



## Transition Services in Saudi Arabia: Revisiting the Research Trends and Objectives

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### ABSTRACT

**Purpose.** In Saudi Arabia, there is a dearth of studies on transition services related to students with special needs. The current study is a systematic review to determine researchable topics, aims, and type of research methods used in studies on transition services. **Method.** By making use of the PRISMA method, 29 studies were short listed which suited the eligibility criteria. Before carrying out the review, a protocol was drawn to define the population (e.g. Saudi individuals with special needs, their parents and teachers). For intervention all Transition programs offered in Saudi Arabia were included in the study.

**Findings.** The findings reveal that various research designs have been used in the related studies, with surveys being the most-used method. Despite the presence of legislation in transition services, Saudi research regarding disabilities services is still in its early stages, especially related to transition services and employment for people with a disability. **Implications to Research and Practice.** This study showed the evidence that topics related to teachers' perspectives and attitudes in transition services have dominated its research in Saudi Arabia.

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## Introduction and Historical Overview

In Saudi Arabia before 1958, no official special education services were provided for people with disabilities; only families provided assistance. The first official special education services were launched in 1962, when the Ministry of Education created a special learning department responsible for developing learning and rehabilitation skills for people with disabilities (Afeefe, 2000). Since then, the Saudi government has paid substantial attention to improve learning for people with disabilities. The year 1995 was a turning point for social education in Saudi Arabia. The Saudi government allowed students with disabilities to attend regular public schools. As a result, many new programs were introduced. For example, the number of special education programs and institutions for males and females with a disability increased from 66 in 1994-95 to 1,554 in 2003-2004 (Al-Mousa, 2007).

In 2004, for the first time, middle and high school programs for students with intellectual and developmental disabilities were established (the Directorate General of Special Education in Saudi Arabia, 2007). For all students with or without a disability, high school is a critical transition into adulthood. Many U.S. studies between the 1980s and 1990s reported the need to move from focusing on the special education process to post-school outcomes in secondary special education (Flexer et al., 2005). Thus, to achieve meaningful outcomes, transition services have become the focus. The gap between life in school and living with a family, total independence, and adjusting to a demanding life can be fulfilled with the help of transition services. School-to-work transition services for people with disabilities are defined by the U.S. Office of Special Education and Rehabilitation Services (OSERS) as “an outcome-oriented process encompassing a broad array of services and experiences that lead to employment” (Will, 1984).

In Saudi Arabia, the Regulation of Special Education Institutes and Programs (RSEIP) defines transition services as “a consistent set of activities designed to prepare students with special needs to move from a stage or from an environment to another, and from school life to public activities, and to be able to rely on himself after God Almighty” (p.3). The RSEIP emphasizes the need to provide transition services whenever they are needed (Ghaleb Alnahdi, 2014). Despite the presence of regulation, transition services in Saudi Arabia are still in the early stages. This is an important aspect of special education that must be studied in depth so that educators can determine best practices to provide transition services for students with disabilities. This review's objective was to identify probably the most common or popular academic content (Topics) and research objectives in Saudi Arabian studies on transition services for people with disabilities. Knowing the study methodologies employed will help in knowing where the Saudi research stands in terms of transition services, which is the second goal.

## Methods

- *Research design*

The Preferred Reporting Items for Systemic Reviews and Meta- Analyses (Moher et al., 2009) technique was considered when carrying out this review and reporting on it. Before carrying out the review, a protocol was drawn up and agreed by the

research team. Nine databases were searched for this review in two main languages. For the literature in English, we used the following seven databases: ERIC, Google Scholar, Education Databases, Education Sources, Social Sciences full text, APA PsycInfo, and Find it USF. For the Arabic literature, one database was used: Dar AlMandumah. To ensure that we searched in a structured way, the PICO framework (Population, Intervention, Comparison and Outcomes) was used to guide the development of the search terms (Liberati et al., 2009). The population (1) included different groups: Saudi individuals with special needs, their parents, their teachers. For intervention (2), we considered all Transition programs that fitted the definition of any type of education following the age of compulsory schooling. A comparison group (3) was not available (not applicable). The outcome (4), the focus was on the finding of the study. From these, key terms were developed to search the databases (Table 1).

The researcher used a combination of keywords associated with transition including but not limited to (transition, transition services, transition plan, transition program, training program, employment, vocational school, training school, vocational rehabilitation program, postsecondary education in Saudi Arabia). After navigating these terms, final searches were conducted on terms related to Population (Saudi special needs students and synonyms), Intervention (Transition programs and synonyms) and Outcome (no special outcomes were need it), as no differences were found in the pilot search results when comparison was included.

**Table 1**

*ERIC final search strategy*

<b>N</b>	<b>Key Terms used to search about transition services in Saudi Arabia</b>
S1	(Saudi individual with special needs, or Saudi student with disability or Saudi handicap, Saudi disabled student, Saudi exceptional students, Saudi ESE (Exceptional student education))
S2	post- secondary or postsecondary or PSE or university, college, 2-year college or 4 year college or undergraduate course, post school, employment, vocational school or life skills training, training school, vocational rehabilitation program, further education.
S3	transition services, transition, transition education, transition plan, transition program, training program,
S4	KSA, Kingdom of Saudi Arabia , Saudi , Saudi Arabia, SA
S5	S3 and S4
S6	S2 and S4
S7	S1 and S2 or S3

For the search terms in Arabic, the author translated the English search terms, and the final search string was applied to all fields to ensure that no studies were missed. Moreover, there was not any restriction placed on the publication dates of studies included in the search (Table 2).

**Table 2**

*A Full Arabic search string in Dar AlMandumah*

بحث بقاعدة بيانات دار المنظومة

[Search full Arabic Dar AlMandumah database]

- 1 (سعودي من ذوي الاحتياجات الخاصة ، أو سعودي معاق أو معوق سعودي ، أو سعودي معاق (جميع الحقول  
[All fields (a Saudi with special needs, a Saudi with a disability, a Saudi with a disability, or a Saudi with a disability]
- 2 أو جامعة أو كلية أو كلية مدتها سنتان أو كلية 4 سنوات (جميع الحقول (ما بعد الثانوي أو ما بعد الثانوي أو  
[All fields (post-secondary, post-secondary, university, college, 2-year college, or 4-year college)]
- 3 جميع الحقول (خدمات انتقالية ، انتقال ، تعليم انتقالي ، خطة انتقالية ، برنامج انتقالي ، برنامج تدريب ،)  
[All fields (transition services, transition, transition education, transition plan, transition program, training program]
- 4 و 123 و 4  
[All 1, 2, and 3]

- *Study Selection*

The inclusion and exclusion criteria were based on the following: First, studies were included if they considered transition programs that were consistent with our definition of education following the age of compulsory schooling. One - to -one tuition was not considered a transition program. Second, we looked for studies that were eligible for inclusion such as qualitative, quantitative or mixed design. Theoretical and policy reports were excluded. Third, we navigated eligible studies published in English or Arabic. It is worth mentioning that all articles on services that were implemented in Saudi were included and studies that did not were excluded. Moreover, articles and dissertations were also included, whether they were published or unpublished. Articles were included if they employed a quantitative, qualitative, mixed or case studies methods design. Theoretical, review, or policy reports were excluded.

The first searches resulted in 10250 articles which were reduced to 8432 articles once duplicates were removed. The first stage of screening was by the researcher and 25% of all articles were reviewed by a second reviewer. In this phase, inter-rater agreement was 97.5%, and any disagreement were resolved through discussions between the researcher's team. The first stage of screening was based on titles and abstracts and a total of 198 Article remained in the review after the first stage of screening.

Second stage of screening was conducted by reviewing the full-text articles from the selected articles and the result of the second screening was 29 articles. Agreement by reviewers at this stage was 98.6% and any disagreements were resolved through consultation with other researchers. A total of 29 articles met the criteria for full inclusion. Google Docs were used to document all review process.

- *Data extraction and Quality synthesis:*

Data were extracted from each study on author name, year of publication, study design, study method, and study aims. A pilot form that included 10% of the extracted data was reviewed by a second person and inter-rater agreement at this stage was 100%. The synthesis of findings for the quantitative studies was based on percentages reported by researchers on questions regarding the study's goal (e.g., what is the aim of the study? what are the difference between the studies' goals? what is the method of the study? what is the design?). The same approach to synthesis was followed for qualitative studies, where if the answers to the questions were matched by 50% or more then it was taken as a result of the studies included.

Mixed Methods Appraisal Tool checklist (MMAT)- Version 2018 was used for the assessment of bias (Hong et al., 2018). This scale was chosen for its established psychometric properties (Pace et al., 2012) and flexibility to evaluate qualitative, quantitative, and mixed methods study add value of each item is 20%. If a study scored only 20% it would have a very high risk of bias, while a score of 60% would indicate a moderated level of bias, and so on (Hong et al., 2018). A random sample of over 15% of the studies (N=4) included in the review was independently rated by a second person, and there wasn't any disagreement. If there was a disagreement on any of the studies it would be resolved through communication between those involved in the review. Results from the studies were analyzed through a narrative synthesis.

## Results

The aim of this review was to identify trends and objectives of research studies on transition services for people with disabilities in Saudi Arabia. Knowing the study methodologies employed will help in knowing where the Saudi research stands in terms of transition services, which is the second goal. Data were extracted from each study on author name, year of publication, study design, study method, study aims. The study yielded the following results as described in Table 3.

**Table 3***Research studies about transition services in Saudi Arabia*

	<b>Title / name /year</b>	<b>Design/ method</b>	<b>Aims</b>
1	Title: Transition Services for Students with Mild Intellectual Disability in Saudi Arabia Author(s): Ghaleb Alnahdi Year: 2013	Survey / Quantitative	To examined teachers' perceptions and attitudes toward transition services for students with mild intellectual disability in Saudi Arabia Furthermore, they looked at the connection between teachers 'attitudes toward transition services for students with mild intellectual disabilities and their gender and educational background
2	Title: Faculty Perceptions of Transition Personnel Preparation in Saudi Arabia. Author(s) :Bandar A. Alhossan, PhD1,2 and Audrey A. Trainor, PhD3 Year :2017	Survey / Quantitative	the researchers investigated the extent to which Saudi Arabian faculty members respect and incorporate transition curricula into their special education preparation programs.
3	Title: Transition Services from School to Work for Students who are Deaf or Hard of Hearing in Saudi Arabia: Teachers Perceptions Author: Bader N.Alkahtani Year: 2016	Survey / Quantitative	to investigate how Saudi Arabian teachers' perceptions about the services provided to pupils who are Deaf or Hard of hearing (D/hh) as they transition from school to the workforce.

	<b>Title/ name/year</b>	<b>Design/ method</b>	<b>Aims</b>
4	Title: Assessing Training Needs of Transition Services for Teachers of Learning-Disabled Students in the Secondary Stage in Saudi Arabia Author: MunirahAL-Hudaib, Nadia Tazi and Saeed Al-Yamani Year: 2017	Survey / Quantitative	To establish the differences in training needs of transition services for teachers according to the variables: educational level, years of experience, and training course, and to define the training needs of transitional services for teachers of secondary learning-disabled girls in Saudi Arabia.
5	The Importance of Teachers' Universal Design Title: For Transition Principles Knowledge in Preparing Students Who Are Deaf and Hard of Hearing for the Life after School in Saudi Arabia Author: Marzouq Ali Alzahrani <sup>1,2</sup> Year: 2018	Interviews Qualitative	to determine whether teachers of Deaf and Hard-of-Hearing students in Saudi Arabia's general education schools have a thorough understanding of Universal Design for Transition (UDT) and have successfully implemented it into their lessons.
6	Title: Special education Teacher Transition-Related Competencies and Preparation in Saudi Arabia Author: Ghaleb Alnahdi Year: 2014	Survey / Quantitative	To analyzed how special education teachers in Riyadh, Saudi Arabia, believe they were prepared for transition services.
7	Title: Investigating Components, Benefits, and Barriers of Implementing Community-Based Vocational Instruction for Students with Intellectual Disability in Saudi Arabia Author: Hussain A. Almalky Year: 2018	Survey / Quantitative	investigates how special education teachers in Saudi Arabia view CBVI in terms of preparing secondary students with ID for post-school work.

	<b>Title/ name/year</b>	<b>Design/ method</b>	<b>Aims</b>
8	Title: Best Practices in the Transition to Work Services for Students with Intellectual Disability: Perspectives by Gender from Saudi Arabia Author: Ghaleb Alnahdi, PhD Year: 2016	Survey / Quantitative	The best practices for transition to work services are examined in this research along with teachers' perspectives on these techniques.
9	Title: Factors Associated with the Academic success of Fourth and Fifth Grade Autistic and Down Syndrome Students' Successful Transition in Saudi Arabian Public Schools: Implications for Educational Leaders Author: Aldosari, Fulwahs Year:2019	Interviews Qualitative	the current study examined the variables linked to the academic success of fourth- and fifth-grade autistic and Down syndrome students successfully adjusting to public schools in Saudi Arabia.
10	Title :Teachers' Attitudes and Perceptions Toward Transition Services from School to Work for Students with Mild Intellectual Disabilities in Saudi Arabia Author: Ghaleb H. Alnahdi 2012	Survey / Quantitative	The purpose of this study was to investigate Saudi Arabian teachers' attitudes and perceptions regarding transition programs for children with mild intellectual disability.
11	Title:Secondary Special Educators' Perceptions of Community-Based Vocational Instruction for Students with Intellectual Disabilities in Saudi Arabia Author: Hussain A. Almalky Year: 2015	Survey / Quantitative	investigate the attitudes, normative beliefs, and behavioral control beliefs of special education teachers regarding the use of CBVI to prepare students with ID for post-secondary employment.



	<b>Title/ name/year</b>	<b>Design/ method</b>	<b>Aims</b>
12	Title: Postsecondary Outcomes of Students with Visual and Auditory Impairments in Saudi Arabia: Implications for Special Education Policy. Author: Hala Al-Hoshan Year: 2009	Interviews Qualitative	This study investigated the post-school experiences of 279 Saudi Arabian students with visual and hearing disabilities who graduated between 2002 and 2006 in Riyadh.
13	Title: Perspectives of Saudi Special Education Teachers Towards Secondary and Post-Secondary Transition Services for Youth with Multiple Disabilities Author: Nabil Almalki Year: 2017	Survey / Quantitative	The goal of the study was to investigate secondary and post-secondary transition services for young people with multiple disabilities (MD) and understand how these services were offered for this demographic in order to assist them live independently for the rest of their lives.
14	Title: Teachers and Practitioners' Perceptions of Transition Services for Females with Intellectual Disability in Saudi Arabia Author: Reem Abdullah Almutairi Year: 2018	Mixed Survey + Interviews	The objective was to examine the present perceptions and experiences of six vocational rehabilitation specialists and five special education teachers in Saudi Arabia who train transition-aged females with intellectual disabilities.
15	Title : Educators', Leaders', and Parents' Perceptions, Knowledge, and Use of Secondary Transition Evidence-Based Practices for Students with Intellectual Disabilities in Saudi Arabia Author: Yasser Mubark Aldossari Year: 2017	Mixed Survey + Interviews	to assess special educators', leaders', and parents' opinions on, levels of understanding of, and application of secondary transition (evidence-based practices) EBPs for children with ID in Riyadh, Saudi Arabia.
16	Title :Secondary Special Education Teachers' Perceptions about Their Personnel Preparation in Transition Competencies in Saudi Arabia Author: Bandar A. Alhossan Year: 2015	Survey / Quantitative	to determine the degree to which secondary special education teachers of ID in Saudi Arabia feel equipped to implement and deliver transition education.

	<b>Title/ name/year</b>	<b>Design/ method</b>	<b>Aims</b>
17	Title: A study of the Needs of Adults with Disabilities and Related Policies in Saudi Arabia Author: Hammad Ali Alhammadi Year: 2000	Mixed Survey + Interviews	Examining how they view impairments and the potential of changing disability policies.
18	Title: Why Does Saudi Arabia Have Fewer Leaders with Disabilities ? Changing Perspectives and Creating New Opportunities for the Physically challenged in Saudi Arabia Author: Sara Abdullah Kadi Year: 2018	Mixed Survey + Interviews	This study looked at Saudi Arabia's negative attitudes regarding persons with disabilities, which led to prejudice against them, made life difficult for them, and prohibited them from fully participating in society.
19	Title: The reality of the application of transitional services for students with learning disabilities from the point of view of educational supervision in the Kingdom of Saudi Arabia Author: Nadih Ahmad AL Zahrani Year: 2021	Survey / Quantitative	From the perspective of educational supervision, describe the reality of the use of transitional services for students with learning disabilities in the Kingdom of Saudi Arabia, the challenges that stand in the way of this, as well as the solutions that would help them. Additionally to demonstrating if there are statistically significant differences between the study sample's perceptions on the application of transitional services for students with learning disabilities in the Kingdom of Saudi Arabia, according to several variables (educational qualification, years of professional service as educational supervisor, number of students served under educational supervision).
20	Title: The Provision of Transition Services in Educational Institutions for Students with Multiple Disabilities and their Importance from the Perspectives of the School Team Author: Dr. Turki A. Alquraini, Ph.D Year: 2013	Survey / Quantitative	From the viewpoint of school teams in the city of Riyadh, the goal of this study was to determine the availability of transition services in educational institutions for students with multiple disabilities and the significance of those services.

	<b>Title/ name/year</b>	<b>Design/ method</b>	<b>Aims</b>
21	Title: Evaluating the effectiveness of the use of transitional services on the motivation and the attention of students with learning disabilities towards learning from the viewpoint of university's female students Author:Dr. Mohammad A. Alobaid Year: 2021	Survey / Quantitative	The purpose of the study was to learn what university students thought about the impact of transitional services on LD students' motivation and attentiveness.
22	Title: The Transitional services for Female students with learning disabilities in High school's programs Authors: Prof. Zaidan Al Sartawi(*) & Mrs. Basema Al-Humaidhi)** Year: 2018	Survey / Quantitative	From the viewpoint of students with learning disabilities and their teachers, this study sought to identify the transitional services offered to students with learning disabilities in government secondary school programs for girls in Riyadh.
23	Title: Revealing the Hindrances of Transitional Programs of Female Students With Intellectual Disabilities in Aseer Region Authers: Sarah khalid Alfozan & Jamelh Moshabab Asiri Year: 2018	Survey / Quantitative	From the perspective of (43) female teachers in this category, the study sought to identify the challenges faced by transitional programs for female students with intellectual disabilities in the Aseer Region of the Kingdom of Saudi Arabia.
24	Title:Evaluation of the transitional services in integration programs for Mental Retardation in Tabuk city according to evaluator (parents - teachers) Author:Dr. Ruwida Muhammad Al.Atawi Year: 2020	Survey / Quantitative	According to the evaluator, the study attempts to determine the actuality of the transitional services in integration programs for mental retardation in Tabuk City.
25	Title: Evaluation of Vocational Rehabilitation Programs for People with Intellectual Disabilities as a Perspective of their Employees in the Kingdom of Saudi Arabia Author: Dr. Sultan Saeed Alzahrani Year: 2019	Survey / Quantitative	The study's objective was to assess how Saudi Arabia's vocational rehabilitation programs for people with intellectual disabilities are perceived by their staff.

	<b>Title/ name/year</b>	<b>Design/ method</b>	<b>Aims</b>
26	Title: Components of Transition Services in the Individualized Education Program for Students with an Intellectual Disability Author: Dr. Hussain A. Almalky Year: 2020	Survey / Quantitative	The goal of the current study was to look at the transitional elements that teachers include in the individualized education plan (IEP) and their significance for students with intellectual disabilities from their teachers' perspectives.
27	Title: Transitional Programs Presented to Students with Intellectual Disabilities from central Region Teachers' Point of View Authors: Sarah Khaled Al-Fawzan Jamilah Mushabb Al-Rawi Year: 2019	Interviews Qualitative	This study attempts to determine how teachers of students with intellectual disabilities feel about transitional programs in the Kingdom of Saudi Arabia's Central area.
28	Title: The Difficulties of Implementing the Transitional Plan for Students with Autism Spectrum Disorder from the Point of View of Teachers in the city of Riyadh Authors: Al-Anzi Suleiman Atallah and Al-Wahaibi Abdullah bin Abdul Mohsen Year: 2022	Survey / Quantitative	Based on teachers' perspectives in Riyadh city, the study sought to identify the challenges associated with implementing the transitional plan for students with autism spectrum disorder.
29	Title: Factors that Affect the Provision of Transition Services to Students with Multiples Disabilities in their Institutions in the Kingdom of Saudi Arabia Author: Turki Abdullah S. Al-quraini, Year: 2017	Survey / Quantitative	The study's objective was to pinpoint key elements that have an impact on how institutions provide transition services to students with various disabilities.

## Discussion

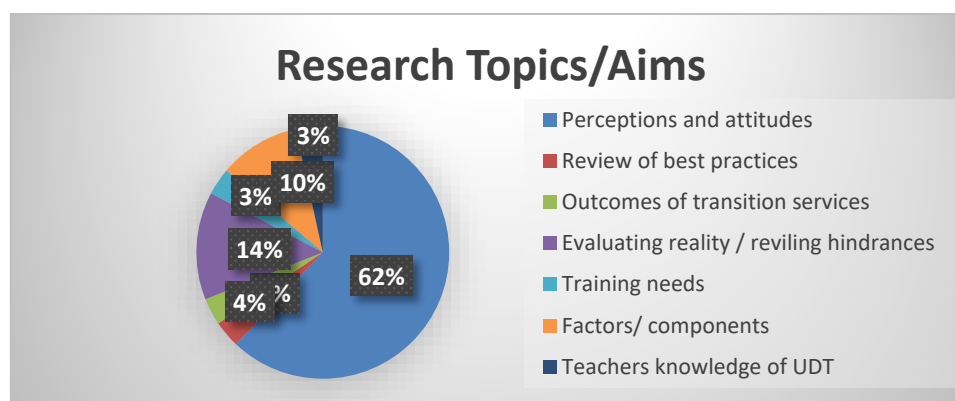
The systemic review of the research revealed many topics related to different transition services in Saudi Arabia. Table 4 illustrates all the Saudi transition services research topics described in English and Arabic.

**Table 4**

*Focus of articles related to different transition services in Saudi Arabia*

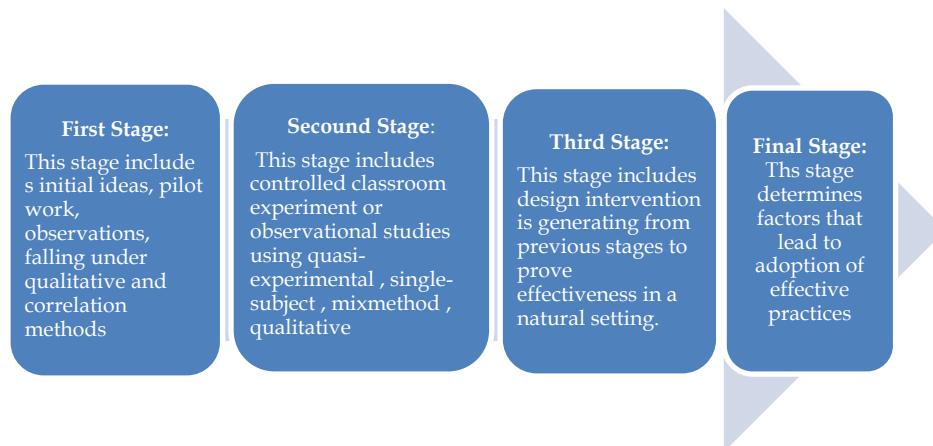
Focus of the article	Number	Percentage
Perception and attitude	18	62%
Review of best practices	1	3.45%
Outcomes of transition services	1	3.45%
Evaluating reality / reviling hindrances	4	13.79%
Training needs	1	3.45%
Factors/ components	3	10.34%
Teachers knowledge of UDT	1	3.45%

The researcher extensively examined the focus of the articles related to transition services. As can be seen in Figure 1, the most dominant topic is perception and attitude which accounted for (62 %) of the researched articles. This was followed by Evaluating reality / reviling hindrances which accounted for (13.79%) of the articles. Also, the data show that special education researchers examined other important topics related to transition services such as Factors/ components, which accounted for three articles. Other topics included a review of best practices, Outcomes of transition services, and Training needs and Teachers knowledge of UDT(Universal Design of Teaching ).



**Figure 1:** Research Topics/Aims

Overall, the data show that there is a limited amount of research related to transition services in Saudi Arabia. Most of the topics studied relate to perspectives and attitudes. This finding aligns with that of [Alrusaiyes \(2014\)](#), who stated that Saudi studies conducted in the last 15 years have focused almost exclusively on the attitudes and perceptions of educators. This finding resonates with [Levin, O'Donnell, and Kratochwill \(2003\)](#), who described disability research in Saudi Arabia as being in the developmental stage. According to [Levin et al. \(2003\)](#), there are four stages of educational research:



**Figure 2:** Four Stages of Educational Research

The research in Saudi Arabia is still predominantly in the first stage, as described by Levin et al. (2003). There is a need for research in Saudi Arabia to move beyond the first stage into intervention research, classroom experiments, and towards effectiveness. This meta-analysis highlights the lack of published research on disability, especially research about transition services, in Saudi Arabia. All of the studies in this meta-analysis stated that there is a limited amount of published research (e.g., Al-Ojaimi and Randa (2019); Al-quraini (2017); Alabdulwahab (2014); Aldosari (2019); Aldossari (2017); Alhossan (2015); Alhossan and Trainor (2017); Alkahtani (2016); Almalki (2017); Almalky (2015, 2018); Almotiri (2017); Almutairi (2018); Alnahdi (2013); Ghaleb Alnahdi (2014); Alnahdi (2016); Alnahdi (2012); Ghaleb Hamad Alnahdi (2014); Alrusaiyes (2014); Alzahrani (2018); Munirah AL-Hudaib and Al-Yamani (2017); Peter, Alem, and Knabe (2018)). Some of the studies point out that they were the first to be conducted (for example, Aldossari (2017); Munirah AL-Hudaib and Al-Yamani (2017) and Al-quraini (2017)). Moreover, six of the 29 studies were dissertations written by Saudi students working on their graduate degrees in the west (Al-Hoshan, 2009). Those papers were not published and were not peer-reviewed.

There are many reasons for the lack of published research. First, the concept of transition is new in Saudi Arabia (Alnahdi, 2013). According to Almuaqel (2008), most Saudi special education (SSE) teachers are prepared to work with elementary students at a young age, which makes it difficult for them to make work-related transition services. The SE teachers also do not have the knowledge or the skills to provide transition services. They need help from specialists or outside professionals, which is not available. There was only one special education department in King Saud University in the entire country until 2002, and it enrolled only a small number of special education specialists (Althabet, 2002), so there are not any transition specialists and the opportunities for this topic to be studied in Saudi were minimal. With that in mind, many Saudi schools do not include transition goals in the individual education plans (IEP) of students with a disability (Almalky, 2018), even though the Ministry of Education (2001) in Saudi Arabia has confirmed the importance of providing transition services for all students with a disability. There is also a gap between education policy and everyday practices (Alnahdi, 2013). This makes it difficult for the researcher to study the topic because no programs are in place.

Second, there are no accurate statistics on people with disabilities in Saudi Arabia (Alhammadi, 2000). No specialized institutions, governmental entities, or organizations in Saudi Arabia collect data about people with a disability. There is also an absence of library services that provide assistance in obtaining reliable scientific information for issues in disability research (Alrusaiyes, 2014). Without accurate data, it is difficult to measure the effectiveness or failure of a program. It is imperative that government prioritizes this issue.

Wehman (2013) suggested using research as a starting point for special education programs, including transition services. Without research, teachers may not know how to serve and where to begin. With research, schools will have a starting point from which to make appropriate changes to meet student needs and help them grow into successful adults. Transition education and services are utilized in many countries to prepare students with a disability to live independently, find and keep jobs. Research would provide potential benefits for Saudi Arabian society, including benefits for students with disabilities, special education teachers, and universities, by gathering information to improve teachers' preparation for and implementation of transition services.

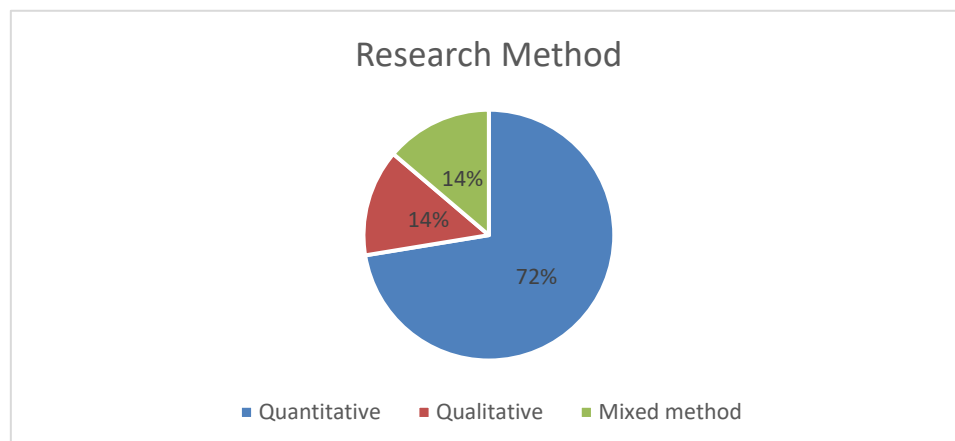
### Research Methods

Regarding the research methods, the data in Table 5 reflect that quantitative research inquiry has been the most common type of research method used over the years. There were 21 quantitative research articles, and researcher's used surveys as the only instruments to collect data. This finding resonates with Alrusaiyes (2014) explanation of the obstacles commonly faced by researchers. Alrusaiyes (2014) stated that most of the research articles were in form of surveys, which limited the depth and validity of the disability research.

**Table 5**

*Research methods used in selected studies*

Research method	Numbers of article	Percentage %	Data Collection Instruments
Quantitative	21	72.41%	Survey
Qualitative	4	13.79%	interviews,
Mixed method	4	13.79%	Survey and interviews



In addition, there are four articles that used the qualitative method to collect data. All four articles used only interview as the method to collect data. Table 5 also shows that there are 4 studies that used mixed method research designs. The researchers of these articles used surveys and interviews to collect data. This research approach allows researchers to combine qualitative and quantitative methods to collect data. It also provides the researcher with greater detail and allows him to compare datasets from both the survey and the interviews (Creswell, 2009).

Still, research is needed to plan more appropriate management programs, effective implementation of strategies, and proper distribution of health resources (Al-Jadid, 2013; Altamimi et al., 2015). This synthesis found non-usage of single-subject design in Saudi research, which is a contrast to international trends (Horner et al., 2005). Thus, adopting such a research design may be the catalyst needed to drive educational research beyond the first stage in Saudi Arabia (Altamimi et al., 2015).

Tables 6-8 show the results of the methodological quality of the studies included in the review of all three research designs: Qualitative, quantitative and mixed methods research designs. These results present mixed levels of bias across the included studies. Fourteen studies presented a low level of bias. Nine studies presented a moderate level of bias and the remaining six studies presented a high level of bias.

**Table 6**

*Quality assessment for the qualitative study*

Author / year		Qualitative Research Study					result
		Is the qualitative approach appropriate to answer the research questions?	Are the qualitative data collection methods adequate to address research questions?	Are the findings adequately derived from the data?	Is the interpretation of results sufficiently substantiated by data?	Do different components of the study adhere to the quality criteria of each tradition for the involved?	Level of bias
1.	Alzahrani1, 2018	✓	✓	✓	✓	✓	low
2.	Aldosari,2019	✓	-	✓	-	-	high
3.	Al-Hoshan, 2009	✓	-	✓	✓	-	Moderate
4.	Al-Fawzan Al-Rawi 2019	✓	✓	✓	✓	✓	low



**Table 7***Quality Assessment for the Quantitative Studies*

Author/year	Quantitative					Result Level Of Bias
	Is the sampling strategy relevant to address the research question?	Is the sample representative of the target population?	Are the measurements appropriate?	Is the risk of nonresponse bias low?	Is the statistical analysis appropriate to answer the research question?	
1. Alnahdi (2013)	✓	✓	✓	-	✓	Low
2. Alhossan and trainor (2017)	✓	✓	✓	-	✓	Low
3. Alkahtani (2016)	✓	✓	✓	-	✓	Low
4. Hudaib and Al-Yamani (2017)	✓	✓	✓	-	✓	Low
5. Alnahdi 2014	✓	✓	-	-	✓	Moderate
6. Almalky 2018	✓	-	✓	-	✓	Moderate
7. Alnahdi, 2016	✓	✓	-	-	✓	Moderate
8. Alnahdi 2012	✓	✓	✓	✓	✓	Low
9. Almalky 2015	✓	✓	✓	✓	✓	Low
10. Almalki 2017	✓	✓	✓	✓	✓	Low
11. Alhossan 2015	-	-	-	-	✓	High
12. AL Zahrani 2021	✓	✓	✓	-	✓	Moderate
13. Alquraini, 2013	-	-	✓	-	✓	High
14. Alobaid 2021	-	-	✓	-	✓	High
15. Al Sartawi and Al-Humaidhi 2018	✓	✓	✓	-	✓	Low
16. Alfozan & Asiri 2018	✓	✓	✓	-	-	Moderate
17. Al.Atawi 2020	✓	✓	✓	-	-	Moderate
18. Alzahrani 2019	-	-	✓	-	✓	High
19. Almalky 2020	✓	✓	✓	-	-	Moderate
20. Al-Anzi and Al-Wahaibi 2022	✓	✓	✓	-	✓	Low
21. Alquraini, 2017	✓	✓	✓	-	✓	Low

**Table 8***Quality assessment for the mixed methods studies*

Author/year	Mixed Method					Result Level of bias
	Is there an adequate rationale for using a mixed method design to address the research question?	Are the different components of the study effectively integrated to answer the research question?	Are the outputs of the integration of qualitative and quantitative components adequately interpreted?	Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?	Do the different components of the study adhere to the quality criteria of each tradition for the methods involved?	
1. Almutairi 2018	✓	✓	✓	✓	-	Low
2. Aldossari 2017	-	✓	✓	-	-	Moderate
3. Alhammadi 2000	✓	✓	✓	✓	-	Low
4. Kadi 2018	-	-	✓	✓	-	High

Table 6 shows that two of the qualitative studies presented a low level of bias with the lowest level being found in the study by [Al-Fawzan and Mushabab \(2019\)](#). However, the highest level of bias in the qualitative studies occurred in this study by [Aldossari \(2019\)](#). The main areas of weakness in the study were: (a) the qualitative data collection method were inadequate to address the research question, (b) the interpretation of the result is not sufficiently substantiated by the data, and (c) the components of the study did not adhere to the quality criteria. Table 7 shows that the level of bias in the twenty-one quantitative studies included in the review. Seven of the quantitative studies had a moderate level of bias ([Al-Atwi, 2020](#); [Al-Fawzan & Mushabab, 2018](#); [Al-Zahrani, 2019](#); [Almalky, 2018](#); [Ghaleb Alnahdi, 2014](#); [Alnahdi, 2016](#)). The low level of bias in the quantitative studies occurred in those studies ([Al-Anazi & Al-Wahbi, 2022](#); [Al-quraini, 2017](#); [Al-Sartawi & Al-Humaidhi, 2018](#); [Alhossan & Trainor, 2017](#); [Alkahtani, 2016](#); [Almalki, 2017](#); [Almalky, 2015](#); [Alnahdi, 2013](#); [Alnahdi, 2012](#); [Munirah AL-Hudaib & Al-Yamani, 2017](#)), while the high level of bias were found in [Al-Obaid \(2021\)](#); [Al-quraini \(2013\)](#); [Al-Zahrani \(2019\)](#); [Alhossan \(2015\)](#).

The main areas of weakness in these studies included: (a) sampling strategy was not appropriate for addressing the research questions, (B) the risk of non-response bias was high, and (c) the sample was not representative of the target population. Table 8 represent 4 mixed methods studies, and two had low level of bias (Alhammadi, 2000; Almutairi, 2018) and one had moderate level of bias (Aldossari, 2017). However, one study had high level of bias (Kadi, 2018). The main areas of weakness in this study were: (a) there was not an adequate rationale for using mixed methods design to address the research question and (b) the different components of the study did not effectively integrate to answer the research question (c) the different components did not adhere to the quality criteria of each tradition of the methods involved.

### Conclusion

This paper provides an overview of transition services research topics in Saudi Arabia. It collected the research written in English and Arabic related to transition services in the country. Teacher' perspectives and attitudes dominated the research agenda. Different research methodologies were used; however, surveys were the most-used method. Having an overview of what has been written about Saudi transition services is crucial for future researchers. The review reveals that even though legislation on transition services was passed years ago, Saudi research regarding transition services is still in the early stages. There is a large gap in the research related to disabilities, and especially to transition services and employment for people with a disability. However, there is a great opportunity to fill these gaps. As a developing country, Saudi hasn't yet implemented transition services in schools. There is little research and few researchers within Saudi Arabia, but this has been changing rapidly as students educated abroad in the US and UK have been returning to Saudi Arabia and joining the professional workforce in universities, institutions, and governmental agencies. There is not yet a widespread statistical database or normative information on students with disabilities in Saudi Arabia. However, at the present, the desire and willingness to accomplish this is a high priority in Saudi Arabia.

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