Outcomes of Special Education Programs for Students with Intellectual Disabilities: Family Members' Perspectives

Ghaleb H Alnahdi
Special Education Department
College of Education
Prince Sattam bin Abdulaziz University

Ayman Elhadi
Special Education Department
College of Education
Prince Sattam bin Abdulaziz University

Abstract: It is important to understand family members' observations and opinions in regards to the programs offered to their children with intellectual disabilities. This study aimed to examine the outcomes of special education programs for students with intellectual disabilities (SWID) from the families' perspectives. The study sample comprised 150 family members of SWID. The results showed that the progress in both academic and life skills was less than expected. Satisfaction was higher in public schools in comparison with private schools. Participants with children enrolled for a longer time in special education programs expressed significantly less dissatisfaction than those with children enrolled for shorter lengths of time in such programs. The findings suggest the need for more involvement of family members in their children's educational future, and for more focus to improve students' life skills. Implications and recommendations to increase the families' satisfaction in regards the special education programs are discussed.

Keywords: Saudi Arabia, intellectual disability, special education, outcomes, academic skills, life skills.

Special Education in Saudi Arabia

Special education services in Saudi Arabia have developed significantly in the recent decades (Alnahdi, 2013; Alnahdi, 2014). In 1990, the Ministry of Education began to mainstream students with disabilities (SWD) by designing classes for them at mainstream schools, which was a turning point in the history of special education in the country. Since then, the number of schools offering classes for SWD has increased noticeably. For example, there were over 53 times as many special education services for male students in 2004–2005 (2,047 programs and institutes) than there had been 11 years before in 1994–1995 (38 programs and institutes) (Al-Mousa, 2007). Similarly, there were over 29 times more special education programs and institutes for female students in 2004–2005 (530 programs and institutes) than there had been 11 years before in 1994–1995 (18 programs and institutes) (Al-Mousa, 2007).

By 2006, about 80% of SWD in Saudi Arabia were mainstreamed (Al-Hano, 2006). The Saudi Arabian General Directorate of Special Education (GDSE) reported that there were 2,477 classes for 13,047 SWID in Saudi Arabia in 2007 (GDSE, 2007). Al-Mousa (2007) demonstrates that Saudi Arabia leads Arab countries in including SWD, mainstreaming more than 90% of male and 65% of female SWD. Today, according to Aldabas (2015), about 746 public schools offer special education classes for those with mild and moderate disabilities and 47 programs for students with mild and moderate autism disorder.

Special Education Programs for SWID

There are two kinds of educational placements for SWD in Saudi Arabia: institutes and inclusion. Al-Mousa (2010) states that institutes separate those with moderate and severe disabilities from typically developing students, focusing on categories of disabilities like visual impairment, hearing impairment and intellectual disability. Inclusion programs place students with mild disabilities into mainstream schools, providing services such as resource rooms, self-contained classrooms, itinerant teachers, and follow-up programs (Al-Mousa, 2010). However, some studies reported that only resource rooms, and self-contained classrooms are available on the ground (Alnahdi, 2014). Students with mild and moderate intellectual disabilities are separated from typically developing students in mainstream schools but may interact with them during activities like lunch or recess. The curriculum for these students differs from the general curriculum. They can continue their studies at mainstream schools until age 18, but they do not have opportunities to continue their education further outside of a few vocational training centers (Al-Ajmi, 2006).

The development of special education services in general have been positively reflected in the services offered to SWID. The first institute for SWID in Saudi Arabia opened in 1970. It provided services such as housing and training for children with severe intellectual disabilities. In 1970, about 100 SWID were enrolled in special education institutes. In 1980, the number of SWID enrolled in these institutes was 827 (Althabet, 2002). By the end of 2007, there were 11 institutes and 718 programs for SWID, with 1,244 students in 170 classes in various institutes; however, 11,805 SWID took 2,307 classes in mainstream schools simultaneously, and 2,272 teachers encountered SWID in various programs and institutes (GDSE, 2007).

Statistics from the Ministry of Education (MOE, 2011) showed that 18,000 SWID benefited from the special education services of nearly 4,500 special education teachers across Saudi Arabia. Sixty-two percent of SWID access special education programs in mainstream schools. Institutes for SWID represent 58% of the programs for all other disabilities (MOE, 2011). With this increasing development in the amount of special education services available to SWID, the question arises as to the quality of these services and student's family members' perspectives on their outcomes. It is important for MOE officials to monitor the views of beneficiaries of special education services to improve the quality and efficiency of these services.

Parental Satisfaction with Special Education in Saudi Arabia and Other Arab Countries

There are a few studies that focus on parents' perspectives regarding special education programs for SWID in Saudi Arabia. Masood (2013) conducted a study that aimed at identifying the level of satisfaction of families of children with disabilities with the services and programs provided to their children in Al-Jouf region. The results showed that the level of satisfaction was medium regarding improvement in academic skills but high when it came to other services provided to their children. One of the main parental recommendations was to increase coordination between the schools and families.

Hussein (2013) carried out a study aimed at identifying the level of satisfaction with the services for the families of SWID in Saudi Arabia. The study revealed a gap in the perceptions of the coverage of a wide range of skills due to a predominant focus among family members on academic skills over other skills. This study came out with a set of recommendations, such as the need to work with SWID on the sensory, language and daily life skills that suit their abilities and needs. Abdullah (2003) examined the contents of individualized education plans (IEP) and programs for SWID and their teaching methods in SWID institutes and classes within mainstream schools in the southern regions of Saudi Arabia. The results showed that special education teachers applied IEPs with their various components but did not include plans to modify behavior or behavior assessment methods. Nor did they include methods used in the assessment of language abilities. Regarding the implementation of the IEP, participation of the family in carrying out the programs was weak. In addition, Alnahdi (2014) analyzed the time allocated for academic and other skills in special education programs for SWID. It was found that students in special education programs spend a great deal of the day, about 64% of the time, working on academic skills at the elementary school level.

Problem of the Study

During frequent visits to special education programs for SWID, as part of their pre-service teacher training, the researchers of the present study closely observed these programs. It was determined that much effort and time was allocated to teaching students academic skills and that life skills and adaptive practices were treated as matters of secondary importance, which is confirmed by Alnahdi's (2014) findings about the amount of time allocated to academic skills in special education programs.

Study Goals

This study aimed to help educators examine the success of special education programs for SWID in terms of improving students' skills and knowledge, which in turn would help address any issues preventing schools from performing their expected roles. Therefore, this study sought to answer two main questions:

1. To what extent do SWID improve academically in special education programs from the point of view of their family members?
2. To what extent do SWID improve their life skills in special education programs from point of view of their family members?

Materials and Methods

Sample

The sample consisted of 150 families of SWID enrolled in special education programs within public schools or private schools for SWID only. The scale was distributed to SWID in elementary and middle schools delivered to their parents. Scales were distributed in two cities in Saudi Arabia: Al-Kharj and Wadi Al Dwasser. Four mediators were responsible for distributing the scales to 16 special education programs for SWID and 5 private schools for SWID. One hundred and fifty family members responded to the scale.

Table 1 demonstrated that 30% (N = 45) of the participants held a bachelor's degree and 10% (N = 15) held higher degrees, while the remaining 60% (N = 90) had lower educational qualifications. The percentage of public school students in the study was 64.7% (N = 97), while private school students made up 35.3% (N = 53) of total students. Fathers accounted for 35.3% (N = 53) of the participants, while 29.3% (N = 44) of the participants were mothers. Brothers represented 18.7% (N = 28) of the sample, sisters represented the smallest percentage at 5.3% (N = 8), and another relative represented the remaining 11.3%. The majority of students in this study, 48% (N = 72), spent between 2 and 5 years in the special education program, while 21.3% (N= 32) of them did not complete their second year. The rest, 30.7% (N = 46), had spent more than 5 years in the program.

Table 1. Demographic Information of the Sample

Independent Variable		Frequency	Percent %
Type of school	Public	97	64.7
	Private	53	35.3
Relative level of education	Graduate degree	15	10
	Bachelor degree	45	30
	Less than bachelor degree	90	60
Relationship to the SWID	Father	53	35.3
	Mother	44	29.3
	Brother	28	18.7
	Sister	8	5.3
	Other	17	11.3

Years at school	Two years or less	32	21.3
	More than 2 years and less than 5 years	72	48
	More than 5 years	46	30.7

Instrument

A scale of 19 items was developed for this study. The goal of developing the scale was to measure the extent to which the participants' believed that the school contributed to the development of their children in academic and life skills. The scales were built to include two main subscales: an academic skills subscale that focused on progress in learning math, reading, writing and science and an adaptive and life skills subscale based on the American Association on Intellectual and Developmental Disabilities' list of adaptive skills as included within its definition of intellectual disability (AAIDD, 2018). The 19 items were divided into 13 items focusing on life skills and 6 items focusing on academic skills. Participants were giving six answers to choose from in response to one general question: *What is your assessment of the level of your son / brother in the following skills since joining the school*? Their choices were the following: there is no improvement at all (0), much less than I expected (1), less than I expected (2), as I expected (3), more than I expected (4) and much more than I expected (5).

To ascertain the psychometric properties of the scale used in this study, three methods were employed: Cronbach's alpha, construct validity, and content validity. Cronbach's alpha was computed to examine the scale's reliability. The results showed a very good level of reliability for the overall scale (.907) and for the two subdomains, academic skills and life skills (.938 and .933, respectively; see Table 2).

Table 2. Reliability Statistics (Cronbach's Alpha)

	items	alpha
Overall	19	.907
AC	6	.938
LS	13	.933

AC = academic skills, LS = life skills

The validity of the scale was examined in two ways. First, the content validity of the scale was tested. The scale was sent to ten specialists in special education and psychology to ascertain the clarity of the statements and their relationship to the two dimensions in this study. The observations of the specialists were taken into consideration during the final draft of the scale. Second, the construct validity was tested by conducting confirmatory factor analysis to examine the proposed two-factor model. The chi-square was significant, indicating that the data did not fit the model. However, this test indicates to be very sensitive to sample size (Byrne 2010). Other fit indices indicated a reasonable fit (see Table 3). For instance, the comparative fit

index (CFI) was .97, indicating acceptable fit (Schermelleh-Engel *et al*., 2003); and the standardized root-mean-square residual (SRMR) was .054, also an indicator of good fit (Hu & Bentler 1998; Schermelleh-Engel *et al*. 2003). In addition, the Tucker-Lewis coefficient (TLI) was .97, which is within the range of an acceptable fit (Bentler & Bonett, 1980).

Table 3. Confirmatory Factor Analysis Statistics

Models	SBS- $\chi 2$	p	df	RMSEA	CFI	SRMR	GFI	AGFI	TLI	IFI
M1	191.613	.005	144	.047	.97	.054	.89	.85	.97	.97

Note. SBS-$\chi 2$ = Satorra–Bentler scaled Chi-square; df = degrees of freedom; RMSEA = root-mean-square error of approximation; CFI = comparative fit index; SRMR = standardized root-mean-square residual; GFI = goodness-of-fit index; AGFI = adjusted goodness-of-fit index; and TLI = Tucker-Lewis coefficient

Results

Descriptive Statistics

Table 4 demonstrates participants' responses to the 19 items. It is noticeable that about 19% of participants, on average, on all items, chose the first option that their student did not improve. The percentage of participants who chose the first option (*no improvement at all*) on all items ranged from 11% to 25%. More details about the response rates of all items are shown in Table 4. The mean for academic skills was 1.86 (SD = 1.12) and 2.07 (SD = .99) for life skills. The overall mean was 2.00 (SD = 1.07), which suggests that participants, in general, felt that their children improved less than expected.

Table 4. Response Distribution and Means by Items and Subscale

Subscale	Items	* 0	1	2	3	4	5	M
AC1	Development in his reading skills	23	22	24	24	7	1	1.72
AC2	Development in his skills in mathematics	15	27	22	30	5	1	1.86
AC3	Development in his knowledge in science	17	21	27	27	5	2	1.89
AC4	Development in his ability to solve some simple mathematical issues	18	19	30	23	9	2	1.91
AC5	Read some simple words	17	23	27	18	11	3	1.93
AC6	Write some simple words alone	21	23	24	20	7	5	1.83
LS1	Improvement in the level of following instructions at home	20	17	22	26	13	2	2.01
LS2	Development in his skills in preparing some simple food for himself	22	23	20	23	8	5	1.86
LS3	Development in his skills to make friends with other children outside the school	18	21	17	27	11	5	2.09

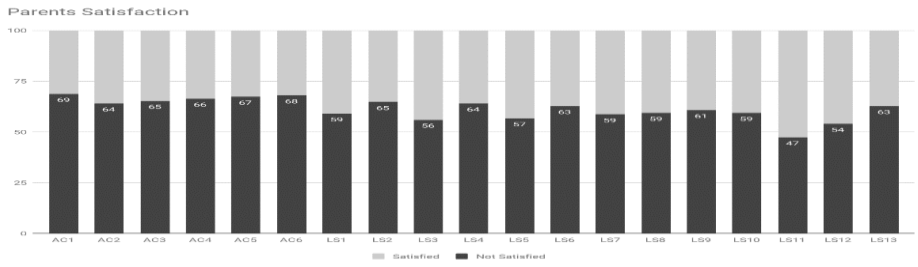
LS4	Development in his skills with clothes and appearance	19	19	26	16	13	7	2.06
LS5	Development in his self-confidence level	18	22	17	28	8	7	2.08
LS6	Improvements in his ability to use money correctly	26	23	14	23	9	5	1.81
LS7	Development in his skills to be independent	22	21	15	20	11	10	2.07
LS8	Improvement in his level of maintaining safety and avoiding danger	23	21	16	16	17	8	2.07
LS9	Improvement in his ability to care for his own general health	19	21	21	21	14	5	2.03
LS10	Improvement in his level of commitment to a schedule of play times and study at home	20	19	20	21	14	5	2.06
LS11	Development in his skills to use the phone	11	21	15	19	22	12	2.55
LS12	Development in his skills during social events	17	17	20	22	19	5	2.25
LS13	Development in his skills in a particular profession (e.g., he was trained to arrange products in a shop, etc.)	25	19	19	17	15	5	1.94
	Average for each option	19	21	21	22	12	5	-
	Academic skills subscale		M= 1.86, SD= 1.07					
	Life skills subscale		M= 2.07, SD= 1.12					
	Overall mean		M= 2.00, SD= 0.99					

AC = Academic skills subscale, LS = Life skills subscale

* 0 = there is no improvement at all, 1= much less than I expected, 2 = less than I expected, 3 = as I expected, 4 = more than I expected, 5 = much more than I expected, M = mean, SD = standard deviation

To facilitate the understanding of participants' responses, the three responses 'there is no improvement at all', 'much less than I expected', and 'less than I expected' were combined to represent the percentage of parents' dissatisfaction with the students' skill development. Also, the three other responses 'as I expected', 'more than I expected', and 'much more than I expected' are combined in Figure 1 to represent parental satisfaction with the students' skill development. Figure 1 demonstrates participants' responses in percentages based on two categories—satisfied or dissatisfied—on all items. Notably, Figure 1 demonstrates at least 60% dissatisfaction in most of the items. The only item that had less than 50% dissatisfaction was item 11 (47%), '*development in use of the phone*' in the life skills subscale.

Figure 1. **Participants responses on all items (combined responses)**



Type of school

The sample in this study consisted of parents of SWID enrolled in two types of schools: public schools with special education programs for SWID and private schools for SWID. Although parents in general showed dissatisfaction with their children's improvement in academic and life skills, dissatisfaction was even greater with regard to children enrolled in private schools. Results of the t-test in Table 5 demonstrate that there were statistically significant mean differences based on the type of school [t (148) = 3.42, p = .001; public M = 2.07, SD = 1.11; and private M = 1.46, SD = .88].

Table 5. Parents' Responses (Means) by Type of School

Sample	N	Mean	SD	*t*	*df*	*p*	*d*
Public School	97	2.07	1.11	3.42	148	.001*	0.61
Private School	53	1.46	.88				

* p value is significant at .01

Years at school

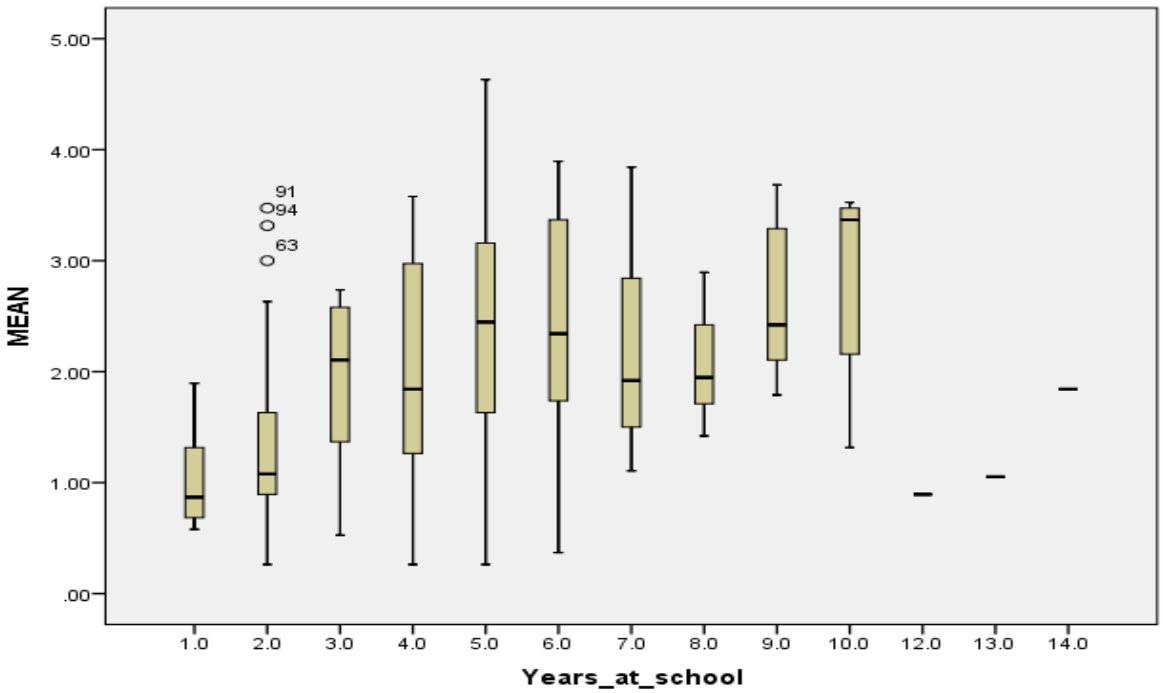
Results showed that students' length of enrollment had a significant influence on parents' perspectives on school outcomes (see Table 6). Regression analysis statistics indicate that the duration of enrollment in school was a significant predictor of family member perspectives [F (131) = 16.366, p < .001, R = .333]. This also demonstrated see Figure 2, which shows that the highest level of dissatisfaction came from families of students who had recently begun to attend their schools.

Table 6. ANOVA Statistics by Number of Years at the School

R	Sig.	F	Mean Square	df	Sum of Squares
.333	.000 [b]	16.366	13.732	1	13.732
			.839	131	109.911
				132	123.643

[a]Dependent Variable: MEAN, [b]Predictors: (Constant), Years at school

Figure 2. ***Participants responses by number of years at school***



Parental Recommendations

In addition to responding to the 19 items on the scale, parents were asked for their suggestions about whether schools should focus more on life skills or academic skills in their work with SWID or whether they should only work on one or the other. The results, listed in Table 7, show that 61% of participants preferred that their child's school focus more on life skills than academic skills. Approximately 21% of participants preferred that their child's school work only on life skills and not spend any time on academic skills.

Table 7. Participants Recommendations to Improve School Outcomes (whether the school should focus more on life skills or academic skills)

	Academic skills only	Mostly on Academic skills + Life skills	Mostly on Life skills + Academic skills	Life skills only	Total
Number of Participants	10	46	59	30	145
Percentage	6.90%	31.72%	40.69%	20.69%	100.00%

Discussion

This study aimed to examine family members' opinions regarding their children's development in academic or life skills. In general, family members reported that school outcomes for their children were below their expectations for both academic and life skills. Parents generally were not satisfied with the extent of improvement in their children's academic and life skills, but parents of students in private schools showed more dissatisfaction with school outcomes than did parents of students in public schools. The greater dissatisfaction among parents of private school students might be related to the high expectations families typically maintain regarding paid services in general, whether for students with disabilities or for typically developing students.

Families of students who had only recently begun to attend schools showed higher levels of dissatisfaction in comparison with families of students who had attended their schools for a longer amount of time. This might be related to families' high expectations when they first send their children to school. In this case, families with children who have been enrolled in a school for many years might tend to lower their expectations over time to mitigate their dissatisfaction with certain services.

The majority of parents suggested that schools focus on daily life skills, which shows the important role schools play in meeting those needs. This suggestion may be attributed to assumptions about the potential of SWID for significant improvement in life skills compared with academic skills. It also shows the importance of the child's adaptation to their society from their parents' perspectives, which can only increase through the development of the students' life skills. These findings are consistent with those of other studies regarding the importance of lessening the focus on academic skills during most of the school day for SWID (Alnahdi, 2014; Almuaqel, 2008).

Conclusion and implications

There was a clear sense among family members that there was little improvement in their children's skills because of attending special education programs. Although daily life skills are essential in educational programs for SWID, most of the day is actually devoted to teaching academic skills. Participants recommended that schools increase the focus on life skills for SWID.

The implications of this study suggest that there are ways to increase the satisfaction of families of SWID in special education programs. First, families should play a role in developing their children's future educational plans. This involvement ensures that they will be engaged in their children's progress and that they will do their best to help the children reach their highest potential. Such engagement will also be reflected in their satisfaction, which will be based on expectations that are more realistic. In addition to parental involvement, the teachers first will bear the responsibility for working with the parents to help their children achieve the goals set out in their development plans.

Second, students' different abilities and needs should constitute the milestones around which any curriculum is built. One fixed curriculum for all students should be outdated. School officials need to authorize and empower teachers to choose goals and skills that can be reached

and acquired by students and that will have the greatest impact on their independence and their social lives. In other words, schools should not require teachers to spend most of their time on academic skills regardless of their students' needs.

Third, findings from this study can help officials in the Ministry of Education evaluate the efficiency of special education programs for SWID. Therefore, special education programs should start to focus on students' life skills as their main goal. To ensure the success of this change, it will be necessary for MOE officials to work to provide the facilities and the resources necessary to train students and occasionally take them outside of school for training purposes. For example, they might take them shopping at a supermarket or to a restaurant close to home to order a meal. These small but crucial skills would make SWID more independent and improve their lives in a way that their families would be able to appreciate and value.

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