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The Early Diagnosis of Gifted Children from the Perspective of Parents and Caregivers

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Abstract

This study focused on the early identification of gifted children in preschool and examined whether there are statistically significant differences between parents' and caregivers' perspectives on evaluating these children. A total of 30 children (both boys and girls) aged 5 were identified as gifted. The study sample included 59 parents and caregivers. The primary tool used was the "Gifted Preschool Children Diagnosis List" by Ahmed and Peter. The researcher employed an inferential descriptive approach and analyzed the data using SPSS (version 19).

The findings revealed that there were no statistically significant differences between parents' and caregivers' evaluations in diagnosing gifted children.

Keywords: early diagnosis, gifted children, perspectives, parents, caregivers

Introduction:

The development and prosperity of advanced societies depend on the effective utilization of natural resources and the strategic investment in human potential. Among these resources, gifted children hold a special status due to their unique characteristics and exceptional abilities. Unlike their peers, gifted children require tailored attention to maximize their potential and ensure their abilities are not wasted. By fostering their talents, these children can significantly contribute to societal advancement.

To achieve this, it is essential to identify and diagnose giftedness early. Early detection facilitates the design of specialized educational programs that cater to their specific psychological, cognitive, and social needs. These programs should provide an environment conducive to creativity and innovation while addressing the children's holistic development.

1. Research Problem

The early diagnosis of gifted children and the development of educational programs tailored to their abilities have gained substantial attention in fields such as psychology, education, and beyond. This focus arises from the recognition that gifted individuals possess exceptional capabilities, and harnessing these abilities is vital for societal growth and prosperity. As a result, various methods have been developed for diagnosing and identifying giftedness. These include observation, case studies, parental and educator nominations, peer evaluations, intelligence and achievement tests, and skill assessments (Baza, 2014; Al-Ta'i , 2016).

This study employs an early detection approach to identify giftedness in preschool-aged children. Specifically, it considers the preparatory stage of development by analyzing the perspectives of parents and caregivers. The tool used is the **Gifted Preschool Children Diagnostic List**, created by Suhair Kamel Ahmed and Boutros Hafez Boutros.

The research aims to answer the following question:

Are there statistically significant differences in the early diagnosis of gifted children based on the perspectives of parents and caregivers?

2. Hypothesis:

- There are statistically significant differences in the early diagnosis of gifted children based on the perspectives of parents and caregivers.

3. Operational definitions

3.1 Gifted Preschoolers Diagnostic List Scale

This scale, developed by Suhair Kamel Ahmed and Boutros Hafez Boutros, assesses talent in preschool children aged 4 to 6 years. It consists of 100 statements that reflect various manifestations of giftedness. Each statement includes three response options, with scores ranging from 1 to 3 points. A child who scores between 255 and 300 points on this scale is classified as gifted.

3.2 Early Diagnosis of Gifted Children

Early diagnosis refers to the process of identifying or discovering gifted children based on their scores on the **Gifted Preschoolers Diagnostic List Scale**. Children aged 4 to 6 years who achieve a total score between 255 and 300 points are classified as gifted during this early developmental stage.

3.3. Preschoolers

Preschoolers are children aged 4 to 6 years who have not yet entered formal schooling. Those who achieve a total score between 255 and 300 on the **Gifted Preschoolers Diagnostic List Scale** are identified as gifted.

4. Theoretical Foundation of the study:

4.1 The concept of talent:

The **linguistic definition of talent** according to Munjid al-Talabi al-Bustani (1981) originates from the triliteral root verb "gave." It denotes the act of giving without expecting compensation, as in the phrase "giving money as a gift." From this, the term *gift* arises, meaning the possession of something freely given, and by extension, the term *talent* is derived (Al-Bustani, 1981, pp. 942–944).

From a **terminological perspective**, the concept of talent has been closely linked to mental superiority. Al-Ta'i (2016) noted that the term *talent* gained prominence in discussions of mental superiority during the second half of the 20th century. She cited several scholars, including Torrance, Freeman, Jannier, and Renzulli, who defined talent in terms of mental superiority. Renzulli, in particular, described talent as the interaction of three core human traits: above-average general abilities, task commitment, and a high level of creativity. Similarly, Maher Saleh viewed talent as a complex attribute that enables individuals to achieve excellence in specific fields or skills. Saleh emphasized that talent requires an appropriate environment to nurture innate potential, which may manifest in areas like poetry, music, or art (Al-Ta'i, 2016).

Eid (2023), in a study examining procedural concepts of talent and excellence, analyzed numerous Arab and foreign studies. He found that the concepts of talent and excellence are interconnected and often overlap. Eid identified three major perspectives on these concepts. The first defines talent as an innate predisposition, with excellence referring to high levels of academic achievement linked to mental abilities. The second treats talent as both innate and hereditary, while the third considers the two terms as synonymous (Eid, 2023).

Ahmed and Peter, who developed the diagnostic scale used in this study, defined a procedurally gifted child as: *"A child who demonstrates a high capacity for creativity and consistently outstanding performance in special fields, such as cognitive ability, thinking, music, arts, motor activities, leadership, or social skills"* (Ahmed & Peter, N.T., p. 10).

This study adopts the view that the terms *talent* and *mental superiority* are synonymous and overlapping. Consequently, references to mental superiority throughout the study apply equally to talent, and vice versa. This approach ensures consistency and clarity in the use of concepts.

4.2 Characteristics of the gifted:

Gifted children exhibit distinct traits that set them apart from their peers at an early stage of development. However, they may not display all these characteristics, as they are not a homogeneous group. The degree of talent and superiority influences the uniqueness of their traits compared to others. These characteristics are dynamic and evolve through interaction with the environment. Family upbringing and external circumstances significantly impact their development over time (Al-Ta'i , 2016).

Recognizing the characteristics of gifted children is crucial for their early identification, diagnosis, and support. Kozlan (2008) highlighted some key traits, including *"curiosity, thirst for learning, and excessive emotionality, as they possess a great capacity for care and intellectual maturity beyond their peers"* (Kozlan, 2008, p. 15). The main characteristics can be grouped as follows:

a. Mental Characteristics

- **High Intelligence:** Gifted children typically score 130 or higher on intelligence scales and often achieve outstanding academic results.
- **Advanced Cognitive Abilities:** They can read easily, comprehend deeply, think abstractly, and demonstrate exceptional memory.
- **Creative Thinking:** They excel in generating innovative ideas, solving problems, and thinking outside the box compared to their peers.
- **Linguistic Proficiency:** They display fluency, flexibility in thought, and the ability to analyze and synthesize complex concepts.
- **Keen Observation and Attention:** Gifted children are quick-witted, observant, and have a longer attention span. They enjoy engaging in challenging mental tasks (Al-Sherbini & Sadiq, 2002).
- **Curiosity:** They exhibit strong intellectual curiosity and a broad range of interests.
- **Independence:** They rely on their creativity and autonomy in production and innovation.
- **Reasoning Skills:** Gifted children are skilled in deduction, making connections, and understanding, analyzing, and generalizing complex ideas.
- **Capacity for Challenging Tasks:** They can successfully perform difficult mental work (Al-Abed, 2015).

b. Psychological Characteristics

- **Emotional Regulation:** They demonstrate psychological calmness and emotional control.
- **Self-Confidence:** Gifted children show high levels of psychological adjustment and self-assurance.
- **Positive Disposition:** They often have a good sense of humor, enjoy optimism, and maintain emotional stability.
- **Motivation:** They exhibit perseverance and a strong drive to achieve their goals.

- **Mental Health:** Gifted children are generally less prone to mental illnesses and maintain emotional stability.
- **Ethical Values:** They uphold strong moral principles, such as honesty, generosity, patience, and integrity, and avoid dishonesty or cheating.
- **Humility:** They show less inclination toward boasting or seeking dominance and aggression compared to others.
- **Preference for Quiet Activities:** They enjoy engaging in calm activities, playing with adults, and experiencing happiness and self-satisfaction.
- **Emotional Sensitivity:** Although highly sensitive and emotionally intense, they possess self-control, emotional balance, and a lack of prejudice or intolerance (Al-Ta'i , 2016).

c. Social Characteristics

- Gifted children often possess endearing personality traits, making them more cooperative and well-liked by others.
- They prefer complex games that involve strategic thinking and competition.
- They are more creative in imagining fictional characters for play (Al-Abed, 2015).
- They demonstrate the ability to form successful social relationships with peers, parents, and teachers, and are seen as trustworthy and dependable.
- Gifted children show an aptitude for integrating into groups, adhering to group norms, and contributing to the group's progress through research and innovation.
- They display resilience in the face of failure, coupled with a strong sense of responsibility.
- They enjoy participating in cultural activities and tend to attend events such as parties and public gatherings (Al-Ta'i , 2016).

d. Physical Characteristics

- Gifted children often have a higher birth weight and experience early teething.
- They tend to walk earlier, are more energetic, and sustain these physical advantages over time.
- They generally enjoy good health and are less likely to experience sensory impairments such as issues with hearing, sight, or touch.
- Over time, they maintain physical robustness and good health.
- Early signs of puberty are sometimes observed.

It is important to note that not all gifted children exhibit these physical traits. Some may have weak physical constitutions, illnesses, or sensory disabilities (Al-Sherbini & Sadiq, 2002).

5. Previous Studies:

5.1. Study by Salem Mohammed Al-Mujahid and Adel Al-Kuni Al-Bai (2008)

This study examined the role of teachers in identifying and nurturing gifted students in Libya. The research involved 148 male and female teachers from the primary education level (first and second

stages). The researchers applied Torrance's list of innovative traits (Torrance, 1965) to assess the teachers' tendencies. Statistical tools such as the *t*-test, analysis of variance, and percentages were used to analyze the data.

The results revealed a general trend among the teachers that did not promote innovative traits in students. Moreover, there were no significant differences in the innovative traits preferred by male and female teachers based on gender or educational stage (Phase I or Phase II).

The researchers attributed these findings to the outdated and predominantly theoretical teacher preparation programs, dating back to the 1970s. These programs lacked a focus on addressing the needs of gifted students in areas such as identification and support (Al-Mujahid & Al-Bai, 2008).

5.2 Study by Bashir Muammariya and Abdul Hamid Khazar (2008)

This study focused on identifying gifted students based on Howard Gardner's theory of multiple intelligences (1983). The sample included 389 secondary school students, comprising 169 male and 220 female pupils. The multiple intelligences test, which measures seven types of intelligence, was administered. Statistical methods, including frequencies, percentages, arithmetic means, standard deviations, and the *t*-test, were used to analyze differences.

The findings indicated that:

- 27% of students were gifted in spatial, musical, and linguistic intelligences.
- 41% of students were gifted in social, musical, and linguistic intelligences.

Gifted students were most commonly found in the science, literature, and construction divisions, with males outnumbering females in these categories.

The researchers recommended:

- Early identification of multiple intelligences in children.
- Regular use of mental assessment tools in schools.
- Incorporation of multiple intelligences theory into curriculum development for all education levels, including preschool (Muammariya & Khazar, 2008).

5.3 Study by Taybi (n.d.)

This study highlighted the roles of families and schools in identifying and supporting gifted and creative individuals. It argued that a society’s advancement depends on its ability to discover, nurture, and invest in the hidden talents of its children.

The family, as the first social unit, plays a crucial role in identifying and fostering children's creative abilities at an early age. Similarly, schools are vital in supporting gifted students by using objective assessments and offering specialized strategies for their care.

The study concluded with the following recommendations:

- Raising family awareness of the importance of talent and creativity through seminars and lectures, fostering collaboration between families and schools in this area.

- Establishing specialized schools for gifted students, particularly in science and technology, with advanced curricula tailored to their mental and creative capacities. These schools should employ well-trained and qualified specialists.
- Organizing national and international competitions for gifted individuals and rewarding exceptional achievements with valuable prizes or scholarships to encourage innovation, creativity, and excellence (Taybi, n.d.).

5.4 Study by Samer Mutlaq Mohamed Ayasra and Noor Azizi Ismail (2012):

This study aimed to provide a comprehensive understanding of the traits and characteristics of gifted and talented individuals. The goal was to clarify the concept of giftedness, making it easier to identify and detect gifted individuals. The researchers emphasized the importance of using behavioral characteristic checklists as one of the primary tools in identifying and detecting gifted individuals.

They examined the emergence of these traits, their significance, and their influence on developing talent and excellence programs. The study also reviewed a collection of research focused on the characteristics of gifted individuals and their role in facilitating identification through evaluative measures.

The study concluded with the introduction of an applied model, the **"Samer Al-Ayasra and Noor Azizi Scale"**. This scale measures general behavioral traits in gifted and talented students. It demonstrated high reliability and validity, with indicators of 0.84 for validity and 0.80 for reliability. A child is considered gifted if they achieve high scores in the scale's five dimensions (Ayasra & Ismail, 2012).

5.5. Study by Ahmed Bilderne (2018):

Ahmed Bilderne's study explored the developmental differences of gifted preschool children compared to their non-gifted peers, based on family observations. The research involved face-to-face interviews with the parents of 112 gifted children, focusing on three age groups: 0–2 years, 2–4 years, and 4–6 years.

Data were collected through a semi-structured questionnaire to identify differences between gifted children and their peers. The data were analyzed using content analysis and further classified through an inductive approach.

The study concluded that gifted children exhibit distinct developmental differences across cognitive, linguistic, emotional, and psychomotor skills. These differences were observable in dimensions that families could identify and articulate (Bilderne, 2018).

6. Tools and Methods for Detecting Gifted Children:

Experts utilize various tools and methods to identify gifted children, as relying on a single tool is insufficient. Each tool captures specific indicators of giftedness. According to Al-Sherbini and Sadiq (2002), the tools used for detecting talent must meet several essential criteria:

- They should reflect all aspects of the definition of talent comprehensively.
- They must incorporate multiple approaches and sources whenever possible.
- The tools should be adapted to align with the local environment.
- They must be recently standardized on samples of the gifted population to ensure accuracy in identification. (Al-Sherbini & Sadiq, 2002, p. 261).

Baza (2014) classified detection tools into two main categories: **quick sorting tools** and **psychometric tools**.

1. **Quick Sorting Tools**:

- Observation.
- Case studies.
- Evaluations by parents, teachers, and peers.
- Expert opinions.
- Self-reports.

2. **Psychometric Tools**:

- Intelligence tests.
- Creativity and innovation tests.
- Behavioral assessments.
- Tests measuring qualitative skills. (Baza, 2014, p. 27).

7. Methodological Procedures:

7.1 Study Approach: The study adopts a descriptive approach, which is considered the most suitable for describing the characteristics of gifted children based on their diagnostic list and early detection. As Obeidat et al. (1999) state, "the descriptive approach is a way to describe the topic to be studied through a correct scientific methodology and depict the results in expressive digital forms that can be interpreted" (p. 46).

7.2 Statistical method: The appropriate statistical method for this study is inferential statistics. As Galal (2008) explains, "inferential statistics includes statistical methods used to reach decisions, judgments, and conclusions about the population based on a sample drawn from this population, such as studying differences between means using tests like the T-test, or performing analysis of variance (ANOVA) to compare differences between more than two means" (p. 9).

7.3 Study population: The study population refers to "the community in which the researcher seeks to conduct the study" (Jalal, 2008, p. 37). In this study, the population consists of the parents and

caregivers of preschool children, estimated to be around 5 years old, attending preparatory education in kindergartens. These children were nominated as gifted by their parents and caregivers.

7.4 Study sample: The study sample refers to "the set of values or observations from which the researcher will collect data, representing part of the full set of values for the community. The sample must be chosen properly to allow the researcher to generalize findings to the entire community" (Jalal, 2008, p. 38). In this study, a sample of 30 children (both males and females) was selected through the cluster sampling method. These children were nominated by their caregivers as gifted.

The total number of preschool children in the study was 542, distributed across 5 kindergarten centers in the city of Al-Qarara, Ghardaia State. These centers included 38 educational cohorts supervised by 42 caregivers. The first sample represents the parents (N1 = 30), and the second sample represents the caregivers (N2 = 30), making a total of 60 participants. The study tool, the gifted preschool children diagnostic list, was distributed to both samples for a period of 15 days during the spring break of 2023.

After collecting the forms, one parent sample participant refrained from responding. Therefore, the final number of participants was as follows: parental sample (N1 = 29), caregiver sample (N2 = 30), for a total of N = 59.

7.5 Study tool:

The tool used in this study is the *List of Diagnoses of Gifted Preschool Children*, developed by Suhair Kamel Ahmed and Boutros Hafez Boutros. This tool consists of two main components: an instruction booklet and a question booklet. The question booklet is intended to be completed by the child's parent, caregiver, or any individual who has direct and continuous contact with the child.

The test includes 100 statements that assess various manifestations of talent in preschool children. These areas include cognitive ability, mental ability, thinking, music, arts, leadership, social skills, and motor activities. For each statement, there are three response options: *It always happens*, *Occasionally*, and *It does not happen*. Each response is scored from 3 to 1, respectively.

When calculating the total score of the test, a score range of 255 to 300 indicates a gifted child, while scores of 254 or below indicate an average child. The test was administered to a sample of 300 kindergarten children (both males and females) for standardization.

To verify the psychometric properties of the test, the developers calculated the validity coefficients using both factual validity and external criterion methods. They also calculated the reliability coefficient using the Coder-Richardson method, split-half method, and test-retest method. The results showed high validity and reliability coefficients (Ahmed & Boutros, DT, pp. 52-60).

8. Findings

After selecting the sample of 30 male and female children who were nominated as gifted by their parents and caregivers, the researcher distributed 30 question booklets to the parents and 30 to the caregivers, totaling 60 booklets. The participants were asked to respond to all the test items by marking an (X) next to the most appropriate response for each item based on their observations of the children's characteristics. The response period was set at 15 days. After collecting the completed booklets, it was found that the parent of one child refrained from responding. Therefore, the final sample size was 29 for the parents (N1) and 30 for the caregivers (N2), with a total of 59 participants (N = 59).

To analyze the responses from the two independent samples (parents and caregivers), the researcher used the SPSS statistical package, version 19. The following statistical methods were applied: frequency, percentage, arithmetic mean, standard deviation, and the T-test for statistical significance. The results of the study are presented below:

Table 1: Frequencies and Percentages of Gifted Children

Talent	Frequency	Percent	Valid Percent	Cumulative Percent
Normal child	8	13.6	13.6	13.6
Medium-talented	19	32.2	32.2	45.8
Gifted child	32	54.2	54.2	100.0
Total	**59**	**100.0**	**100.0**	

From **Table 1**, we observe that 32 children (54.2%) were classified as gifted, while 27 children (45.8%) were considered medium-talented or ordinary.

Table 2: Arithmetic Mean and Standard Deviation for Parents and Caregivers

Relationship to Child	N	Mean	Std. Deviation	Std. Error Mean
Nanny	30	2.3000	0.79438	0.14503
Parents	29	2.5172	0.63362	0.11766

In **Table 2**, we can see that the arithmetic mean for the parents' total scores is 2.5172, which is higher than the mean for the caregivers' scores (2.3000). The standard deviation for the parents' scores is 0.63362, while for the caregivers, it is 0.79438. Although there is a slight difference, the dispersion of scores is relatively similar between the two groups.

Table (3): Meta-value, T-value, and Statistical Significance

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Difference	Std. Error Difference	Lower	Upper
Talent	Equal variances assumed	719	0.105 ***	159	57	.251	-.21724-	.18748	-.59265-	.15817
	Equal variances not assumed			1- 3 /163	.041	.250	-.21724-	.18676	-.59151-	.15702

Table (3): Meta-value, T-value, and Statistical Significance

According to Bouhafs (2017), who explained how to determine the statistical significance level of the T-test using the SPSS program (Bouhafs, 2017, p. 170), **Table 3** indicates that the significance value (Sig) for Levene's test is 0.105, which is greater than 0.05. This suggests that the variance of the parents' and caregivers' samples is equal. Therefore, we refer to the values under the assumption of equal variances. The degrees of freedom (df) are 57, the T-value is -1.159, and the significance level (Sig. 2-tailed) is 0.251. Since 0.251 is greater than 0.05, the result is not statistically significant.

9. Disccussion:

By applying the T-test to analyze the differences between two independent samples, the results reveal that the value of T = -1.159 and the significance level (sig 2-tailed) = 0.251, which is greater than the statistical significance level of 0.05. Based on this:

- The alternative hypothesis (H1) is rejected: There are no statistically significant differences in the early diagnosis of gifted children from the perspectives of parents and caregivers.
- The null hypothesis (H0) is accepted: There are no statistically significant differences in the early diagnosis of gifted children from the perspectives of parents and caregivers.

These findings suggest that both parents and caregivers were accurate in their assessments of gifted children in preschool. The rate of discovery of gifted children was 54.2%. The expectations and

nominations from parents and caregivers for the early detection of gifted children were very similar, with no significant disparities between them. The mean score for parents was 2.5172, while the mean score for caregivers was 2.3000.

The results of the current study align with the study by Taibi Rutaiba (DT), which emphasized the role of both the family and the school in identifying and nurturing gifted and creative children. However, unlike the current study, Taibi Rutaiba's study did not focus on early detection specifically.

Conclusion:

The early detection of gifted children is crucial, as it enables timely guidance and care tailored to their abilities and talents. By identifying gifted children at an early age, we can provide the support they need to refine their skills, ultimately contributing to the development and progress of their countries and communities as they grow. This allows society to benefit from their full potential and capabilities.

Parents play a significant role in the early identification of their gifted children, a role that is equally important for kindergarten caregivers. This study demonstrates that both parents and caregivers made accurate assessments of gifted children, with a success rate of 54.2%, based on the Gifted Preschool Children Diagnostic List. Furthermore, the study found no statistically significant differences in the views of parents and caregivers regarding the identification of gifted children. This indicates that their perspectives align closely and reflect an accurate understanding of the traits associated with giftedness, largely due to their direct and ongoing interactions with the children.

Suggestions

Based on the findings of this study, the researcher suggests the following:

- The importance of incorporating the nominations of parents and kindergarten caregivers in the early diagnosis of gifted children, given their accurate understanding of their children's characteristics.
- Conducting a study on peer nominations for identifying gifted children.
- The need for continued follow-up and support for gifted children identified early on, to help nurture their talents and prevent them from being neglected or wasted.
- Adopting locally developed gifted diagnostic lists and child intelligence tests that are tailored to the child's specific environment.

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