Measuring the Effectiveness of Transition Services for Saudi Students with Autism

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Abstract

This research assesses the feasibility of transition services received by students with ASD in Saudi Arabia to vocational training, life skills, college and university experiences, and employment supports. In a quantitative survey method, data were obtained from 200 students with ASD and caregivers to evaluate the services as to post-secondary outcomes such as employment, education, and independence. The results indicate the shortage of available services especially for the preparation to the higher education and employment which corresponds to high unemployment rates and low level of independence of the sample. Therefore, there is a reasonable demand for radical changes in transition services and the use of methods that will take into consideration the specifics of the Saudi Arabian context. Thus, the results presented contribute to the discussion of the issues concerning the transition of persons with ASD to adulthood, especially in non-Western countries.

Keywords: Autism Spectrum Disorder, transition services, vocational training, Saudi Arabia, post-school outcomes

Introduction

ASD is, indeed, a development disorder that impacts the neural system and is associated with a series of difficulties in social communication and repetitive behaviors (Bhat, 2021). Over the last decade, a growing number of children in the world has been diagnosed with ASD, which has contributed to the raising awareness of the educational and developmental services required for pupils with such a disorder. This issue is most seen in Saudi Arabia where the management assistance of students with autism into the society that they are in considerably complicates. Although there are some efforts done in the Saudi context regarding special education, in transition from school to adulthood, students with ASD still remain a challenging area that has not got much attention (Khalil et al., 2020).

The provision of transition services is considered as a worldwide important support activity in the educational process of students with disabilities, including ASD. It is for the purpose of making the transition from school's highly regulated setting to what is found in the real world whereby an individual is likely to engage in higher learning, job markets or be on his/her own (Stavrou, 2022). However, such services do not only depend on their provision but the extent to which they have been fitted accordingly to respond to the students with autism requirements. This research aims at assessing the quality of transition service for the Saudi students with autism, a topic that has received less research attention as is crucial for future prognosticative.

It is therefore worth to emphasize the significance of transition services, especially in the case of learners with ASD, who may experience substantial challenges in relation to transition and changes in their lives. A review of studies has revealed that enhancing transition services can go a long way in improving the quality of life of students with disability once they leave school since the aspiration to get a job improves, and there will be increased dry independence and social adjustment in the community (Anderson et al. 2022; Jaremuset al. 2022). But such outcomes are not very certain and the fluctuation in service

standards and availability of services can cause different outcomes. Such variability calls for an extensive assessment of the transition services whenever implemented stressing the fact that the provision of these services is still escalating in nations like Saudi Arabia (Alasmari, 2023).

Saudi Arabia also faces factors that make the challenges of transitioning students with autism from school to adulthood worse such as cultural beliefs towards disability, services available for autistic students, and the preparedness of organizations to allow students with ASD into their institutions (Chun et al.,2023). Because of prejudices linked to autism, children are diagnosed and recommended for intervention extremely late, consequently influencing transition services' effectiveness. Furthermore, the Saudi education system is highly centralized and has proved over the years as highly sluggish to the needs of students with disabilities thereby posing more challenges to transition (Alkhattabi, 2022).

Consequently, while transition services are known to necessitate specialization, there is a lack of research on their efficacy in Saudi Arabia. The prior literature on transition services is comparatively rich in Western contexts, where legal and social environments of people with disabilities are markedly dissimilar to Saudi Arabia (Alqunaibet, 2021). A lack of empiric studies indicates that despite the successful implementation of the strategies and practices in other countries, they may not be suitable in the Saudi environment. This study aims to fill this void by conducting an empirical investigation of the impact of transition services designed for Saudi students with autism.

One of the important features of this research is the identification of the crucial characteristics of effective transition services. Prior research has identified several factors that may influence transition success among students with disabilities, namely, the availability of specified transition plans, family engagement, as well as social and vocational skills (Binghashayanet al., 2022; Ookeditse, 2022). However, such factors may be assigned different value by culture and education. For instance, Al-Khraif et al.(2012) noted that family highly influences the lives of people with disabilities in Saudi Arabia; the family influence might be, therefore, important in transition. This research aims at identifying the ways that these and any others enhance or hinder transition services in Saudi.

Enriching our understanding of how organizations currently function is the problem of this study.

School to young adulthood is transformation period and these students with ASD face unique development challenges especially where systems to support them are nascent or still rudimentary. Unfortunately, the substantial increase in the incidence of autism in Saudi Arabia has not been followed by a similar growth in appropriate transition services for students with ASD. Despite this, the inclusion process with regards to these students has seen some improvements made, and the transition services meant to help prepare the students for life after school are still in their infancy and receive comparatively little research attention. This lack of focus on transition services has large consequences for students with a refining focus on leaving school, getting a job, continuing their education, or being able to live on their own. The first and main research question to be explored in this study is: What is the current status of employing transition services for Saudi students with autism in Saudi? When there is no single insight of performance of these services it becomes a challenge to decide on the best measures to take to foster effectiveness of the service provision. This research aims at addressing this gap by undertaking a systematic evaluation of the transition services in the KSA, with the overall objective of improving the transition services and support for students with ASD as they ameliorate through to the adulthood.

Research Questions

1. How effective are the current transition services provided to Saudi students with autism in preparing them for post-school outcomes, including employment, higher education, and independent living?

2. What are the key components of transition services that most significantly contribute to successful outcomes for Saudi students with autism?

3. How do individual characteristics of Saudi students with autism, such as the severity of their condition and family involvement, influence the effectiveness of transition services?

The Significance of the Study

First of all, the importance of this study relates to the educational setting, as well as concerns social and policy relevance. In real terms therefore, this research seeks to fill a significant knowledge gap in the current literature by presenting quantitative data regarding the practices of transition services for learners with autism in Saudi Arabia. Although there is an appreciable number of research studies on autism and educational approaches, however, there are very few studies conducted in Saudi Arabia on the transition process from school to adulthood for children with autism. It is anticipated that the results of this study will provide implications that would be helpful in enhancing transition services that different countries inclusive of the Kingdom of Saudi Arabia is providing to students with autism. Besides, it can be beneficial for policy in the sense of getting the recommendations that should be offered to allocate resources more efficiently. This paper can help improve the understanding of which practices are most effective in transition services and in this way, improve the long-term situation for students with autism, more students can gain meaningful employment and thereby become more socially integrated, fewer stress and burdens will be shifted onto families and society in general.

Terms of the Study

The concern of this research is the services offered to Saudi students with Autism Spectrum Disorder (ASD) in their early transition from schools to adulthood. The term 'transition services', therefore, means a clearly defined seamless range of services that will help a child to exit from school to post-school activities such as education, training, work and life. These services are meant to be goal directed, student centered, based on a student's strengths, preference and interests, for students with autism. Therefore, the study focuses on reviewing several variables in the light the Saudi Arabia that may affect the effectiveness of these services: cultural; educational; and policy-related. In this study, the term 'effectiveness' means to what extent the transition services assist students with autism in having successful postschool futures, including having a job, going to college, or being self-sufficient.

undefined

As this study seeks to offer an overall assessment of the transition services available to Saudi students with autism, some limitations must not be overlooked. First, this study mainly employed quantitative data collection techniques, including questionnaires and standardized tests and may therefore miss the rich details of the experiences of students with ASD transitioning to adulthood. It is technically possible to conduct interviews or case studies which could be more comprehensive, but it would take much more time and resources and therefore cannot be conducted for this study. Second, the notion of generalization of the study results may be somewhat restricted due to the given cultural and educational setting of Saudi Arabia. Despite the useful information derived from the study, it is important to note that the findings may not be so easily transferable to other countries with varying social, economic and educational settings from the Saudi Arabia context. Third, the study sample although has a reasonable representation of students with autism, is not exhaustive and there could still be other experiences of the Saudi students with autism than those presented here especially in the rural or less developed areas where the transition services may be even more limited. Lastly, the study is cross-sectional in nature implying that the results may not give a true picture of the long-term efficacy of transition services since services are dynamic and may change over time for the better. Altogether, the study makes a significant contribution to identifying challenges and perspectives in transition service provision for students with ASD in Saudi Arabia.

Literature review and Prior research

ASD is a developmental neurological disorder that causes impaired social interaction, communication, and repetitive behavior. The broad autism phenotype places students with autism spectrum disorder in different categories from those with severe intellectual disability to those who have high functioning autism, especially when designing the low intensity personalised futures of learners as they transition

from school to adulthood (Chandrooet al., 2020). The IEP contains transition services which are vital elements of education for students with disabilities including the ASD to prepare them for post-secondary education employment or for independent living (Kraemer et al., 2022). These services are especially necessary for students on the ASD, as they usually have difficulties with alterations of routines and environment, thus questioning their transition into adulthood (Kim et al.,2021).

Transition planning and early adulthood issues have been of interest to the researchers for several years with focus on students with ASD. Transition services usually take form of services as provided by the individual education program (IEP) such as transitional career extended services, and life and social skills education (Wade, 2023). However, these services turn out to be rather diverse in their efficiency, depending on the amount of resources available, parental engagement, or students' needs, for instance (Herrera et al., 2020). In the context of Saudi Arabia, provision of transitions services relatively recent, and consequently, there are few SA publications concerning explicit and empirically validated operational efficacy.

In most of the western countries, the process of identified and development of transition services for students with ASD has been informed and directed by legislation such as the Individuals with Disabilities Education Act (IDEA) in the United States (Humpal, 2023). IDEA requires school to offer transition services that should favour each student with disability including those with ASD from the age of sixteen (Fine, 2022). Studying the outcomes of transition services in the USA and other developed countries revealed that better-organized transition services contribute to a better quality of students with ASD's lives after school, employment rates, and increased independence (Mareteet al., 2020).

However, even in such settings, issues are not lack of them; this is because they still persist. Several researches have well established that a majority of the learners with ASD still face challenges when it comes to acquiring jobs and living on their own even though there is provision of transition services (Snell-Rood et al., 2020). This implies that, aspects for example, intensity of the disorder, existence of other disorders, and socio-economic status greatly influence transition services' effectiveness (De Girolamo et al., 2012). In addition, the young with AS experience a decrease in the support services when they become young adults, and this has implications to the deterioration of functioning for some of these individuals as noted by Stein &Dumaret(2011).

It should be noted that the general practice of transition services is still quite new in Saudi Arabia, which in turn is an indication of the general growth of special education in the country. In the past, disabled students including those with ASD were excluded from getting enroll in normal school and most of the time they did not access to such services (Brede et al., 2017). Although the new changes have aimed at promoting the inclusion of students with disabilities to the regular schools, facilities have been provided to enable them to succeed (Alquraini&Gunt , 2012). Nevertheless, there has been a lack of advancement of transition services more focused on students diagnosed with ASD as compared to students with other disabilities.

Investigations on transition services in the context of KSA are rather limited, involving only a few empirical studies that compared the effectiveness of the actual services. In this regard Alshuayl(2021), explained that Saudi students with autism encounter huge difficulties when moving to the adulthood stage as there are no adequate services that cater for their needs and there is inadequate family engagement when it comes to transition. Scoping review of the services provided to children with ASD in Saudi Arabia done by Alnemary et al., stresses the lack of transition services and urges for a need to develop more extensive support programs for such children. In the same context, Alzahrani(2017) pointed out that it is essential to employ culturally responsive transition services because of the social and educational environment of Saudi Arabia.

In the literature, many variables have been highlighted as being important in relation to transition services for learners with ASD. One of the most important is the presence of individualized transition plan that should be developed especially for the student (Trainor et al., 2020). Such plans tend to contain objectives on employment, education and other areas of community living and the processes to attain

these objectives (Kanto et al., 2018). Another important antecedent namely family participation seems even more critical and emergent especially for the cultures of Saudi Arabia where family takes the central position of the lives of the disabled persons (Jamal, 2023). According to the research, it has been revealed that supportive family environments were correlated to better post-secondary outcomes of children with ASD (Brammer-Owens, 2022).

Another transitional aspect that has a strong influence on delivery involves aspects of resource such as the availability of funding or trained human resource. In Saudi Arabia, special staff shortage and absence of finances for transition services have been acknowledged as main obstacles to their efficiency (Asmri et al., 2020). However, another factor that concerns attitudes to disability in the cultural context may affect the effectiveness of the transition services. Autistic individuals living in many parts of Saudi Arabia still face a lot of embarrassment and a lacks adequate support system.

Relatively few prior researches have investigated the transition services for students with ASD in the context of the Saudi Arabian culture, which is oriented differently concerning the legislation and opportunities for individuals with disability. For instance, Lee &Kim (2022) surveyed current literature on students with ASD in the United States to determine the nature of transition services and the general features of effective programs; these included early intervention and individualised planning. In the same regard, Hay (2021) conducted another study on how the states fared in the provision of transition services and revealed that students with ASD who received complete transition services posted high positive post-school outcomes.

Thus, knowledge about transition services in the Kingdom of Saudi Arabia remains rather scarce. Alothaim(2023) is one of the first finding the difficulties encountered by Saudi students with autism by stressing the importance of assistance in the transition years. Alnemary et al. demanded these by reviewing the literature available on services for children with autism in Saudi Arabia and discovered gross inadequacy in transition services. In the recent past, a study by Alolayan(2023) sought to determine the current rate of Transition services in Saudi Arabia, to encourage for better culturally sensitive and enhanced programs.

Methods

The current research work aimed at assessing the utilization of transition services for the students originating from Saudi and diagnosed with ASD and, thus, was an exclusively quantitative study. The use of quantitative research method was informed by the objective of systematically assessing the performance of the various components of transition services on the post – school experiences of these students. The research design adopted for the study was cross-sectional whereby data collection was done at a given point of time to establish the extent of effectiveness of the transition services being offered. One of the benefits of this approach was that it enabled the researcher to focus on facts and numbers so as to enable the generation of conclusions about the population under investigation.

Population and Sample

The target population of the present study included Saudi students with ASD in their last year of schooling or those who had left school recently and were in young adulthood. The participants also comprised their respective caregivers whose information was also useful in determining the efficiency of the transition services offered. A purposive sampling method was utilized in the selection of the participants in order to capture a good cross-sectional population of Saudi students with ASD.The last sample size was 200 students accompanied by their caregivers selected with regard to area of Saudi Arabia since this determined the quality and availability of transition services.

Data Collection

In this study, data collection was carried out using a range of integrated and targeted approaches to capture the required information about students with ASD and, therefore, ensure the data collected were

both reliable and valid. Due to the nature of difficulties with which children with ASD may experience, particular attention was paid to the choice and application of the instruments used in the present study.

The main method of data collection was operationalised through a quantitative survey questionnaire developed specifically for use within the study to enable the collection of specific and detailed information about the transition services for students with ASD and their post-school experiences. The survey used in the work was designed considering other survey tools which have been validated previously, including the Transition Planning Inventory (TPI) and the Arc's Self-Determination Scale (Clark & Patton, 1997; Wehmeyer&Kelchner, 1995). As it was also mentioned these instruments were developed in Western countries, the survey was cautiously translated and/or adjusted to the cultural and educational background of the Kingdom of Saudi Arabia. This adaptation entailed seeking recommendations from the local teachers, psychologists and other special needs educators so as to captures the language, content and format that would be easily understood by the Saudi participants.

To focus on certain aspects of the transition services the survey was divided into several sections. The initial part of the questionnaire required the respondent's age, gender, geographical location, the severity of the ASD diagnosis of the child or the individual, and family SES, which play a crucial role in service provision. The second section was concerned with the services that the participants got in transition with questions on the kind of service offered and the frequency of the services as well as satisfaction of the participants on the services received. The third section focused on post-school activities; it considered the participant's employment status at the present, highest level of education attained and their level of self-care.The questions were standardised from the National Longitudinal Transition Study (NLTS) to reduce variance in the responses. The last part of the survey used the Likert scale as a way of measuring the respondents' views on the efficiency of the services with regard to readiness for adulthood, overall satisfaction and perceived inadequacies of services offered.

Organising the survey in a way that it could be filled directly by students with ASD was highly problematic due to their possible communication/attention/comprehension issues. As a result, the study had to depend mostly on caregivers' help to complete the questionnaire. To prepare the caregivers who were aware of the students' experiences and or results of the study, they were carefully given directions on how to correctly interpret the questions and respond as they perceived it and/or from what they knew. This approach made sure that information that included representation of the students' account was obtained in a reliable manner inasmuch as direct responses from students may not be possible.

For the students with high functioning ASD who thought they could answer the questions appropriately, the questionnaire was completed in the presence of a specialist. Al these professionals well experienced to work with clients with ASD employed basic language, props and direct instructions to enhance understanding and obtain accurate responses. In situations where it was not possible to obtain direct students' response, the caregivers provided the response on behalf of the student, sometimes in consultation with the student.

In a bid to guarantee the suitability and efficiency of the instrument, the survey was pilot tested to a small sample of students with ASD and their parents/guardians. The pilot phase lets one discover main concerns with the comprehensibility or substance of the survey so that changes can be made before data gathering at a massive level. This step was something important to ensure that the final instrument developed is understandable and culturally sensitive to the students with ASD in Saudi Arabia.

Besides the survey, alternative sources of information were employed for the purpose of getting factual information on the post-school experiences of the students. They included usage of employment status, education level, degree of self- sufficiency functioning, and other types of acknowledged accomplishment. Autism spectrum disorder (ASD) students are challenged and the assessments were given by professionals who understand ASD students and adapted the manner and methods of giving the assessments to make them appropriate and valid for usage. The use of data collected using caregiver questionnaires in conjunction with straight student answers as well as professional opinions where applicable gave a good all-round view of the functionality of the transition services.

Data Analysis

The survey and the assessment data were feed to the statistical software (SPSS) where the data was analyzed. The demographic information of the participants as well as the general features of the data collected were analysed using descriptive statistics. Descriptive statistics and inter-and intra-variable relationships were also used in the study to determine the various correlations and regression between the elements of transition services and the students' postschool functioning. With those analyses, the frequency of specific aspects linked with successful transitions was established, that are transition planning services and the degree of family engagement among others.

In an endeavour to establish reliability and validity of findings, the survey instrument was pilot tested among a sample of student participants before administration among the overall study sample. Some of the conclusions drawn from the pretest include rewording the questions on the survey tool to make them culturally sensitive and understand though at the same time being unambiguous. Further, coefficients of reliability analysis-Cronbach's alpha were done to measure the internal consistency of the Likert scale which was 0. 85 revealing a strong reliability of the results.

Results

Table 1. Demographic Characteristics of Students with ASD (N = 200)

Characteristic	Frequency (n)	Percentage (%)
Age		
16-18 years	70	35%
19-21 years	85	42.5%
22-24 years	45	22.5%
Gender		
Male	160	80%
Female	40	20%
Severity of ASD		
Mild	60	30%
Moderate	95	47.5%
Severe	45	22.5%
Region		
Central	55	27.5%
Western	45	22.5%
Eastern	50	25%
Northern	25	12.5%
Southern	25	12.5%
Family Socio-Economic Status		
Low	90	45%
Middle	85	42.5%
High	25	12.5%

The sample comprised mainly male students (80 %), and most of the respondents were between 19 – 21 years old (42. It was interesting to know that the greatest number of students had moderate ASD, that is, 47. 5% ASD were in the moderately affected range, and the participants were almost equally recruited from different regions, but slightly more from the central region. Nearly half of the families were from low socio-economic backgrounds (45%), highlighting potential socio-economic barriers to accessing services.

Table 2. Types of Transition Services Received by Students with ASD

Service Type	Frequency (n)	Percentage (%)
Vocational Training	110	55%
Life Skills Education	120	60%
Career Counseling	85	42.5%
Social Skills Development	90	45%
Employment Support Programs	60	30%
Higher Education Preparation	55	27.5%

What emerges from the current study findings is that whereas some of the transition services received by students with disabilities were satisfactory, that is, life skills education 60% and vocational training 55%, many other important support services such as employment support programs 30% and higher education preparation 27. These gaps indicate that many students may be poorly equipped to handle the responsibilities of the person's life especially in aspects that concern employment and further education.

Table 3. Post-School Outcomes for Students with ASD

Outcome	Frequency (n)	Percentage (%)
Employment Status		
Employed (Full-time)	45	22.5%
Employed (Part-time)	35	17.5%
Unemployed	120	60%
Educational Attainment		
Enrolled in Higher Education	40	20%
Not Enrolled	160	80%
Independence in Daily Living		
Independent	30	15%
Partially Independent	90	45%
Dependent	80	40%

The post-school outcomes available show that the scenario is not a very rosy one. Only 22. 5% of students were employed full time – another 17. 5% of the patients were reported to be working part-time while 60% were jobless. Literacy level was also disappointing with overall literacy level 65%, the enrolment for higher education among student were 20%. Moreover, only 15 percent of the students were either fully independent in their daily activities, 40 percent were fully dependent on other people. The above

outcomes imply that current transition services are inadequate to prepare the students for adult life as everyone should wish to have it.

Table 4. Caregiver Perceptions of Service Effectiveness

Service Type	Mean Score (1-5)	Standard Deviation
Vocational Training	3.5	1.0
Life Skills Education	3.8	0.9
Career Counseling	3.2	1.2
Social Skills Development	3.4	1.1
Employment Support Programs	2.8	1.3
Higher Education Preparation	2.6	1.4

Non-technical perceiving of services indicates that the effectiveness of few services is reasonably satisfactory while the effectiveness of some services is completely unsatisfactory. School-based life skills education and vocational training were two$item types that had higher mean scores than the overall mean, but were still moderate and can be represented by the score 3. And although higher education preparation (mean = 2. 6) and especially employment support programs (mean = 2. 8) were deemed rather inadequate, the biggest concern of caregiver's rests with transition services.

Table 5. Correlation Matrix Between Transition Services and Post-School Outcomes

Variables	Employment Status	Educational Attainment	Independence in Daily Living	Service Satisfaction
Vocational Training	**0.45**	0.25	**0.42**	**0.50**
Life Skills Education	0.30	**0.48**	**0.55**	**0.58**
Career Counseling	0.15	**0.32**	0.28	0.35
Social Skills Development	0.20	0.28	**0.40**	0.38
Employment Support Programs	**0.52**	0.20	**0.45**	**0.55**
Higher Education Preparation	0.25	**0.55**	0.30	0.40

Note: Correlation coefficients (r) range from -1 to 1. Values above 0.3 are generally considered meaningful, with those above 0.5 indicating strong correlations. Bolded values are significant at the $p < 0.05$ level.

Correlation values demonstrated that vocational training has a strong correlation with the employment status with the value of r = 0.45 and employment support program has an even better correlation of r = 0.52 with the employment status of the students that have ASD indicating that these services are important for the employment of students who have ASD. There was also a moderately positive significant relationship between the level of life skills education and level of independence in daily living activities r = 0. 55. Higher education preparation had a moderate to strong positive relationship with educational level reached (r = 0. 55) thus underlining the importance of this factor in student's progression to the next level. The correlation with service satisfaction suggests that perceived effectiveness is linked to better outcomes, particularly in the areas where the services are most relevant.

Table 6. Multiple Regression Analysis Predicting Employment Status

Variables	B (Unstandardized Coefficients)	Std. Error	Beta (Standardized Coefficients)	t	Sig. (p-value)

	0.30	0.08	0.38	3.75	**0.001**
Vocational Training	0.30	0.08	0.38	3.75	**0.001**
Life Skills Education	0.15	0.07	0.22	2.14	**0.035**
Employment Support Programs	0.42	0.09	0.46	4.67	**0.000**
Constant	1.80	0.50		3.60	**0.002**

R² = 0.45, Adjusted R² = 0.43, F(3, 196) = 26.47, p < 0.001

Employment support programs (β=0. 46, p < 0. 001), vocational training (β = 0. 38, p = 0. 001) as well as life skills education (β = 0. 22, p = 0. 035) predict employment status among the students with the ASD. The research model yields a total coefficient of determination of 45%, which is a moderate to strong amount of prediction. The employment support programs received the highest standardized coefficient (mean = 0. 460) and this indicates that the program can single out whether a students with ASD will secure a job or not**.**

Table 7. Multiple Regression Analysis Predicting Educational Attainment

Variables	B (Unstandardized Coefficients)	Std. Error	Beta (Standardized Coefficients)	t	Sig. (p-value)
Life Skills Education	0.25	0.10	0.28	2.50	**0.013**
Higher Education Preparation	0.45	0.12	0.52	3.75	**0.001**
Career Counseling	0.10	0.09	0.15	1.11	0.270
Constant	1.20	0.60		2.00	**0.048**

R² = 0.36, Adjusted R² = 0.34, F(3, 196) = 18.29, p < 0.001

The regression analysis gives an insight that the highest predictor of education attainments is the higher education preparation (β = 0.

Please choose the appropriate options.

52, p = 0. 001) and followed by life skills education (β = 0. They found that the proposed model has a moderate test of prediction strength with an R² of 0. 36 hence qualifying to explain 36% variance of educational outcomes. Career counselling though helpful was not a predictor that reached a significant value in this model; therefore, the value was 0. 270..

Table 8. Multiple Regression Analysis Predicting Independence in Daily Living

Variables	B (Unstandardized Coefficients)	Std. Error	Beta (Standardized Coefficients)	t	Sig. (p-value)
Life Skills Education	0.40	0.11	0.45	3.64	**0.001**
Vocational Training	0.25	0.09	0.30	2.78	**0.007**
Social Skills Development	0.20	0.08	0.25	2.50	**0.013**
Constant	2.10	0.70		3.00	**0.003**

R^2 = 0.40, Adjusted R^2 = 0.38, F(3, 196) = 24.29, p < 0.001

In testing the working model of daily living skills each of the DLC interventions entered independently predicted independence in daily living; life skills education (β = 0. 45, t = 4. 61, p = 0. 001), vocational training (β = 0. 30, t = 3. 37, p = 0. 007), social skills development (β = 0. 25, t This model contributes 40% of the variance of independence outcomes (R^2 = 0. 40); that is, these services are highly related to student's with ASD's independence potential. The findings underscore the importance of promoting life skills education with a view to enhancing independence.

Discussion

The Central Role of Vocational Training

The significance of vocational training for students with ASD lies in the fact that it predicts employment outcomes with considerable accuracy (r = 0. 45, p = 0. 001).This is in line with the literature where vocational training has been identified as the most beneficial practice towards employment for people with ASD (Schallet al., 2018; Johnson et al., 2020). However, it is equally crucial to discuss the lower picture of specialized training and education that comprises only 55 percent of the sample; such issues ignite concerns regarding the accessibility and supply of these services in Saudi Arabia's educational system.

For the population of Saudi Arabia, the concept of the labor market is rapidly evolving due to the vision of economic diversification within the Saudi Arabia Vision 2030 plan. This shift requires specialized workforce skills, which make vocational training even more essential (Gonczi, 2020). However, the results indicate that the assumed transition services may not be solely suitable to achieve these economic objectives mainly due to the insufficient vocational preparation of numerous students with ASD. The high unemployment rate among the sample is 60% and such statistics clearly demonstrate the lack of work-life fit.

Insufficient provision of vocational training might be attributed to systematic issues, such as insufficient funding for vocational training, scarcity of skilled vocational education teachers, and cultural paradigms that positively influence academic results but negatively affect vocational skills (Yulfizar&Zulganef, 2023). These barriers point out at a bigger problem of Saudi education system on how it poorly addresses the issue of integration of learners with a disability, more often than not being without adequate structures and supports. This is compounded by a culture that denies vocational careers the deserved recognition they need with many deeming such careers as inferior to academic and professional careers.

To overcome these challenges, there is a need to change the reputation and existing application of vocation education and training in Saudi Arabia. In order to address this need, policy makers should closely focus on the availability of effective vocational education programs for students in the ASD category that may cater to the growing needs of diverse cultures and the changing demands of the labor market.In addition, specific programmes are required to address the lack of knowledge of educators, families and employers on the importance of VET in preparing and integrating persons with ASD to the world of work.

Independence and the Impact of Life Skills Education

Pearson correlation test revealed a positive and a highly significant correlation between life skills education and independence in daily living (r = 0. 55 p = 0. 001). This finding supports the evidence with more focus on life skills education for persons with ASD to foster self-reliance and a better quality of life (White et al., 2023; Saulnier &Klaiman, 2024). However, the study revealed that only 60% of the students received life skills education and this shows a gap in service delivery that negative affects the students' independence.

In the context of Saudi Arabia, for example, the culture fosters a very high level of family dependency, which makes it difficult for the patients to learn independent living skills. The findings showed that Only 15 % of students were at fully independent level This may indicated that current life skill programs

employed may not be appropriate or targeting and addressing the cultural and family backgrounds of individuals with ASD s In Saudi Arabia. This is a major issue since self-reliance is an important factor that defines the quality of life and rehabilitation of disabled persons in the future.

Availability and accessibility of services have expectations and experiences of student with ASD that will help them transition to adulthood. Family enjoys a very powerful prerogative in Saudi Arabian culture and this practically confines the people with disability in their homes giving them very less chance of having a life on their own.On the one hand, this family engagement can be very helpful to provide the required support; on the other hand, it might cause an overprotectiveness that would diminish individual with ASD chances to gain those competencies necessary to address upcoming daily life challenges and be able to live independently (Manassis, 2020).

In order to respond to this, life skills education programs should respect Saudi culture and be tailored with regard to family organization of this country. This may involve enlisting the help of the parents in the education process thereby offering them another tool and knowledge to slowly and progressively help their children become independent. Moreover, such programs should also focus on developing such competencies that can be applied to Saudi Arabia in particular, for instance, how to address the Saudi society and officials.

The Status of Preparation for Higher Education

The relationship between higher education preparation and educational attainment, Pearson correlation coefficient = 0. 55, p = 0. 001 indicate the role of preparatory needs for student with ASD in achieving the goal of accessing higher education. However, this study establishes that 27. Only 5% of students reported to have had such preparation; and on the other hand, only 20% went on to he higher learning immediately after schools. Such an approach is justified with evidence of a shortage of support services for students that are crucial for transitions between academic levels.

This gap between the expectation of higher education preparation and the preparation being offered is paradoxical and is even more worrying given that the Saudi government has incorporated a knowledge-based economy in Vision 2030 (Al Nabt, 2020). Education at the tertiary level is one of the strategies to pursue this goal, and therefore constraining student with ASD from these chances is unsmart both to the individual as well as the country at large.

The scarcity of higher education preparation services might just be an indication of what may be ailing the Saudi educational system, that there is more focus on preparing students to conform and succeed in traditional academic settings, than there is on identifying and supporting students with disabilities (Aldawsari, 2020). This systemic bias is evidenced by inadequate development of programs that would address the needs of students with ASD; students who, due to their disability, need extra support in their college experience.

Therefore, possible community attitudes about disability might also be a factor in negating opportunities to education with ASD students. It may be subconsciously assumed that students with ASD are less likely to succeed on higher education level, thus few resources are allocated on preparation programs. This perception is in conflict with global research on the same showing that when persons with ASD are provided with the necessary support, they are able to attend and succeed in higher education institutions (Kim & Crowley, 2021).

As such, there is a clear need to work towards the more centralised approach which would situate the creation of special preparation programs, training of educators for the students with Autism in the postsecondary education, and the formulation of the policies accepting the kids with Autism in educational environment as a whole. It should also involve sensitisation campaigns, questioning the culture, that fuels prejudice in education and discriminates against students with ASD as being unaudacious for the university education and the nation.

Employment Support Programs

The employment support programs' and employment outcomes' mean comparison an analysis of the results presented above indicates that the services providing employment support correlate meaningfully with the employment outcomes of the students with ASD studied (r = 0. 52, p < 0. 001). However, only 30 percent of the students reported to have received such support, a fact that can be said to reflect a serious shortcoming in one of the most essential aspects of transition services.

Supported employment, which entails job readiness training, targeted vocational training, and placement support and services comprises offer important supports that can help/support persons with ASD obtain employment, and successfully navigate work environments given the many barriers they experience (Franklin, 2021).What is worrisome is the fact that these programs were unavailable in Saudi Arabia and this comes at a time when the observed unemployment rate among the sample was 60%. This would strongly indicate that, without support, most youths with ASD struggle to gain employment and are therefore locked out of socio-economic reintegration for the rest of their lives.

The lack of availability or access to ESP may be linked to structural problems in the labour market, for example poor relationships between schools and employers, employers' ignorance about the potential of the candidates with ASD, and weak financial stimuli provided by the governments for the employment of persons with disabilities. In Saudi Arabia in particular, and given that the labor market is yet to be flexible enough to absorb the effects of economic liberalization, there is a dire need to put in place facilities for the employment of disabled persons (Almulhim, 2022).

That is why to close this gap there is needed the complex of measures consisting in the increasing of number of employment support programs, improving the employers' awareness and readiness to provide persons with ASD, and introducing policies with the financial reward for employers for hiring employees with disabilities. Moreover, there ought to be enhanced attempt to incorporate employment support services as other transition services so that these services offered are well understood to cater for all students with ASD and also be flexible to serve individual needs.

The Role of culture and Family Participation

The results of this work have to be discussed in the cultural context of Saudi Arabia focusing on families' influence on students with ASD. A high level of family engagement identified in the study is appreciated due to the care provided to learners while at the same time it may restrict the learner's autonomy and decision-making. This cultural imprinting is well illustrated by the low status of independence noted among the sample (15% fully independent); a situation that can be attributed to the cultural overprotectors (Van Petegem et al., 2020).

In Saudi Arabia the role of the family is even much more pronounced when it comes to persons with disabilities This centrality in the lives of ''disabled'' persons could be helpful or harmful at all times. st publicly, this enables emotion, practical and financial support to keep all family members; with ASD included safe. At the same time, the over-reliance on the family implies certain risks for the autonomy and self-advocacy domains critical to human transition phases into adulthood.

This shows that cultural factors are very important, and educators and policymakers have to be very cautious when designing and implementing transition services. Thus, life skills education for instance should be a process that engages families in a way that causes them to steadily enable the dependant status of their children. This may consist of an education campaign for the families under which they are encouraged to encourage people with ASD to become more independent for example, by taking responsibilities or making certain decisions by their own with support from the family.

Moreover, the culture, which is prevailing nowadays, has to be questioned because it can be a cause of exclusion of such people from certain opportunities, for example, from education at the universities and work. The use of advertisement concerning ASD with regard to abilities of the individuals with such condition could go a long way in changing the discourse among the people, with more acceptance and integration.

Recommendations

This work has given an assessment concerning the effectiveness of the transition services offered to learner with Autism Spectrum Disorder (ASD) in Saudi Arabia and has ...identified areas of effectiveness and inadequacies. Therefore, the results have highlighted the significance of the vocational training, life skill education, higher education preparation, and programs for employment to enhance the transition from school to adulthood for learners with ASD. Nevertheless, some weaknesses have been revealed, with a focus on the lack of and barriers to access to these services.

The survey showed that while vocational training and life skills education which prepares students for employment and life independent are helpful, most students do not have access to these services and hence are ill prepared to face the difficulties that remark life. Likewise, scarce access to higher education preparation and employment support programs have led to low educational level and high unemployment rates to students with ASD which also enhanced exclusion from society. These findings call for more extensive changes in the ways transition services are organised and provided in Saudi Arabia. Stakeholders need to ensure the growth of these services with an emphasis on catering for the needs of learners with ASD while respecting the goals of economic and social improvement of the country. Thus, it is also important to point to cultural sensitivity issues that have to be included in the analysis of the opportunities and challenges of people with ASD in Saudi Arabia reporting strong family- and community-oriented values.

The study thus supplements the theoretical body of knowledge available regarding transition services by presenting findings from a different non-western perspective, which actually calls for a reassessment of what has hitherto been embraced as universal culture driven factors that affect the usage of such services. The implications for policy, practice, and future research are clear: an improved perspective toward transition services is vital for the students with ASD and facilitate them achieve high goals in order to become successful and productive member of the society. Although the existing transition services in Saudi Arabia provide some orientation on how to support learners with the ASD, there is much to develop. Thus, with these gaps in mind, and using the culturally sensitive and integrated approach, Saudi Arabia will be able to make the changes that would improve the status of people with disabilities in the society and encourage everyone to support them. Future research should continue to explore these issues, with a focus on developing and evaluating interventions that are both effective and contextually relevant. Through these efforts, the long-term outcomes for students with ASD can be significantly improved, paving the way for a more inclusive and equitable future.

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