

Barriers of providing transitional services for adolescent students with autism spectrum disorder: Saudi teachers' perspective

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Abstract: Transitional services play a crucial role in helping individuals identify personal goals, develop skills, and connect with community resources, thereby enhancing their quality of life, reducing isolation, and increasing opportunities for employment and social engagement, particularly for individuals with disabilities. Previous research has highlighted a gap in the implementation of transitional services within educational settings. This study aims to identify the barriers to transitional services for adolescent students with autism and explore strategies to improve their effectiveness. A descriptive survey methodology was used, with data collected through a questionnaire administered to a random sample of 144 teachers of adolescent students with autism spectrum disorder in public schools under the Ministry of Education in Riyadh. The findings revealed that although teachers recognize the significance of transitional services for these students, there is a lack of knowledge regarding essential transitional services. Furthermore, there are deficiencies in the preparation and professional development programs for teachers related to these services. The study suggests the introduction of targeted programs to improve teachers' understanding of transitional services for students with autism spectrum disorder, as well as providing training to enhance their ability to deliver and evaluate these services effectively.

Keywords: Adolescence, Autism spectrum disorder, Barriers, Solutions, Transitional services.

1. Introduction

In recent years, there has been an increase in the number of individuals with disabilities, with a disability rate of 7.1% among the population of the Kingdom of Saudi Arabia, according to the [1]. This rise is attributed to advancements in measurement and diagnostic processes of disabilities, as well as improved population statistical methods that have become systematic and comprehensive for all segments of the Saudi community. The prevalence of Autism Spectrum Disorder (ASD) in Saudi Arabia is estimated to be around 35,000 individuals, with 10,546 recorded cases in the Riyadh region alone, as reported by the King Salman Center for Disability Research [2]. Individuals with disabilities face numerous challenges when transitioning from one stage of life to another, including difficulties in finding employment or pursuing a profession. In the context of higher education, the opportunity for students with ASD to enroll and engage in academic studies poses a significant challenge for many young individuals. Moreover, they encounter various professional and academic obstacles. ASD is defined as a comprehensive developmental disorder that is typically identified in the early years of a child's life. It is accompanied by difficulties in social interaction, communication problems, a lack of imaginative play, and the presence of repetitive behavioral patterns and limited interests [3]. Many of these difficulties serve as barriers to the integration of individuals with ASD into society, highlighting the urgent need for transitional services for this population. ASD can impede developmental progress in

several areas, including emotional, social, communicative, and cognitive development. Transitional services encompass offerings such as self-determination services, support for independent living, and vocational services. Al-Fawzan and Al-Rawi [4] argue that providing transitional services, whether social or vocational, at an early stage in an individual's life contributes to fostering a sense of self-worth and achievement, enhancing self-confidence, and reducing unemployment rates in the community, ultimately benefiting societal development. Transitional services aim to assist individuals with disabilities in identifying their desires, needs, and interests, and preparing them and their families to access available community services, facilitating their connection with the society in which they live, and establishing strong relationships between students with disabilities and the community and workforce [5]. During secondary school, adolescents prepare to develop their identities and make critical decisions regarding their futures, including where to live, seeking suitable employment, whether to continue their university education or enter the workforce, and establishing appropriate friendships. This process can be challenging for any student at this age, and it is even more so for students with disabilities due to obstacles that impede their healthy developmental progress, making the transition and adaptation to changes in their lives a significant challenge. These differences and challenges vary among students in academic, linguistic, social, and behavioral domains, necessitating that teachers accurately identify the characteristics and needs of their students in order to develop individualized plans that suit their abilities and needs [6]. For example, students with autism, who primarily struggle with communication and social interaction skills, require post-secondary support services after completing secondary school, which should be tailored based on their interests, abilities, skills, physical, and psychological conditions [7]. Providing transitional services helps build the individual by enabling them to achieve their goals and, consequently, boosts their self-confidence and abilities, ultimately contributing to societal development [4]. Teachers play a crucial role in delivering transitional services and essential skills that help students achieve their transitional goals toward adult life effectively and positively. This involves establishing positive relationships with community institutions that offer various transitional services and providing students with hands-on experiences to prepare them for the transition process. Teachers are also expected to work on developing students' self-determination skills, advocate for their rights, and assist them in achieving their goals and enhancing their abilities [8]. Furthermore, teachers are expected to provide vocational training to students both within and outside the school, incorporating this training into the curriculum issued by the Ministry of Education to prepare them for the labor market. They should also design individualized educational plans that align with the needs of students with disabilities and provide sufficient information about future job opportunities and requirements for students with ASD [9].

The objectives of transitional services can be summarized based on Al-Qurayti [9] insights, which include assisting students and their families in benefiting from supportive services, helping students identify their key interests and priorities, and facilitating the establishment of relationships between students and the community. The research also aims to provide opportunities for individuals with disabilities to learn about post-secondary education options, consistent oversight from community institutions, and raise awareness among young people with disabilities regarding potential challenges they may face after school, whether social, in the field of work, or in education. The real challenges faced by students with disabilities in life after school include working under conditions that involve discrimination, or working in positions that do not align with their skills, as well as receiving lower wages, which hinders successful transitions [10]. Additionally, transitional services aim to help students discover themselves in all aspects of life, prepare for employment and life skills, and develop their planning and decision-making skills [11].

1.1. Areas of Successful Transition for Adolescents with Autism Spectrum Disorder

1.1.1. Education and Training

This area focuses on the individual with a disability during secondary school, where services are provided according to each student's needs, recognizing that they may exhibit variations in academic, linguistic, behavioral, and social abilities [6].

1.1.2. Employment

Students with disabilities have the right to choose the type of work they desire, which matches their abilities and needs after completing their studies. This requires additional efforts from both the community and organizations that assist in providing transitional services by implementing strategies that aim to cooperate among all parties to facilitate this employment [12].

1.1.3. Social Life

This encompasses various outcomes of the transition process for individuals with disabilities, including recreational activities, marriage, and parenting during adulthood [13].

2. Literature Review

2.1. Awareness of Teachers Regarding Transitional Services

Teacher awareness of transitional services is a crucial element for the successful implementation of these services and for ensuring that students benefit effectively from them. However, a study conducted by Al- Kalbani [14] found that teachers' familiarity with transitional services within Individualized Education Plans (IEPs) was low, and there were obstacles to providing these services, including a lack of opportunities offered by community institutions. Additionally, studies by Alalet [15]; Almutlaq [16] and Alnahdi [17] noted a deficiency in teacher competency and their need for training and guidance in developing and implementing transitional plans. This indicates a gap between knowledge of transitional services and their application for students with disabilities.

2.2. Reality of Transitional Services Provision

There is a pressing need to understand the reality of transitional service provision to identify strengths and weaknesses in evaluating the effectiveness of these services for students with disabilities. A study by Al- Attawi [5] aimed to assess the state of transitional services in integration programs for students with intellectual disabilities from the perspectives of teachers and parents. The study revealed weaknesses in the implementation and utilization of transitional services according to the views of parents and teachers. Conversely, a study by Al-Qudah and Al-Otaibi [18] showed that transitional services were offered at a high level, reflecting parents' awareness of the nature of the services provided to their children. Furthermore, another study conducted by Al-Zahrani and Ghareeb [19] highlighted the limited provision of transitional services for needy students, which poses numerous challenges and barriers, the most significant of which is societal acceptance of this group. Also, parents are facing significant financial barriers and finding a niche for their youths that fits [20].

2.3. Barriers to Providing Transitional Services

Identifying barriers to transitional services is essential for improving the quality of services provided to students with disabilities. Studies by Al-Mutairi [21]; Al-Shatti and Al-Natoor [22]; Al-Leqani and Al-Dakhil [23]; Al-Fawzan and Al-Rawi [4] and Al-Quraini [24] identified several obstacles affecting the transition process. These obstacles included inadequate training for teachers in providing transitional services, a lack of collaboration from specialized agencies and institutions, insufficient family involvement in offering appropriate transitional services for students with disabilities,

and limited employment opportunities and community participation for individuals with disabilities. The previous studies indicate that barriers to transitional services are varied and may manifest in different contexts, including family, community, and school settings.

2.4. Ways to Improve Transitional Services

It is crucial to identify ways to enhance transitional services to maximize their benefit for students with disabilities. Brewe and White [25] discussed the effectiveness of transitional assessments designed according to the individual needs of persons with autism, including the identification of necessary resources and types of transitional services, and how these assessments can influence the successful outcomes of the transitional services provided. Studies by Al-Sharbi and Al-Hwaiti [26]; Paul [27] and Ba'azim and Abid [28] emphasize the need to reorganize and develop curricula to align with the needs of students with disabilities concerning transitional services. Additionally, increasing teacher training in transitional services and strengthening the connection between community, school, and family are also essential, along with determining students' interests and inclinations.

The previous studies have helped clarify the topic's significance, particularly in the field of autism spectrum disorders. The researcher noted that most studies focused on evaluating transitional services provided to students with disabilities and their realities, such as the study by Mpofu [29]; Al-Ramamneh, et al. [13]; Al-Sartawi and Al-Humaidi [30]; Al-Qahtani and Al-Quraini [31] and Al-Nasser and Al-Malki [32]. In contrast to the aforementioned studies, the current study addresses the barriers to transitional services for students with autism spectrum disorder in Riyadh and ways to improve these services from the perspective of their teachers. The current study aligns with previous research [4, 8, 21-23]. By discussing barriers to transitional service provision. However, it differs in its focus on the autism spectrum disorder population, whereas previous studies included individuals with intellectual disabilities, hearing impairments, and multiple disabilities. The current study also coincides with research [26-28]. By addressing methods to improve transitional services, and it is distinct in focusing on the Riyadh area, where there is a lack of studies discussing transitional services.

Saudi legislation affirms the right of students with disabilities to receive transitional services. The regulatory rules for special education programs issued by the Ministry of Education in Saudi Arabia in 1422 AH under decision number 467 emphasized providing transitional services through individualized educational programs tailored to the individual needs of each case. These rules also specified how to provide and utilize transitional services for individuals with disabilities, outlining the types of transitional programs available for these students, including pre-school, in-school, and post-school programs, as well as programs for working with typical peers. In 1436 AH, the regulations were reorganized into what is known as the procedural organizational guide for special education, focusing on providing transitional services to prepare students with disabilities for transitions from one stage to another, whether related to educational phases or moving from school life to work or university life [8]. The primary objective of transitional services is to prepare individuals to become effective and productive members of society [6]. By the age of 14, individuals with autism spectrum disorder require evaluation services to assess their current performance levels and subsequently develop future plans that provide services contributing to social, self, and professional competencies. This involves equipping individuals with autism spectrum disorder with self-determination skills, self-esteem, and facilitating their participation in organized and coordinated school and social activities to ease the transition process from school to social and professional life based on their interests and needs [19]. Despite the importance of transitional services, studies have shown that the implementation level of transitional programs and services was rated as moderate to weak [13, 19, 30, 31]. This indicates the presence of numerous challenges and barriers that hinder the appropriate provision of transitional services, consistent with the findings of [33]. It is noteworthy that educators play a fundamental role in facilitating the educational process and preparing individuals with autism spectrum disorder for future

life. Thus, the problem of the study crystallized in evaluating teachers' perceptions of the barriers to providing transitional services for adolescents with autism and ways to improve these services in Riyadh. The central research questions of this study were as follows:

1. What is the level of awareness among teachers of adolescents with autism spectrum disorder regarding transitional services?
2. What are the barriers that impede teachers in providing transitional services for adolescents with autism spectrum disorder in Riyadh?
3. What are the best ways to assist teachers in delivering transitional services for adolescents with autism spectrum disorder in Riyadh?

3. Method

The researchers employed the descriptive survey method for this study, as it aims to investigate the phenomenon as it exists in reality. This method relies on data collection, which enables the researcher to explore its characteristics and determine conclusions that assist in understanding it Al-Azzawi [34]. This method provides an accurate evaluating of teachers' perceptions to providing transitional services for adolescents with autism, determining barriers and ways to improve these services in Riyadh.

3.1. Participants

Prior to conducting this study, ethical approval was obtained from the Majmaah University. All procedures involving human participants were reviewed and approved to ensure compliance with ethical research standards. The study population consisted of all teachers working with adolescents with ASD in Riyadh, totaling (231) male and female teachers under the Ministry of Education. The sample included (144) teachers working with adolescents with ASD in Riyadh. The sample can be described according to its characteristics as follows:

The gender distribution of the sample varied, with males representing approximately (38.2%) and females accounting for (61.8%).

Table 1.
Frequency distribution of the sample according to gender.

Gender	Frequency	Percentage
Male	55	38.2%
Female	89	61.8%
Total	144	100%

The distribution of the sample based on the educational qualifications of teachers working with adolescents with ASD is presented in the following table:

Table 2.
Frequency distribution of the sample according to educational qualifications.

Educational Qualification	Frequency	Percentage
Bachelor's in special education	109	75.7%
General Bachelor's with Special Education Diploma	18	12.5%
Master's in special education	17	11.8%
Total	144	100%

The years of experience among the sample of teachers working with adolescents with ASD varied, as shown in the following table:

Table 3.

Frequency distribution of the sample according to years of experience.

Years of Experience	Frequency	Percentage
Less than 5 years	52	36.1%
6 - 10 years	40	27.8%
More than 10 years	52	36.1%
Total	144	100%

Given the importance of training teachers who work with adolescents with ASD, the researcher sought to determine the extent to which they had previously received training related to transitional services. The results are summarized in the following table:

Table 4.

Frequency distribution of the sample according to training on transitional services.

Training on Transitional Services	Frequency	Percentage
Yes	95	66%
No	49	34%
Total	144	100%

3.2. Methodology of the Study

The researcher employed a descriptive survey methodology for this study, as it seeks to examine the phenomenon as it exists in reality. This approach relies on data collection, allowing the researcher to explore its manifestations and draw conclusions that aid in understanding it Al-Azzawi [34].

3.3. Study Tool

The researcher developed the study tool based on the questionnaire by Al-Quraini [8] with several modifications. The final version of the questionnaire consists of two parts:

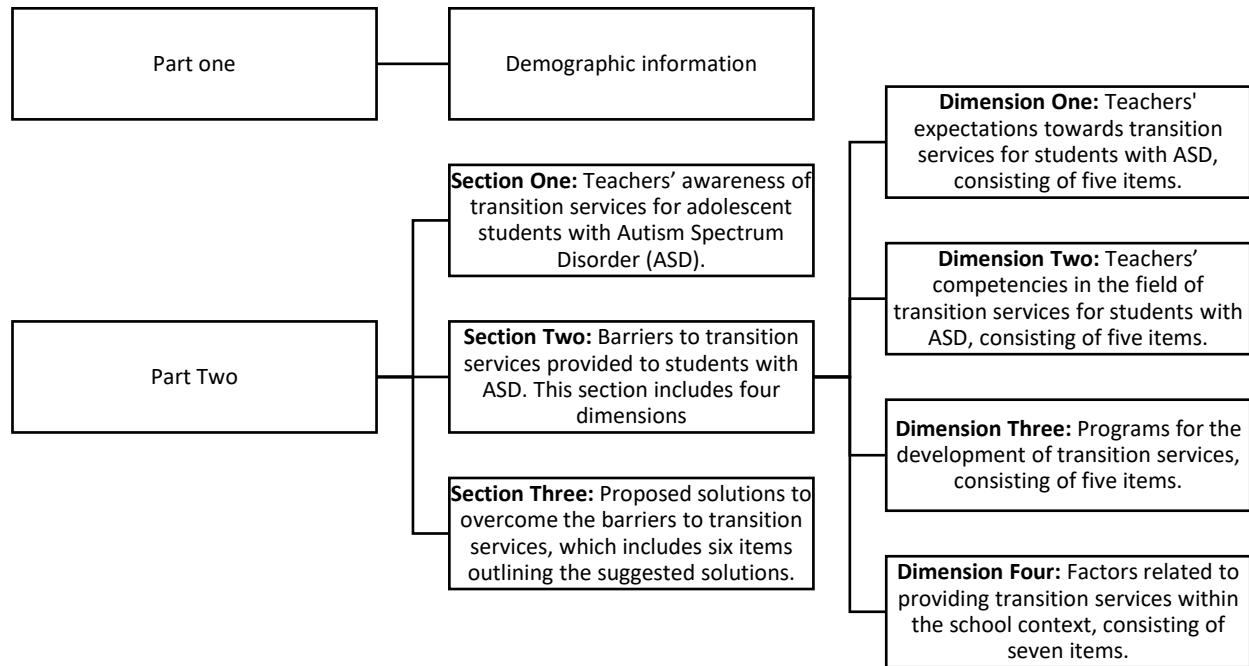


Figure 1.
The questionnaire parts.

3.3.1. Tool validation

The tool was presented to six reviewers from the faculty members in the Special Education Department at Saudi universities to assess the face validity of the questionnaire, as well as to determine the clarity, accuracy, and relevance of its items to the sections. The researcher took into account several comments that contributed to finalizing the questionnaire. To verify the validity of the tool, the researcher administered it to a pilot sample of 30 teachers of adolescents with autism spectrum disorder.

3.4. Data Analysis

The researchers employed the Statistical Package for Social Sciences (SPSS) and calculated the Pearson correlation coefficient to assess the validity of the performance by calculating the score of each item in relation to the overall score of the tool. All correlation coefficients between each item and its respective section were positive and significant at a significance level of (0.01), indicating the validity of the items in the questionnaire.

Additionally, the researcher calculated the correlation coefficients between each section and the overall score of the questionnaire. The results indicated that the questionnaire exhibited acceptable to high validity across all sections, with validity coefficients ranging from (0.43 to 0.88), all being positive and significant at a significance level of (0.05 to 0.01).

The researcher also calculated reliability using Cronbach's Alpha for all sections of the tool, revealing reliability coefficients that ranged from (0.68 to 0.93), all of which were acceptable. The overall Cronbach's Alpha for the entire questionnaire was approximately (0.91), indicating high reliability.

The researchers designed the questionnaire using Google Forms and distributed it to the sample members through various communication platforms to facilitate online responses.

Responses were scored by assigning a value to each item in the questionnaire, converting responses from a verbal scale to a numerical scale as (5: Strongly Agree, 4: Agree, 3: Unsure, 2: Disagree, 1: Strongly Disagree).

4. Results and Discussion

To answer the research questions, the researcher calculated the frequencies, percentages, means, and standard deviations of the sample's performance on the questionnaire sections, as outlined below:

4.1. What is the Level of Awareness Among Teachers of Adolescents with Autism Spectrum Disorder Regarding Transitional Services?"

The results are presented in the following table:

Table 5.

Frequencies, percentages, means, and standard deviations for items in section one: Awareness of teachers regarding transitional services for adolescents with autism spectrum disorder

No.	Statement	Frequency (%)	Agreement Level	Mean	Standard Deviation	Rank	Comment
1	Teachers possess sufficient knowledge about transitional services for students with Autism.	57	39.6%	3.78	1.32	4	Agree
		31	21.5%				
		30	20.8%				
		20	13.9%				
		6	4.2%				
2	Teachers are capable of preparing transitional plans for students with Autism.	53	36.8%	3.84	1.13	3	Agree
		43	29.9%				
		24	16.7%				
		21	14.5%				
		3	2.1%				
3	Teachers have the ability to communicate with the families of students with Autism.	78	54.2%	4.37	0.85	1	Strongly Agree
		51	35.3%				
		8	5.6%				
		5	3.5%				
		2	1.4%				
4	Teachers have the ability to communicate with community organizations concerned with Autism.	60	41.7%	3.95	1.10	2	Agree
		38	26.4%				
		31	21.5%				
		10	6.9%				
		5	3.5%				
Overall			3.98	1.1		Agree	

The results indicated that the overall mean for the section "Teachers' Awareness of Transitional Services for Adolescents with Autism" reached (3.98) with a standard deviation of (1.1), classifying it within the agreement category regarding teachers' awareness of transitional services for adolescents with Autism Spectrum Disorder.

This suggests that all teachers in the study agreed on various aspects of awareness regarding transitional services. Specifically, they agreed on three items in the agreement category, while one item fell into the strongly agree category. The items can be ranked as follows:

1. Item 3: "Teachers have the ability to communicate with the families of students with Autism" ranked first with a mean of (4.37) and a standard deviation of (0.85). This indicates that teachers are aware of their communication skills with families, emphasizing the importance of family engagement in developing strategies to support students and enhance their skills.
2. Item 4: "Teachers have the ability to communicate with community organizations concerned with Autism" ranked second with a mean of (3.95) and a standard deviation of (1.10). This indicates that teachers acknowledged the significance of communicating with relevant community organizations to effectively address the needs of students with Autism and utilize available services.
3. Item 2: "Teachers are capable of preparing transitional plans for students with Autism" ranked third with a mean of (3.84) and a standard deviation of (1.13). This means that teachers agreed on their capability to develop transitional plans, recognizing that such services support effective interventions for students with Autism.
4. Item 1: "Teachers possess sufficient knowledge about transitional services for students with Autism" ranked fourth with a mean of (3.78) and a standard deviation of (1.32). This indicates that teachers acknowledged their knowledge about transitional services, which allows them to maximize support for students with Autism.

The results regarding the first question indicate a high level of awareness among teachers about transitional services for adolescents with Autism Spectrum Disorder. The key aspects of this awareness include their recognition of the importance of communicating with families, the ability to connect with community organizations, the capability to develop transitional plans, and having sufficient knowledge about transitional services.

These findings align with Alnahdi [35] study, which showed that teachers hold positive attitudes towards awareness of transitional services. However, the results contrast with the study by Al-Sharbi and Al-Hwaiti [26] which revealed a lack of understanding regarding transitional services and planning, where sample members reported that transitional plans were nonexistent, and they limited the concept of transitional services to employment only, without addressing other aspects. This discrepancy may be attributed to the different contexts in which the studies were conducted.

4.2. Section Two

4.2.1. Teachers' Expectations Towards Transition Services for Students with ASD

Table 6.

Frequencies, percentages, means, and standard deviations for items in section two: Teacher expectations regarding transitional services for students with autism spectrum disorder.

No.	Statement	Frequency (%)	Agreement Level	Mean	Standard Deviation	Rank	Comment
1	There is no importance to transitional services in supporting students' transition from high school to beyond.	26	18.1%	3.48	1.53	4	Agree
		18	12.5%				
		15	10.4%				
		30	20.8%				
		55	38.2%				
2	Students with Autism have weak capabilities to achieve the goals of the transitional services provided to them.	32	22.2%	3.31	1.32	5	Neutral
		29	20.2%				
		48	33.3%				
		23	16%				
		12	8.3%				
3	There is weak cooperation from the families of students with Autism to achieve the goals of the transitional services provided to their children.	69	47.9%	4.07	1.06	3	Agree
		34	23.6%				
		25	17.4%				
		15	10.4%				
		1	0.7%				
4	There is weak cooperation from relevant authorities, whether governmental or private, to achieve the goals of the transitional services provided to these students.	70	48.6%	4.17	0.98	1	Strongly Agree
		42	29.2%				
		20	13.9%				
		11	7.6%				
		1	0.7%				
5	There is a decline in support from the school administration to achieve the goals of the transitional services provided to these students.	67	46.5%	4.13	1.05	2	Agree
		44	30.5%				
		21	14.6%				
		9	6.3%				
		3	2.1%				
Overall			3.83	1.18		Agree	

The results indicated that the overall mean for the section "Barrier One: Teacher Expectations Regarding Transitional Services for Students with Autism Spectrum Disorder" reached (3.83) with a standard deviation of (1.18), classifying it within the agreement category regarding the existence of this barrier and its impact on providing transitional services for adolescents with Autism.

This implies that all teachers in the study agreed that their expectations regarding transitional services represent a barrier to delivering these services; they strongly agreed on one item and agreed on

three other items, with one item rated as neutral. This reflects a variance in teachers' opinions regarding their expectations' significant impact on the provision of transitional services. The items can be ranked as follows:

1. Item 4: "There is weak cooperation from relevant authorities, whether governmental or private, to achieve the goals of the transitional services provided to these students," ranked first with a mean of (4.17) and a standard deviation of (0.98). This indicates that teachers expect a lack of cooperation from relevant authorities, which hampers the effective delivery of transitional services for these students.
2. Item 5: "There is a decline in support from the school administration to achieve the goals of the transitional services provided to these students," ranked second with a mean of (4.13) and a standard deviation of (1.05). This suggests that teachers perceive low support from school administrations, which hinders the effective provision of transitional services for students with Autism.
3. Item 3: "There is weak cooperation from the families of students with Autism to achieve the goals of the transitional services provided to their children," ranked third with a mean of (4.07) and a standard deviation of (1.06). This indicates that teachers agree on the lack of cooperation from families, which obstructs achieving the transitional services' goals. This aligns with their recognition of the importance of family communication and collaboration in delivering these services.
4. Item 1: "There is no importance to transitional services in supporting students' transition from high school to beyond," ranked fourth with a mean of (3.48) and a standard deviation of (1.53). This indicates that teachers acknowledged this barrier as a perception that diminishes the provision of transitional services and impedes their objectives for students with Autism.
5. Item 2: "Students with Autism have weak capabilities to achieve the goals of the transitional services provided to them," ranked fifth with a mean of (3.31) and a standard deviation of (1.32). This indicates that teachers were neutral in their assessment of students' abilities to achieve transitional service goals, suggesting that many teachers do not view these students as inherently unable to benefit from transitional services.

The results indicate that teachers acknowledge a barrier to delivering transitional services to adolescents with Autism stemming from their expectations about these services. These expectations are influenced by their beliefs regarding the weak cooperation from relevant authorities (governmental and private), low support from school administrations, insufficient collaboration with families, and the perceived lack of importance of transitional services.

These findings are consistent with Al-Fawzan and Al-Rawi [4] study, which revealed that teachers hold negative expectations towards transitional services for special education students. The researcher attributes these negative expectations to insufficient preparation and training for teachers in providing transitional services for students with disabilities. Additionally, Al-Quraini [8] study showed that negative teacher expectations towards services are significant barriers to providing transitional services.

4.2.2. Teachers' Competencies in the Field of Transition Services for Students with ASD

Table 7.

Frequencies, percentages, means, and standard deviations for items in section two: Teacher competencies regarding transitional services for students with autism spectrum disorder.

No.	Statement	Frequency (%)	Agreement Level	Mean	Standard Deviation	Rank	Comment
1	The knowledge and skills that teachers receive in their university training programs regarding assessing the performance of these students to receive transitional services are weak.	75	52.1%	4.16	1.05	2	Agree
		35	24.3%				
		19	13.2%				
		13	9%				
		2	1.4%				
2	The knowledge and skills that teachers receive in their university training programs regarding identifying the preferences and inclinations of these students and their families towards suitable transitional programs are weak.	68	47.2%	4.15	0.98	3	Agree
		44	30.6%				
		21	14.6%				
		9	6.2%				
		2	1.4%				
3	The knowledge and skills that teachers receive in their university training programs regarding preparing suitable transitional plans for these students are weak.	68	47.2%	4.13	1.02	4	Agree
		45	31.3%				
		15	10.4%				
		15	10.4%				
		1	0.7%				
4	The knowledge and skills that teachers receive in their university training programs regarding implementing suitable transitional plans for these students are weak.	68	47.2%	4.18	1.00	1	Agree
		51	35.5%				
		11	7.6%				
		11	7.6%				
		3	2.1%				
5	The knowledge and skills that teachers receive in their university training programs regarding assessing the performance of these students to receive transitional services are good.	19	13.2%	3.27	1.53	5	Neutral
		41	28.5%				
		20	13.9%				
		9	6.3%				
		55	38.2%				
6	The knowledge and skills that teachers receive in their university training programs regarding evaluating the	69	47.9%	4.15	0.98	3	Agree

	effectiveness of the transitional plans provided to these students are weak.						
		42	29.2%				
		21	14.6%				
		11	7.6%				
		1	0.7%				
Overall			4.00	1.09		Agree	

The results indicated that the overall mean for the section "Barrier Two: Teacher Competencies Regarding Transitional Services for Students with Autism Spectrum Disorder" reached (4.00) with a standard deviation of (1.09), classifying it within the agreement category regarding the existence of barriers due to teacher competencies in providing transitional services for students with Autism.

This suggests that all teachers in the study agreed that teacher competencies are a significant barrier to the provision of transitional services, as they agreed on all items except one, which was rated as neutral. This reflects a consensus on this barrier, with the items ranked as follows:

1. Item 4: "The knowledge and skills that teachers receive in their university training programs regarding implementing suitable transitional plans for these students are weak," ranked first with a mean of (4.18) and a standard deviation of (1.00). This indicates that teachers believe the preparation they receive in universities is inadequate for implementing effective transitional plans for students with Autism.
2. Item 1: "The knowledge and skills that teachers receive in their university training programs regarding assessing the performance of these students to receive transitional services are weak," ranked second with a mean of (4.16) and a standard deviation of (1.05). This suggests that teachers agree on the inadequacy of the training related to evaluating student performance in the context of transitional services, which hampers the effectiveness of these services.
3. Item 6: "The knowledge and skills that teachers receive in their university training programs regarding evaluating the effectiveness of the transitional plans provided to these students are weak," ranked third with a mean of (4.15) and a standard deviation of (0.98). This implies that teachers see a deficiency in their training related to assessing and modifying transitional plans to better serve adolescents with Autism.
4. Item 2: "The knowledge and skills that teachers receive in their university training programs regarding identifying the preferences and inclinations of these students and their families towards suitable transitional programs are weak," ranked fourth with the same mean and standard deviation as Item 6. This indicates that teachers feel ill-prepared to accurately identify the needs and preferences of students and their families regarding transitional programs, which is crucial for effective service delivery.
5. Item 3: "The knowledge and skills that teachers receive in their university training programs regarding preparing suitable transitional plans for these students are weak," ranked fifth with a mean of (4.13) and a standard deviation of (1.02). This further supports the notion that the training lacks essential competencies for developing effective transitional plans tailored to the characteristics of students with Autism.
6. Item 5: "The knowledge and skills that teachers receive in their university training programs regarding assessing the performance of these students to receive transitional services are good," ranked sixth with a mean of (3.27) and a standard deviation of (1.53). This indicates that teachers were neutral regarding the effectiveness of their training in assessing student performance, which aligns with their previous views on the weaknesses present in their training programs.

The findings indicate a significant barrier stemming from teacher competencies in delivering transitional services to students with Autism. This barrier is primarily attributed to the general

inadequacy of university teacher preparation programs, which do not effectively equip teachers with the knowledge and skills necessary for planning, implementing, or evaluating transitional services.

This aligns with Al-Quraini [24] study, which showed weaknesses in teacher preparation programs in Saudi universities. The researcher emphasizes the need for increased focus on this area due to its critical impact on the overall transitional process. Additionally, it concurs with Alnahdi [17] study, which revealed negative perceptions regarding teacher preparation programs in relation to transitional services.

4.2.3. Programs for the Development of Transition Services

Table 8.

Frequencies, percentages, means, and standard deviations for items in section two: Professional development programs in transitional services

No.	Statement	Frequency (%)	Agreement Level	Mean	Standard Deviation	Rank	Comment
1	The lack of training courses and workshops provided to teachers by educational administrations in the field of assessing the performance of these students to receive transitional services is a barrier.	89	61.8%	4.50	0.71	1	Strongly Agree
		42	29.2%				
		10	6.9%				
		3	2.1%				
		0	0%				
2	The lack of training courses and workshops provided to teachers by educational administrations in the field of preparing transitional plans for these students is a barrier.	88	61.1%	4.48	0.74	2	Strongly Agree
		42	29.2%				
		10	6.9%				
		4	2.8%				
		0	0%				
3	The lack of training courses and workshops provided to teachers by educational administrations in the field of implementing suitable transitional plans for these students is a barrier.	80	55.5%	4.40	0.81	4	Strongly Agree
		49	34%				
		9	6.3%				
		5	3.5%				
		1	0.7%				
4	The lack of training courses and workshops provided to teachers by educational administrations to evaluate the effectiveness of the transitional plans provided to these students is a barrier.	87	60.4%	4.45	0.79	3	Strongly Agree
		41	28.5%				
		12	8.3%				
		3	2.1%				
		1	0.7%				
5	The lack of informational programs	78	54.2%	4.35	0.84	5	Strongly

	provided to teachers by educational administrations regarding transitional services and their importance for these students is a barrier.						Agree
		46	31.2%				
		16	11.1%				
		4	2.8%				
		1	0.7%				
Overall			4.43	0.77			Strongly Agree

The results indicate that the overall mean for the section "Barrier Three: Professional Development Programs in Transitional Services" reached (4.43) with a standard deviation of (0.77), classifying it within the strong agreement category regarding the inadequacy of professional development programs as a barrier to achieving the goals of transitional services. This means that all teachers in the study strongly agreed on all items, reflecting a consensus on the importance of this barrier. The items can be ranked as follows:

1. Item 1: "The lack of training courses and workshops provided to teachers by educational administrations in the field of assessing the performance of these students to receive transitional services is a barrier," ranked first with a mean of (4.50) and a standard deviation of (0.71). This suggests that there is a significant lack of training in performance assessment, which obstructs the effectiveness of transitional services.
2. Item 2: "The lack of training courses and workshops provided to teachers by educational administrations in the field of preparing transitional plans for these students is a barrier," ranked second with a mean of (4.48) and a standard deviation of (0.74). This indicates that teachers strongly agree on the insufficient training in preparing effective transitional plans for students.
3. Item 4: "The lack of training courses and workshops provided to teachers by educational administrations to evaluate the effectiveness of the transitional plans provided to these students is a barrier," ranked third with a mean of (4.45) and a standard deviation of (0.79). This reinforces the idea that inadequate training in evaluating the effectiveness of transitional plans hampers the overall effectiveness of services.
4. Item 3: "The lack of training courses and workshops provided to teachers by educational administrations in the field of implementing suitable transitional plans for these students is a barrier," ranked fourth with a mean of (4.40) and a standard deviation of (0.81). This indicates a need for more training in the implementation of transitional plans to better serve students.
5. Item 5: "The lack of informational programs provided to teachers by educational administrations regarding transitional services and their importance for these students is a barrier," ranked fifth with a mean of (4.35) and a standard deviation of (0.84). This suggests that teachers strongly agree on the necessity of more informational programs regarding transitional services.

The results illustrate that teachers of students with Autism Spectrum Disorder strongly agree on the existence of barriers to implementing transitional services due to the lack of professional development programs provided by educational administrations. These programs are crucial for preparing, designing, implementing, and evaluating transitional services for students with Autism.

This finding aligns with Al-Quraini [24] study, which showed that participants perceived weaknesses in professional development programs related to transitional services, indicating that this issue is a significant barrier to the advancement of the transitional process. It also agrees with the study

by Al-Leqani and Al-Dakhil [23] where respondents identified obstacles related to teacher preparation and development.

4.2.4. Factors Related to Providing Transition Services Within the School Context

Table 9.

Frequencies, percentages, averages, and standard deviations for items in section two: Factors related to providing transitional services within the school context.

No.	Statement	N/%	Agreement Level	Mean	Standard Deviation	Rank	Comment
			Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	The time allocated to assist the school team in providing transitional services for adolescents with autism is limited.	T	76	41	20	7	0
		%	52.7	28.5	13.9	4.9	0
2	The provision of necessary facilities for school team members to provide transitional services, such as appropriate meeting spaces, is weak.	T	74	44	16	8	2
		%	51.4	30.5	11.1	5.6	1.4
3	The number of school team members who can effectively contribute to providing transitional services for these students is limited.	T	70	50	17	7	0
		%	48.6	34.7	11.8	4.9	0
4	Student participation in the preparation, implementation, and evaluation of transitional services is weak.	T	66	51	15	10	0
		%	45.8	35.5	11.8	6.9	0
5	The involvement of individuals related to the field of providing transitional services, whether teachers or specialists, is weak.	T	65	49	16	12	2
		%	45.2	34.0	11.1	8.3	1.4
6	The activities and teaching methods used to support the provision of transitional services for adolescents with autism are weak.	T	63	50	18	13	0
		%	43.8	34.7	12.5	9.0	0
7	Teamwork among school team members in providing transitional services is weak.	T	64	40	30	9	1
		%	44.4	27.8	20.8	6.3	0.7
Overall	4.19	0.98	Agree				

The results indicated that the overall mean for the for the section “Barrier Four: Factors Related to Providing Transitional Services Within the School Context” was (4.19) with a standard deviation of (0.92). This categorizes it in the agreement category, suggesting that the factors associated with the school context may act as barriers to providing these services for this group. All teachers in the study agreed on these school-specific barriers; three items were in the "strongly agree" category and four items in the "agree" category, which can be ranked as follows:

1. The statement "The time allocated to assist the school team in providing transitional services for adolescents with autism is limited" ranked first with a mean of (4.29) and a standard

deviation of (0.83). This indicates that teachers strongly agreed that the time allocated for providing these transitional services within the school is limited, which hinders efficient service delivery. This signifies a need for better planning within the school to efficiently provide these services for students with autism spectrum disorder.

2. The statement "The number of school team members who can effectively contribute to providing transitional services for these students is limited" ranked second with a mean of (4.27) and a standard deviation of (0.85). This shows that teachers strongly agreed that the limited number of school team members hampers their ability to contribute effectively to providing transitional services for students with autism spectrum disorder. Therefore, there is a pressing need to increase the number of personnel in the school responsible for providing these services.
3. The statement "The provision of necessary facilities for school team members to provide transitional services, such as appropriate meeting spaces, is weak" ranked third with a mean of (4.25) and a standard deviation of (0.95). This indicates that the facilities provided in schools for team members are insufficient and need to be redesigned to enable teachers and other supporting services within the school to provide transitional services effectively for students with autism.
4. The statement "Student participation in the preparation, implementation, and evaluation of transitional services is weak" ranked fourth with a mean of (4.20) and a standard deviation of (0.90). This implies that teachers strongly agreed that there is a weakness in student participation in the preparation, design, implementation, and evaluation of these services, which reduces their effectiveness since they are developed away from the actual interests, desires, and needs of these students with autism spectrum disorder. This highlights the urgent need to redesign these transitional programs in collaboration with these students and their families.
5. The statement "The activities and teaching methods used to support the provision of transitional services for adolescents with autism are weak" ranked fifth with a mean of (4.13) and a standard deviation of (0.95). This shows that teachers strongly agreed that the activities and teaching methods intended to support the provision of transitional services for students with autism are inadequate and ineffective, necessitating a reevaluation and the development of new, effective teaching methods to support and implement these services fully.
6. The statement "The involvement of individuals related to the field of providing transitional services, whether teachers or specialists, is weak" ranked sixth with a mean of (4.13) and a standard deviation of (1.00). This indicates that teachers view the participation of relevant individuals, such as teachers and specialists, as weak, which hinders service provision and diminishes its effectiveness.
7. The statement "Teamwork among school team members in providing transitional services is weak" ranked seventh with a mean of (4.09) and a standard deviation of (0.98). This indicates that teachers strongly agreed that the foundation for successful transitional services for students with autism spectrum disorder lies in teamwork, which is currently lacking in school services and needs support from officials and encouragement for participants in every possible way to achieve effective implementation.

The results indicated a consensus among teachers regarding the existence of a barrier related to the school context and specific factors that hinder the efficient provision of transitional services. These factors include the limited time allocated for the school team to provide transitional services for adolescents with autism spectrum disorder, the limited number of school team members able to contribute effectively, the inadequate provision of necessary facilities for team members, weak student involvement in the preparation and evaluation of these services, ineffective activities and teaching methods, weak involvement of relevant individuals in the provision of these services, and a lack of teamwork among school team members.

These findings align with the results of Al-Fawzan and Al-Rawi [47] which showed barriers in the school context regarding the provision of necessary facilities and the limited number of school team members available to provide transitional services. This result also concurs with the study by Ba'azim and Abid [28] which reported obstacles related to insufficient resources and material support in schools.

From the researcher's perspective, these factors hinder the effective delivery of transitional and other services for students with disabilities overall. When discussing the school context, it is important to emphasize the educational and instructional processes, not just the transitional ones.

What are the best ways to improve transitional services provided to adolescents with autism in Riyadh?

The researcher calculated frequencies, percentages, means, and standard deviations for the items in the dimensions, and the results were as follows:

4.2.5. Proposed Solutions to Overcome Barriers to Transition Services

Table 10.

Frequencies, percentages, means, and standard deviations for items in section three: Proposed solutions to overcome barriers to transition services.

No.	Statement	N/%	Degree of Agreement	Mean	Standard Deviation	Rank	Comment
			Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	Providing a number of training programs for teachers regarding transition services for students with autism.	N	102	31	8	2	1
		%	70.8	21.5	5.6	1.4	0.7
2	Providing necessary support for families of individuals with autism by guiding them and providing information about transition services for adolescent students with autism.	N	96	39	8	1	0
		%	66.3	27.4	6.6	0.7	0
3	Increasing the courses related to transition services for students with disabilities in the teacher preparation programs at universities.	N	84	44	12	4	0
		%	58.3	30.5	8.4	2.8	0
4	Offering training courses for teachers regarding the preparation of transition plans for adolescent students with autism.	N	89	47	5	2	1
		%	61.8	32.6	3.5	1.4	0.7
5	Providing training courses for teachers regarding the evaluation of the effectiveness of transition plans provided to students.	N	92	42	7	2	1
		%	63.8	29.2	4.9	1.4	0.7
6	Increasing opportunities for adolescent students with autism to enroll in vocational institutes with appropriate support.	N	90	41	11	1	1
		%	62.5	28.5	2.6	0.7	0.7
Overall		4.53	0.70	Strongly Agree			

The results indicate that the overall mean for section Three, "Proposed Solutions to Overcome Barriers to Transition Services," was (4.53) with a standard deviation of (0.70), classifying it as strongly agreed upon. This implies that all teachers in the study strongly agreed with the solutions proposed by the researcher to overcome these barriers in transition services, and they agreed on all items with a strong consensus.

The first item, "Providing a number of training programs for teachers regarding transition services for students with autism," ranked first with a mean of (4.60) and a standard deviation of (0.72). This indicates that one of the most important proposals is to develop teachers' performance through providing training programs on transition services for students with autism, reflecting teachers' awareness of the importance of these services.

The third item, "Increasing the courses related to transition services for students with disabilities in teacher preparation programs at universities," ranked sixth with a mean of (4.44) and a standard deviation of (0.76).

The second item, "Providing necessary support for families of individuals with autism by guiding them and providing information about transition services for adolescent students with autism," ranked second with a mean of (4.59) and a standard deviation of (0.62). This highlights the importance of providing necessary support to families through guidance and information about transition services.

The fifth item, "Providing training courses for teachers regarding the evaluation of the effectiveness of the transition plans provided to students," ranked third with a mean of (4.54) and a standard deviation of (0.71), suggesting that the training courses for teachers should focus on evaluation methods for the effectiveness of the transition plans.

The fourth item, "Offering training courses for teachers regarding the preparation of transition plans for adolescent students with autism," ranked fourth with a mean of (4.53) and a standard deviation of (0.69). This indicates that courses and workshops for teachers should focus on preparing transition plans for these students.

The sixth item, "Increasing opportunities for adolescent students with autism to enroll in vocational institutes with appropriate support," ranked fifth with a mean of (4.51) and a standard deviation of (0.72). This means that one of the key proposals to overcome barriers to transition services for students with autism is to work on increasing enrollment opportunities in vocational institutes and providing suitable support for their preparation for life and future job markets.

The results indicate that teachers agreed on the proposed solutions to overcome barriers to transition services, emphasizing the necessity of continuous development for teachers through training programs on preparing transition plans and delivering transition services for students with autism and evaluating these services. Studies by Al-Leqani and Al-Dakhil [23] and Al-Zahrani and Ghareeb [19] recommended providing support to families and increasing their participation in determining and delivering transition services for their children. These responses reflect the awareness of teachers of adolescents with autism regarding the necessity of transition services.

This implies that the proposal to overcome barriers in delivering transition services for adolescents with autism includes increasing courses related to these services in university programs for teacher preparation.

Table 11.

Mean values for the different parts of the questionnaire according to participants' ranking.

Parts	Mean	Rank	Comment
Part One: Awareness of Teachers of Adolescent Students with Autism Regarding Transition Services	3.98	5	Agree
Part Two: 1. Teachers' Expectations Regarding Transition Services for Students with Autism	3.83	6	Agree
Part Two: 2. Competencies of Teachers of Students with Autism in Transition Services	4.00	4	Agree
Part Two: 3. Professional Development Programs in Transition Service Delivery	4.43	2	Strongly Agree
Part Two: 4. Factors Related to Providing Transition Services Within School Context	4.19	3	Agree
Part Three: Proposed Solutions to Overcome Barriers to Transition Services	4.53	1	Strongly Agree

The results indicate that the highest level of agreement among teachers was with Part Three, "Proposed Solutions to Overcome Barriers to Transition Services for Adolescent Students with Autism," which had a mean score of 4.53. Meanwhile, the barrier titled "Professional Development Programs in Transition Service Delivery" had a mean score of 4.43, followed by "Factors Related to Providing Transition Services Within the School Context," with a mean of 4.19. The barrier titled "Competencies of Teachers of Students with Autism in Transition Services" had a mean of 4.00, while "Teachers' Expectations Regarding Transition Services" had the lowest mean of 3.83. Additionally, "Teachers' Awareness of Transition Services" ranked fifth in terms of teacher agreement, with a mean score of 3.98.

5. Conclusion

The results of this study indicate that teachers are aware of the importance of transition services for adolescents with autism spectrum disorder (ASD) and are knowledgeable about these services and their implementation strategies. However, the study also highlighted weaknesses in teacher preparation programs and professional development for teachers of students with ASD, as well as a lack of members on the transition team within schools. These issues significantly impact the quality of transition services available to students with ASD, hindering their integration into society.

Based on these findings, the researchers recommends several actions that could contribute to improving the delivery of transition services for adolescents with ASD:

1. Develop a Program for Teacher Development: Establish a comprehensive program aimed at enhancing the skills of special education teachers, particularly focusing on transition services and strategies tailored to the school context.
2. Increase Enrollment Opportunities: Expand opportunities for adolescents with ASD to enroll in vocational institutes while providing them with appropriate support and conducive environments.
3. Enhance University Curricula: Increase the coursework related to transition services within special education programs at Saudi universities to ensure that future educators are well-prepared.
4. Support for Families: Ensure that necessary support and guidance are provided to families of adolescents with ASD concerning the transition process, helping them navigate the available services and resources effectively.

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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