within the population of individuals with LDs, tailored intervention strategies are crucial in addressing the unique challenges faced by each child (Al-Salem, 2023).

Early intervention is instrumental in improving health and developmental outcomes, reducing the need for future medical and non-medical treatments, and highlighting the importance of early childhood care in shaping developmental trajectories.

Research Problem

The challenge of accurately diagnosing LDs has long been a focus of researchers and educators due to its critical role in determining effective prevention and intervention strategies. Accurate diagnosis is essential in addressing LDs, but the complexity of developmental and academic difficulties, along with the interplay between intelligence levels and specific types of learning challenges, complicate the diagnostic process. Furthermore, the overlap in the skills required for various academic subjects presents additional barriers to effective diagnosis (Higher Council for the Rights of Persons with Disabilities, 2016).

There is a consensus among researchers regarding the critical role of early intervention in addressing LDs. Early intervention significantly increases the success rates of treatment, with younger children benefiting the most. Delayed intervention can result in entrenched difficulties that become more difficult to remediate. Early intervention involves systematic, evidence-based actions designed to address behavioral, psychological, and educational challenges at an early stage, thereby reducing the severity of these problems (Huwidi Tayel & Al-Khaza'leh Ahmad, 2017).

Diagnosing LDs in preschool children primarily depends on the observations of parents and kindergarten teachers, who can identify the early signs of these challenges. Parental observations and the insights of preschool educators are crucial in early identification and diagnosis (Ministry of Social Development, 2017).

This study was conducted to investigate parents' level of awareness regarding early intervention processes for students at risk of LDs in early childhood in Al-Ahsa city. By administering a questionnaire to assess parents' knowledge of early intervention, the researcher aims to uncover the extent to which parents recognize early signs and understand the importance of intervention strategies.

Given the prevalence of learning disabilities among young children, it is imperative to evaluate whether parents are adequately informed about early intervention processes. This understanding is crucial for developing effective support systems and ensuring timely interventions for children at risk of LDs.

Research Objective

This research is intended to assess the level of knowledge among parents regarding early intervention processes for children at risk of LDs in early childhood in Al-Ahsa city.

Research Questions

1. What is the overall level of knowledge among parents about early intervention processes for children at risk of LDs in early childhood in Al-Ahsa city?
 - o Sub-questions:
 - What is the level of knowledge among parents about the symptoms of developmental problems in early childhood in Al-Ahsa city?
 - What is the level of knowledge among teachers about primary and secondary prevention programs in early childhood in Al-Ahsa city?
 - What is the level of knowledge among parents about the evaluation areas for symptoms in early childhood in Al-Ahsa city?
 - What is the level of knowledge among parents about the symptoms of specific LDs after the evaluation of their children in early childhood in Al-Ahsa city?

Key Concepts

Learning Disabilities (LDs): Defined as disorders that affect an individual's ability to acquire and use basic academic skills, such as reading, writing, and arithmetic. These difficulties may appear in school performance or daily activities that require specific academic skills. Often, these difficulties arise from differences in how the brain processes information, rather than from any intellectual or mental impediment (Kohli-Lynch, Tann, & Ellis, 2019).

Early Intervention Processes for Students: Defined as processes aimed at identifying and addressing LDs in children during early childhood, before they enter formal education. This intervention involves providing appropriate educational and rehabilitative support and services to meet these students' needs and develop their skills in areas that present challenges, such as reading, writing, and arithmetic. Early intervention aims to reduce the impact of LDs on academic and social progress and enhance children's chances of success in school and life in general (Leite, Pereira, 2020).

Previous Studies

Mutar (2021) investigated the effectiveness of a linguistic auditory screening initiative in the early diagnosis of hearing impairments in children. The study targeted Egyptian children aged 2–6 years and included a sample of 1,680 children, with a subset of 420 parents of hearing-impaired children who were randomly selected for in-depth analysis. Utilizing questionnaires and semi-structured interviews with officials and participants, the research demonstrated that the initiative successfully heightened the awareness of early diagnosis, provided training for staff working with hearing-impaired children, facilitated medical examinations, and utilized diverse screening devices. Parent satisfaction regarding the initiative's management and impact was notably high.

Al-Hattah (2021) focused on identifying predictive indicators of pre-academic skills related to learning disabilities in preschool children. The study argued that diagnosing LDs in preschoolers without a comprehensive understanding of the influencing factors at work could be premature. These factors, which are often circumstantial or temporary, could resolve over time or result from individual maturity differences. The study underscored the necessity of a cautious evaluation to exclude environmental conditions. Identifying deficiencies in pre-academic skills early can predict future learning difficulties, allowing for timely interventions.

Al-Qudaat (2021) evaluated early intervention programs for mentally disabled children in Saudi Arabia from the perspective of their families. The study included 148 families with children in early intervention programs.

The results indicated that families rated these programs more highly than the professionals did. Additionally, there were no statistically significant differences in evaluations based on a child's gender or age, suggesting overall satisfaction with the programs across demographics.

Maylan and Krisnawati (2019) conducted a systematic review entitled "Prevalence and Risk Factors of Congenital Disabilities in China, India, and Indonesia," which covered the period from 2012 to 2017. The study highlighted congenital disabilities as significant causes of mortality among newborns and children under five. The prevalence rates and risk factors varied across the three countries, with the highest prevalence being found in Pune, India (230.51/10,000 births). Key risk factors included maternal age, environmental conditions, nutritional deficiencies, and genetic factors. The study underscored the importance of developing intervention programs tailored to these specific risk factors to reduce the prevalence of congenital disabilities.

Dunst et al. (2012) examined family attitudes toward early intervention policies for mentally disabled children in the US. The study involved 25 families and was intended to reveal the family's role in early intervention programs. The findings indicated that parents played a significant and effective role in developing and participating in these programs. The study highlighted the critical role of families in supporting mentally disabled children through continuous engagement and skill development.

Turnbull (2007) focused on the importance of early intervention services from the perspective of families with mentally disabled children. Data were collected through telephone interviews with 2,600 service recipients. The results showed that 75% of the sample reported a significant positive impact on the part of early intervention on their children's overall development. Additionally, 85% of families indicated that these services helped them learn how to care for their children's basic needs. The study emphasized the essential role of early intervention in fostering child development and providing crucial support to families.

Collectively, these studies highlight the critical role of early intervention in addressing various developmental and learning challenges in children. They emphasize the importance of early diagnosis, family involvement, and the development of tailored intervention programs. The diverse methodologies and contexts of these studies provide a comprehensive understanding of the impact of early intervention across populations and conditions. A consistent finding across these studies is that early intervention significantly improves outcomes for children at risk, underscoring the need for continued program support and development globally.

RESEARCH METHODOLOGY

This study employed a descriptive survey methodology, which is particularly well-suited to examining the phenomenon of interest and its relationship with various related variables. To interpret the field data accurately, a range of statistical methods was utilized.

Research Population

The population for this research comprised parents residing in Al-Ahsa, Saudi Arabia, totaling 120 individuals who were included during the 2023/2024 academic year.

Research Sample

A random sample of 75 parents, representing 62.5% of the total research population, was selected for the study. Additionally, an exploratory sample of 30 parents, which was drawn from the research population but not included in the main sample, was used to conduct statistical procedures to ensure the validity and reliability of the research instrument. Fifteen incomplete questionnaires were excluded from the sample.

Research Instrument

To achieve the research objectives, a questionnaire was developed to assess parents' knowledge about early intervention processes for students at risk of LDs in early childhood in Al-Ahsa.

Steps in Constructing the Questionnaire

1. **Determining the Indicators and Components.** Based on the theoretical framework and a review of previous studies, four major dimensions were identified for the questionnaire: symptoms of developmental problems, primary prevention programs, secondary prevention programs, and symptoms of specific learning disabilities after evaluation. These dimensions were considered essential components of the early indicators questionnaire for students at risk of LDs in early childhood.
2. **Preparing the Questionnaire Items.** Following the identification of the components, 19 items were formulated to address the questionnaire's dimensions. To ensure validity, internal consistency was calculated by applying the items to an exploratory sample of 30 individuals from the research population who were not part of the main sample. Correlation coefficients were calculated between each item's score and the total score of its respective dimension, as well as between the total scores for each dimension and the overall questionnaire score (Appendix 1).
3. **Preparing the Questionnaire Instructions.** Clear and precise instructions were developed to answer the questionnaire, encouraging respondents to provide their honest opinions. The instructions emphasized not leaving any items unanswered, choosing the answers that best represented them, and assured them that their responses would be used solely for scientific research purposes, without requiring them to disclose their identities.

Internal Consistency Validity

Validity Assessment: The content validity of the questionnaire was ensured by administering it to a sample of 30 individuals from the research population who were distinct from the main sample but had similar characteristics. Pearson's correlation coefficient was computed to evaluate validity:

- Correlation coefficients were calculated between each item's score and the total score for its respective dimension.
- Additionally, correlation coefficients were calculated between the total scores for each dimension and the overall questionnaire score.

Table 1. Correlation Coefficients Between Each Item Score and the Total Dimension Score (N = 30).

Dimension	Growth Problems Symptoms	Primary, Secondary, and Tertiary Prevention Programs	Evaluation Fields for Symptoms	Specific Learning Difficulty Symptoms After Evaluation
Item	Correlation Coefficient	Significance	Correlation Coefficient	Significance
1	0.918**	0.000	0.804**	0.001
2	0.903**	0.002	0.857**	0.000
3	0.911**	0.000	0.858**	0.000
4	0.871**	0.000		

Table 1 shows statistically significant correlations at the 0.05 level between each item and its respective dimension, indicating satisfactory validity across all 19 questionnaire items.

Table 2. Correlation Coefficient Values Between Each Dimension Score and the Total Questionnaire Score (N = 30).

Dimensions	Correlation Coefficient	Significance
Dimension 1: Growth Problems Symptoms	0.749**	0.00
Dimension 2: Primary, Secondary, and Tertiary Prevention Programs	0.742**	0.00
Dimension 3: Evaluation Fields for Symptoms	0.750**	0.00
Dimension 4: Specific Learning Difficulty Symptoms After Evaluation	0.768**	0.00

Table 2 indicates significant correlation coefficients at the 0.05 level between each dimension and the overall questionnaire score, confirming the questionnaire's validity.

Questionnaire Reliability

Table 3. Reliability Coefficient Values for the Dimensions of the Early Signs List for Students at Risk of Learning Difficulties in Early Childhood in Al-Ahsa.

Dimensions	Cronbach's Alpha	Split-Half (Spearman)
Dimension 1: Growth Problems Symptoms	0.920	0.849
Dimension 2: Primary, Secondary, and Tertiary Prevention Programs	0.824	0.945
Dimension 3: Evaluation Fields for Symptoms	0.784	0.926
Dimension 4: Specific Learning Difficulties Symptoms After Evaluation	0.798	0.965

Table 3 presents significant reliability coefficient values at the 0.05 level for each dimension of the questionnaire, indicating high reliability.

Final Questionnaire

The final questionnaire consisted of 19 items distributed across four dimensions:

- Dimension 1: Growth Problem Symptoms (eight items)
- Dimension 2: Primary, Secondary, and Tertiary Prevention Programs (five items)
- Dimension 3: Evaluation Fields for Symptoms (seven items)
- Dimension 4: Specific Learning Difficulties Symptoms After Evaluation (six items)

Responses were scored on a five-point scale:

- Strongly Agree: 5 points
- Agree: 4 points
- Neutral: 3 points
- Disagree: 2 points
- Strongly Disagree: 1 point

The questionnaire’s scoring ranged from a minimum of 45 points to a maximum of 225 points, reflecting respondents’ agreement or disagreement with questionnaire items.

Data Collection:

The questionnaire for this research was administered to a sample of 75 individuals from Monday, June 5, 2023, to Monday, July 3, 2023. Following the completion of the survey, responses were corrected and transferred to prepared sheets for statistical analysis.

Results:

The data were analyzed using the Statistical Package for the Social Sciences (SPSS). The analysis included frequencies, percentages, correlation coefficients, and semi-partial correlations. Below are the presentation, interpretation, and discussion of the results.

Symptoms of Growth Problems:

The results for the first dimension are presented in Table 4.

Table 4. Means, frequencies, and relative weights of responses for the first dimension–Symptoms of Growth Problems (N = 75).

#	Statement	Mean	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total Estimated Scores	Relative Weight (%)	χ^2
1	I realize that the school can provide the assessment of current theoretical knowledge and practice.	4.093	26 (34.7%)	34 (45.3%)	9 (12.0%)	5 (6.7%)	1 (1.3%)	304	81.1	54.2
2	I realize that the school provides on-the-job training.	4.053	24 (32.0%)	40 (53.3%)	5 (6.7%)	6 (8.0%)	0 (0%)	307	81.9	44.3

Parents' Level of Awareness of Early Intervention Processes for Students at Risk of Learning Disabilities in Early Childhood

3	I realize that the school can develop a gradual intervention system at the school level.	4.133	28 (37.3%)	34 (45.3%)	9 (12.0%)	3 (4.0%)	1 (1.3%)	310	82.7	60.4
4	I realize that the school can create an early diagnosis system at the school level.	4.280	32 (42.7%)	36 (48.0%)	4 (5.3%)	2 (2.7%)	1 (1.3%)	321	85.6	81.1

Note: The critical χ^2 value at a significance level of 0.05 is 9.448.

From Table 4, it is evident that the means range between 4.053 and 4.280, and the percentages range from 81.1 to 85.6%. The critical χ^2 value indicates that across all statements, respondents favored the “Agree” responses to a statistically significant degree.

- The statement “I realize that the school can create an early diagnosis system at the school level” obtained a relative weight of 85.6% and a χ^2 value of 81.1, reflecting significant consensus among participants. This highlights the importance of early diagnosis in providing timely support for children.
- The statement “I realize that the school can develop a gradual intervention system at the school level” received a relative weight of 82.7% and a χ^2 of 60.4, indicating a reasonable consensus. However, the χ^2 value suggests variability in opinions, highlighting the need for improved understanding and implementation.
- The statement “I realize that the school can provide the assessment of current theoretical knowledge and practice” received a relative weight of 81.1% and a χ^2 of 54.2, reflecting a moderate consensus. This indicates a need for enhanced assessment tools and methods.
- The statement “I realize that the school provides on-the-job training” received a relative weight of 81.9% and a χ^2 of 44.3, indicating Moderate consensus but also variation in opinions regarding the quality or effectiveness of the education provided.

The results demonstrate a strong consensus on the importance and capability of the school regarding establishing an early diagnosis system. The high relative weight and χ^2 indicate significant recognition of the importance of early diagnosis in improving educational support for children. Therefore, educational policies should focus on developing effective and early diagnostic systems to provide appropriate support at the right time.

Despite good consensus on the school’s ability to develop a gradual intervention system, there is room to improve understanding and agreement regarding how to implement these interventions effectively. The χ^2 indicates variation in opinions regarding the effectiveness of these interventions, necessitating the development of well-planned and integrated strategies to ensure these interventions’ effective and accurate implementation.

The moderate consensus regarding the school’s ability to assess current theoretical knowledge and practices highlights the need to improve assessment tools and methods. It is important to focus on developing precise standards and innovative assessment tools with which to achieve objective and effective assessments, thereby enhancing the quality of education and academic performance. Similarly, variations in opinions regarding the effectiveness of on-the-job training highlight the need to evaluate the quality of these programs and make improvements to better meet teachers’ needs. The continual development of training programs and the enhancement of their content and methods are essential to equip teachers with the necessary skills and knowledge to address modern educational challenges.

The results of this study are aligned with those of previous research, such as Matar (2021), which identified the effectiveness of auditory-linguistic screening in the early diagnosis of auditory impairments in children, and Al-Hattah (2021), which focused on predictive indicators of pre-academic skills in preschool children with learning difficulties. Additionally, Al-Qudah (2021) evaluated early intervention programs for intellectually disabled children in Saudi Arabia, considering variables such as age, gender, and trainer experience. Dunst et al. (2012) and Turnbull (2007) highlighted the role of families in early intervention and the importance of family services for intellectually disabled children.

Primary, Secondary, and Tertiary Prevention Programs

The results for the second dimension are presented in Table 5.

Table 5. Means, frequencies, and relative weights of responses for the second dimension—primary, secondary, and tertiary prevention programs (N = 75).

#	Statement	Mean	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total Estimated Scores	Relative Weight (%)	χ^2
1	I am aware that the initial phase of preventive work on early intervention in learning difficulties can minimize or alleviate the extent of learning difficulties in children as much as possible.	4.413	35 (46.7%)	37 (49.3%)	2 (2.7%)	1 (1.3%)	0 (0%)	331	88.3	63.6
2	I realize that I can use the secondary phase of preventive work for early intervention to eliminate the problem or prevent its exacerbation.	4.493	42 (56.0%)	29 (38.7%)	3 (4.0%)	1 (1.3%)	0 (0%)	337	89.9	64.5
3	I realize that I can use the tertiary phase of preventive work for early intervention to prevent the spread of the problem or its mismatch with other functional areas.	4.413	36 (48.0%)	35 (46.7%)	3 (4.0%)	1 (1.3%)	0 (0%)	331	88.3	59.9

Note: The critical χ^2 value at a significance level of 0.05 is 9.448.

Based on the data shown in Table 5, it is evident that the means ranged between 4.413 and 4.493 and the percentages ranged between 88.3 and 89.9%. The tabular value of Chi-squared (χ^2) indicates statistical significance for items 2 and 3 in favor of “Strongly Agree” responses and for item 1 in favor of “Agree.”

- Initial Phase:** The statement “I am aware that the initial phase of preventive work on early intervention in learning difficulties can minimize or alleviate the extent of learning difficulties in children as much as possible” obtained a mean score of 4.413, a relative weight of 88.3%, and a Chi-squared value (χ^2) of 63.6. These values indicate a strong consensus among participants regarding the effectiveness of the initial phase of preventive work in terms of reducing or alleviating learning difficulties. This reflects a strong awareness of the importance of early intervention in mitigating the impact of learning difficulties in children.
- Secondary Phase:** The statement “I realize that I can use the secondary phase of preventive work for early intervention to eliminate the problem or prevent its exacerbation” obtained a mean score of 4.493, a relative weight of 89.9%, and a Chi-squared value (χ^2) of 64.5. These values indicate an even stronger consensus among participants regarding the effectiveness of the secondary phase of preventive work in addressing or preventing the worsening of learning difficulties. The high relative weight reflects a strong recognition of the importance of intervention at this stage.
- Tertiary Phase:** The statement “I realize that I can use the tertiary phase of preventive work for early intervention to prevent the spread of the problem or its mismatch with other functional areas” obtained a mean score of 4.413, a relative weight of 88.3%, and a Chi-squared value (χ^2) of 59.9. These values reflect a significant consensus among participants regarding the effectiveness of the tertiary phase of preventive work in preventing the spread of learning difficulties or their negative impact on other functional areas. This underscores the importance of continuous preventive intervention in preventing the escalation of problems or their transition into other areas.

Therefore, the results demonstrate significant consensus on the importance and effectiveness of the initial phase of preventive work in reducing or alleviating learning difficulties in children. The high mean score and relative weight indicate the importance of early intervention and its vital role in improving learning outcomes for children. The secondary phase of preventive work enjoys a very strong consensus among the participants,

as evidenced by the high mean score for and relative weight of the associated statement. This indicates a strong recognition of the importance of intervention at this stage to prevent the exacerbation of learning difficulties, highlighting the need for effective and continuous preventive strategies. The values related to the tertiary phase of preventive work also reflect a significant consensus among participants regarding its effectiveness in preventing the spread of learning difficulties or their negative impact on other functional areas. This underscores the importance of continuous preventive intervention to ensure that problems do not worsen or transition to other areas, necessitating the development and implementation of comprehensive and precise strategies at this stage.

Based on this, the data indicate a significant consensus among participants on the effectiveness of early preventive intervention in its three stages in terms of addressing learning difficulties. The high mean score and relative weight demonstrate widespread recognition of the importance of these preventive interventions, calling for the development of integrated educational strategies targeting early and preventive intervention to improve children's learning outcomes and mitigate the impact of learning difficulties on their academic and professional lives.

These results are aligned with those of previous research. Al-Hattah (2021) identified predictive indicators for pre-academic skills in preschool children with learning difficulties, emphasizing caution in prematurely judging a child's readiness for learning. Al-Qudah (2021) evaluated early intervention programs for intellectually disabled children in Saudi Arabia from the perspective of families, considering variables such as a child's age and gender and a trainer's experience. Dunst et al. (2012) clarified the role of families in early intervention programs for intellectually disabled children and evaluated families' response to training in these programs. Turnbull (2007) emphasized the importance of early intervention and gathered family viewpoints on the importance of early intervention, particularly regarding family services provided for intellectually disabled children.

Third Dimension: Assessment Fields for Symptoms

Table 6. Arithmetic Means, Repetitions, and Relative Weights of Responses on the Third Dimension – Assessment Fields for Symptoms (n = 75)

No.	Statement	Arithmetic Mean	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)	Estimated Total Scores	Relative Weight (%)	χ^2
1	I am aware that I can assess cognitive arrangements, memory, context building, attention, and problem-solving skills in the cognitive domain.	4.333	44.0	49.3	2.7	4.0	0.0		86.7	63.6
2	I realize that in the communication field, I can evaluate language/speech forms, context, language used for expression, and comprehension. In addition, early auditory literacy awareness, writing awareness, number recognition, and infinite contexts, including comprehension ability, are examined.	4.200	45.3	38.7	8.0	6.7	1.3		84.0	59.9
3	I realize that regarding motor functions, overall motor abilities and oral motor skills or reading are examined.	4.293	42.7	49.3	4.0	2.7	1.3		85.9	64.5
4	I am aware that sound, touch, movement, and	4.360	44.0	50.7	2.7	2.7	0.0		87.2	59.9

	visual systems are evaluated in the sensory domain.								
5	I realize that social and emotional adaptation skills are assessed in the context of emotion, self-management, play, and social interaction.	4.453	49.3	46.7	4.0	0.0	0.0	89.1	59.9

Note: The critical χ^2 value at a significance level of 0.05 is 9.448.

From the data in Table 6, it is evident that the arithmetic means ranged between 4.200 and 4.453 and the percentages ranged between 84.0 and 89.1%. The critical χ^2 value was statistically significant for statements 1 and 5 in the direction of “Strongly Agree” responses and for statements 2, 3, and 4 in the direction of “Agree” responses.

- **Cognitive Domain:** The statement “I am aware that I can assess cognitive arrangements, memory, context building, attention, and problem-solving skills in the cognitive domain” achieved a relative weight of 86.7%, indicating the significant importance of these skills in assessment.
- **Communication Field:** The statement “I realize that in the communication field, I can evaluate language/speech forms, context, language used for expression, and comprehension” focuses on communication skills. The relative weight for this domain is 84.0%, underscoring the significance of communication skills in assessment.
- **Motor Functions:** The statement “I realize that regarding motor functions, overall motor abilities and oral motor skills or reading are examined” refers to motor skills and functions. The relative weight for this domain is 85.9%, highlighting its importance in assessment.
- **Sensory Domain:** The statement “I am aware that sound, touch, movement, and visual systems are evaluated in the sensory domain” pertains to the sensory domain. The relative weight for this domain is 87.2%, reflecting its importance in assessment.
- **Social and Emotional Adaptation Skills:** The statement “I realize that social and emotional adaptation skills are assessed in the context of emotion, self-management, play, and social interaction” had the highest relative weight at 89.1%, indicating the significant importance of these skills in assessment.

The analysis of these statements reveals a comprehensive assessment addressing a wide range of skills and abilities across various domains, providing a thorough picture of individuals’ performance.

Correlation with Previous Studies

These findings are aligned with those of previous studies:

- Al-Hattah (2021) identified predictive indicators for pre-academic skills in preschool children with learning difficulties, emphasizing caution in prematurely judging a child’s readiness for learning.
- Al-Qudah (2021) evaluated early intervention programs for intellectually disabled children in Saudi Arabia from the perspective of families, considering variables such as a child’s age and gender and their trainer’s experience.
- Dunst et al. (2012) clarified the role of families in early intervention programs for intellectually disabled children and evaluated families’ responses to training.
- Turnbull (2007) emphasized the importance of early intervention and gathered family viewpoints on the importance of early intervention, particularly regarding family services provided for intellectually disabled children.

Fourth Dimension: Symptoms of Specific Learning Difficulties after Evaluation

Table 7. Arithmetic Means, Frequencies, and Relative Weights of Responses for the Fourth Dimension–Symptoms of Specific Learning Difficulties after Evaluation (n = 75).

No.	Statement	Arithmetic Mean	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)	Total Estimated Score	Relative Weight (%)	Chi ²
1	I am aware that preschool teachers must identify the problem and provide guidance to caregivers.	4.360	40.0	56.0	4.0	0.0	0.0		87.2	59.9
2	I am aware that special education teachers are involved in preparing and implementing individualized educational programs by considering students' academic performance and the goals they must achieve.	4.427	49.3	44.0	6.7	0.0	0.0		88.5	64.5
3	I am aware that speech and language therapists conduct and implement assessments, treatment, and rehabilitation planning for patients with speech, language, voice, and swallowing disorders.	4.453	50.7	45.3	2.7	1.3	0.0		89.1	63.6
4	I am aware that audiologists diagnose, select, and program devices for use in hearing rehabilitation and conduct diagnostic tests.	4.387	44.0	52.0	2.7	1.3	0.0		87.7	59.9
5	I am aware that physical education teachers plan and implement individual physical activities and exercise programs to regulate physical activity for individuals and increase their mobility.	4.227	34.7	56.0	6.7	2.7	0.0		84.5	59.9
6	I am aware that occupational therapists evaluate an individual's functional potential in home, work, and school environments and provide recommendations to improve their performance and help them adapt to their environments.	4.400	49.3	44.0	4.0	2.7	0.0		88.0	64.5
7	I am aware that guidance counselors provide psychological guidance and counseling in areas of psychological services, education, and staff training.	4.307	38.7	54.7	5.3	1.3	0.0		86.1	59.9

Note: The critical value of Chi² at a significance level of 0.05 is 9.448.

From the data in Table 7, it is evident that the arithmetic means ranged between 4.227 and 4.453 and the percentages ranged between 84.5 and 89.1%. The critical value for Chi² was statistically significant for statements 2, 3, and 6 in the direction of “Strongly Agree” responses and for statements 1, 4, 5, and 7 in the direction of “Agree” responses.

- Preschool Teachers: The statement “I am aware that preschool teachers must identify the problem and provide guidance to caregivers” underscores the role of preschool teachers. The relative weight for this area is 87.2%, highlighting the significant role of teachers in this context.

- Special Education Teachers: The statement “I am aware that special education teachers are involved in preparing and implementing individualized educational programs by considering students’ academic performance and the goals they must achieve” emphasizes the role of special education teachers. The relative weight for this area is 88.5%, indicating their crucial role in educational planning.
- Speech and Language Therapists: The statement “I am aware that speech and language therapists conduct and implement assessments, treatment, and rehabilitation planning for patients with speech, language, voice, and swallowing disorders” highlights their role. The relative weight for this area is 89.1%, underscoring the significant importance of their role in the medical field.
- Audiologists: The statement “I am aware that audiologists diagnose, select, and program devices for use in hearing rehabilitation and conduct diagnostic tests” highlights the role of audiologists. The relative weight for this area is 87.7%, reflecting their crucial importance in healthcare provision.
- Physical Education Teachers: The statement “I am aware that physical education teachers plan and implement individual physical activities and exercise programs to regulate physical activity for individuals and increase their mobility” emphasizes their role. The relative weight for this area is 84.5%, indicating their significant role in promoting physical activity and overall health.
- Occupational Therapists: The statement “I am aware that occupational therapists evaluate an individual’s functional potential at home, work, and school environments and provide recommendations to improve their performance and help them adapt to their environment” underscores their role. The relative weight for this area is 88.0%, emphasizing the importance of occupational therapists in promoting independence and functional improvement.
- Guidance Counselors: The statement “I am aware that guidance counselors provide psychological guidance and counseling in areas of psychological services, education, and staff training” highlights their role. The relative weight for this area is 86.1%, reflecting their importance in providing psychological and educational support.

Correlation with Previous Studies

The findings of this study are aligned with those of previous research:

- Matarr and Yasmin Saad (2021) identified the effectiveness of the language auditory screening initiative in the early diagnosis of hearing impairments in children.
- Hattah (2021) indicated the predictive indicators of pre-academic skills in preschool children with learning difficulties.
- Al-Qudah (2021) evaluated early intervention programs for children with intellectual disabilities in Saudi Arabia, considering variables such as a child’s age and gender and their trainer’s experience.
- Dunst et al. (2012) clarified the role of families in early intervention programs for intellectually disabled children and assessed these families’ responsiveness to training in early intervention programs.

These findings provide valuable insights into the assessment and identification of specific learning difficulties, highlighting the roles of various specialists in the process and reinforcing the importance of early intervention and comprehensive assessment approaches.

CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this study, several key conclusions can be drawn. Firstly, regarding symptoms of growth problems, the results underscore the critical importance of establishing an early diagnosis system in schools. The high relative weights and Chi² values reflect a significant awareness of the need for early diagnosis to improve educational support for children. Educational policies should prioritize the development and implementation of effective early diagnostic systems to ensure timely and appropriate interventions. Secondly, concerning primary, secondary, and tertiary prevention programs, there is a strong consensus among

participants on the effectiveness of early preventive interventions in all three stages regarding addressing learning difficulties. The high arithmetic mean and relative weight indicate a broad understanding of the importance of these interventions. This necessitates the creation of integrated educational strategies and programs focusing on early and preventive interventions to enhance learning outcomes and mitigate the impact of learning difficulties on children's academic and professional lives. Thirdly, in terms of areas of symptom evaluation, the study reveals significant agreement among participants regarding the importance of various roles in providing individualized support for children. This includes the roles of preschool and special education teachers, as well as the necessity of therapeutic and rehabilitative services for individuals with special needs. Lastly, regarding the symptoms of specific learning difficulties after evaluation, the findings highlight the importance of coordinated efforts among various professionals and services to improve the quality of life for individuals, regardless of their unique needs and abilities. This underscores the need for an integrated approach in addressing specific learning difficulties.

Given these conclusions, the following recommendations are proposed. First, raising awareness and educating parents is crucial. Organizing awareness campaigns and workshops for parents in Al-Ahsa can enhance their understanding of growth problems in early childhood. Additionally, developing educational materials and training courses for teachers and parents that explain the three levels of prevention programs will emphasize the role of early intervention in improving outcomes for children at risk of learning difficulties. Second, developing comprehensive and effective evaluation procedures for early childhood learning difficulties, in collaboration with relevant authorities, is essential. This includes providing intensive training for specialists in the evaluation and development of appropriate tools and tests with which to accurately identify and assess learning difficulties. Third, supporting families and students after evaluation is vital. Offering comprehensive support for parents and children post-evaluation, including counseling and guidance on implementing appropriate strategies at home and in school, is recommended. Organizing educational sessions for parents on supporting children at risk of learning difficulties at home and providing psychological and educational support services will further assist families. Lastly, enhancing communication and collaboration among relevant parties is crucial. Fostering enhanced communication and collaboration among schools, child development centers, health centers, and non-governmental organizations will ensure the provision of necessary support and services for families and children in early childhood. Implementing these recommendations will enhance parents' understanding of the symptoms and complications associated with learning difficulties in early childhood and provide essential support for children at risk, promoting better educational and developmental outcomes.

ACKNOWLEDGEMENT

This work was supported through the Annual Funding track by the Deanship of Scientific Research, Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Saudi Arabia [Project No.GRANT KFU241482].

REFERENCES

- Al-Fawa'ir, A. (2015). Evaluation of early intervention services for children with special needs in the Sultanate of Oman from the perspective of families. *Arab Childhood Journal*.
- Al-Ghamdi, A. (2009). The effectiveness of early intervention services for autistic children from the perspective of parents and workers in public and private institutions in Madinah. Unpublished Master's Thesis, Yarmouk University, Jordan.
- Al-Hattah, Z. (2021). Predictive indicators of preschool skills for learning difficulties in preschool children. *International Journal of Research in Educational, Human, Literary, and Language Sciences*, 2(8), 258–274.
- Al-Khatib, J., & Al-Hadidi, M. (2021). Early intervention in special education for early childhood. Dar Al-Fikr.
- Al-Makanin, H., & Al-Samadi, J. (2016). Evaluation of special education programs in early childhood in Jordan in light of global quality indicators. *Journal of Educational Sciences Studies*, 43(2), 817–836.
- Al-Qudah, D. (2021). Evaluation of early intervention programs provided to children with intellectual disabilities in Saudi Arabia from the perspective of the beneficiaries' families. *Journal of Umm Al-Qura University for Educational and Psychological Sciences*, 13(2), 128–142.
- Al-Rashidi, S., & Turkistani, M. (2018). Parental involvement and its barriers in early intervention services for deaf and hard of hearing children in Kuwait. *Journal of Special Education and Rehabilitation*, 7(27), 70–122.

- Al-Salem, M. (2023). The level of professional competencies in early intervention standards among specialists working with deaf and hard of hearing children. *Journal of Educational and Psychological Studies - Sultan Qaboos University*, 17(1), 16–36.
- Al-Subaih, A. N. (2022). Quality of life and its relationship with psychological resilience among mothers of children with autism spectrum disorder. Unpublished Master's Thesis, Mutah University, Jordan. Retrieved from <http://search.mandumah.com/Record/1280495>
- Al-Zureikat, I. (2016). Early intervention: Models and procedures. Dar Al-Maseerah.
- Callanan, J., Signal, T., & McAdie, T. M. (2021). Involving parents in early intervention: Therapists' experience of the parent child relationally informed-early intervention (PCRI-EI) model of practice. *International Journal of Disability, Development and Education*, 70(5), 674–687. <https://doi.org/10.1080/1034912x.2021.1910933>
- Damrah, L. M. (2015). The level of use of family-centered practices for children with disabilities by service providers in Jordan in light of some variables. *Journal of Educational Sciences Studies*, 42(3), 1179–1202.
- Dunst, C., Hamby, D., Johanson, C., & Trivette, C. (2012). Family-oriented early intervention policies & practices. *Journal of Youth and Adolescence*, 115, 19.
- Higher Council for the Rights of Persons with Disabilities. (2016). National procedural standards for evaluating early intervention services and programs in Jordan. Amman, Jordan.
- Howeidi, T., & Al-Khaza'ala, A. (2017). Evaluation of early intervention services in special education centers provided to children with disabilities from the perspective of their mothers. *Journal of Amman Arab University for Research, Series of Educational and Psychological Research*, 7(1), 138–161.
- Khalil, M., & Ismail, M. (2019). Evaluating the quality indicators of comprehensive early intervention programs for children with disabilities from the perspective of their families. *Egyptian Journal of Psychological Studies*, 29(102), 1–24.
- Kohli-Lynch, M., Tann, C. J., & Ellis, M. (2019). Early intervention for children at high risk of developmental disability in low- and middle-income countries: A narrative review. *International Journal of Environmental Research and Public Health*, 16(22), 4449. <https://doi.org/10.3390/ijerph16224449>
- Leite, C. S. C., & Pereira, A. P. da S. (2019). Family outcomes in early intervention: results from a nationwide study in Portugal. *Early Child Development and Care*, 190(15)2484–2492. <https://doi.org/10.1080/03004430.2019.1585348>
- Malatsi, N., Mpuang, K., & Mukhopadhyay, S. (2015). Early childhood interventions for children with disabilities in Botswana: Policy and practice. *The Journal of the International Association of Special Education*, 16(1), 76. <https://eric.ed.gov/?id=EJ1218646>
- Maylan, W., & Krisnawati, B. (2019). Prevalence and risk factors of congenital disabilities in China, India, and Indonesia: A systematic review. *KnE Life Sciences*, 2019, 392–401.
- Ministry of Community Development - United Arab Emirates. (2017). Quality standards for early childhood intervention. First Edition, UAE.
- Ministry of Social Development. (2017). Regulation No. (10) for the year 2017 - Regulation of early intervention centers for children with disabilities. Published in the Official Gazette, Issue 5438, Page 610, Jordan.
- Ministry of Social Development. (2020). Operational procedures manual for early intervention programs in Jordan targeting young children with disabilities or developmental delays, Jordan. (In Arabic)
- Mutar, Y. S. (2021). The effectiveness of the auditory-language screening initiative in the early diagnosis of hearing disabilities in children. *Journal of Childhood Research and Studies*, 3(6), 916–939.
- Raver, S. A. (2009). Early childhood special education, 0 to 8 years: Strategies for positive outcomes. Pearson.
- Sabah, N. (2015). Effectiveness of a cognitive-behavioral training program in developing professional competencies among workers in early intervention programs: A Jordanian sample. Unpublished Doctoral Dissertation, World Islamic Sciences and Education University.
- Sarouphim, K. M., & Kassem, S. (2020). Use of the portage curriculum to impact child and parent outcome in an early intervention program in Lebanon. *Early Years*, 42(4–5), 528–542. <https://doi.org/10.1080/09575146.2020.1818186>
- Turnbull, J. (2007). Family supports and services in early intervention. *Journal of Early Intervention*, 29, 187–205.
- Yahya, K. (2020). Educational programs for individuals with special needs. Dar Al-Maseerah.