Zhongguo Kuangye Daxue Xuebao
Journal of China University of Mining and Technology

2025 | Vol 30 | Issue 1 | Page 39-47
Journal Homepage: https://zkdx.ch/
DOI: 10.1654/zkdx.2025.30.1-5

Determinants of Academic Performance of Special Needs Students in Gurage Zone Primary Schools

Mohammed Derese Biru *https://orcid.org/0000-0002-4498-545X*
Department of Statistics, College of Natural and Computational Sciences, Wolkite University, Ethiopia

Ayele Gebeyehu Chernet *https://orcid.org/0000-0002-6828-0323*
Department of Statistics, College of Natural and Computational Sciences, Wolkite University, Ethiopia

Kassahun Trueha *https://orcid.org/0000-0001-8141-1589*
Department of Statistics, College of Natural and Computational Sciences, Wolkite University, Ethiopia

Abebe Debu *https://orcid.org/0000-0003-4281-0434*
Department of Statistics, College of Natural and Computational Sciences, Wolkite University, Ethiopia

Tekalign Deksisa Bejji *https://orcid.org/0000-0002-9484-8138*
College of Education and Behavioral Science, Wolkite University, Ethiopia

Esayas Teshome Taddese* *https://orcid.org/0000-0001-8988-7311*
Faculty of Education and Liberal Arts, INTI International University, Nilai, Negeri Sembilan, Malaysia
*Corresponding author

Abstract
The purpose of this study is to identify and assess the association of determinants affecting the academic performance of special needs students. The data were collected from randomly sampled 1,053 special needs students from three primary schools in the Gurage Zone via questionnaire. The chi-square test of association and binary logistic regression model were employed to analyze the data. The chi-square test results indicate that the academic performance of special needs students is significantly associated with socioeconomic variables (father's education level, mother's education level, father's occupation, mother's occupation, and being born with a disability); curriculum-related variables (academic performance improvement, rating of the current curriculum, curriculum support for friendly teaching, curriculum that allows for discussion, structured and accessible curriculum, and practical curriculum); support service variables (rating of support services, teacher understanding of the needs of special needs students, government support through bursary programs, peer support, specialists coming from institutions to mentor, donor funding for education, and regular guidance and counseling); and learning environment and resources (wheelchair ramps, wide doors, lighting, horseshoe seating arrangement, Braille, special sanitary facilities, landmarks for the blind, auditory rooms, adequate toilets, and flattened ground). Furthermore, the logistic regression model revealed that the variables: age, learning disability, emotional challenges, neurological disorders, being born with a disability, and mother's education level were statistically significant. These findings point to Ethiopia's challenges in achieving Sustainable Development Goal (SDG) 4, which focuses on ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.

Keywords
Inclusive education, Special needs students, Academic performance, Logistic regression, School safety

1. Introduction
According to the World Health Organization (WHO), about 10% of the world's population has a specific type of disability. 80% (150 million) of this population are children live in developing countries[1, 2]. Only 2% of individuals with special needs receive any form of special services in developing countries. Despite free education is delivered in many African Countries, special needs education schemes are rarely considered, supported and access to facilities they need in their education are seldom provided [3, 4].

The Ethiopian government has made significant strides in improving educational access over the past two and a half decades. However, the education of children with special needs education remains concerning due to overcrowding, a focus on urban areas, and a lack of essential resources and adequately trained human resources. (Tirussew, 2006; World Vision, 2007).

Teacher training on special needs education has been conducted in Ethiopia since the 1990s, becoming a focus of much international support. Until the early 1990s, teacher education for special needs education was primarily delivered through workshops funded by non-governmental organizations. This approach did not result in lasting changes in teaching and learning processes, nor did it enable the government to become self-reliant in training special education staff. Beginning in 1992, with support from the Finnish government, a six-month training course was launched at a teacher training institute [5]. However, according to Ministry of Education statistics, it is estimated that only 6,000 identified disabled children have access to education within a primary school population of nearly 15 million [6].

Report from Ethiopian ministry of education shows that only 1% of primary school teachers are qualified (degree holders) in special needs education. The proportion of teachers with degree qualifications in special needs education is similar across regions, and highest in Tigray and Addis Ababa at 2%. Statistical data indicates, nationally the number of male special need education trained teachers is higher than female SNE trained teachers. (MOE).

In most part of Ethiopia, education for special need children were delivered by means of inclusive education. Hence, unlike special education that focuses on providing services for individual children, inclusive education focuses on the change of the whole system of the school environment to the need of the individual child [3]. More recently, inclusive education is even thought of as an approach that seeks to address barriers to learning and participation and provide resources to support learning and participation for all kinds of children with special needs.

The fundamental principle of an inclusive school is that all students should learn together, regardless of any difficulties or differences they may have [7]. The inclusive education system must recognize and respond to the diverse needs of students, accommodating various learning styles and ensuring quality education for all through appropriate curricula, resource utilization, teaching strategies, and a continuum of support and services [7-9]. The continuum of special needs education present in every school [10] has clearly shown that children with special needs must have access to regular schools. However, nearly two decades have passed without meaningful inclusion of these children in many parts of the world. One can only imagine how challenging such practices can be in contexts like Ethiopia, where social, political, and academic discussions are just beginning to take shape, resources (human, material, and financial) are extremely limited, and cultural stereotypes persist in many ways [11].

2. Methods

2.1 Study Area, Period and Study Design

School based cross sectional study design was utilized for students with special needs in Gurage zone. The study was conducted from April 2019 to November 2020 in Gurage Zone, Southern Ethiopia.

2.2 Sample Size Determination

The required sample size for this study was calculated by considering the proportion of academic performance of special needs students in the Gurage zone is 0.5. 3% marginal error with 95% confidence interval by and 10% response rate. The sample size (n) is determined using the following statistical formula for single proportion:

$$n_0 = \frac{z_{\frac{\alpha}{2}}^2 * p * q}{d^2}$$

$$n_0 = \frac{1.96^2 * 0.5 * 0.5}{0.03^2}$$

$$n_0 = 1067$$

The required sample size will be

$$n = \left(\frac{n_0}{1+\frac{n_0-1}{N}}\right) + 10\% \text{ response rate} = \left(\frac{1067}{1+\frac{1067-1}{9373}}\right) + 10\% \text{ response rate} = 958+95=1053$$

Where,

d = margin of error = 0.03

$z_{\frac{\alpha}{2}}$= 1.96 at 95% Confidence Interval (CI)

P = proportion of special needs students scored pass mark = 0.5

n_0=the initial sample size

n= adjusted sample size

N =the population size = 9373

2.3 Sampling Technique

Three special needs primary school centers in the Gurage Zone were selected using a clustered sampling technique. These schools had a total population of 9,373 special needs students for the 2019/20 academic year. A sample size of 1,053 was randomly drawn from the population.

2.4 Data Collection Procedures

A structured questionnaire was used for data collection, conducted in person by the participants' teachers. The questionnaire included different variables such as socio-economic and demographic and other related characteristics. Before the interview, a brief explanation was given to the students by the data collectors about the purpose of the study. The data collection tool was prepared in English and translated into the Amharic language. Before the actual data collection, training was given to the data collectors and supervised during data collection.

2.5 Data Management and Analysis

Data coded, cross-checked and entered to CSpro 7.3 and then exported to SPSS Version 26 for analysis. Both descriptive and inferential statistical analyses were performed. The results of the analysis were presented with tables and figures, where appropriate. Binary logistic regressions (bivariate and multi-Variable analyses) were done the odds ratios and corresponding confidence intervals is used to report the association between dependent and independent variables. In all cases p-value of less than 0.05 is considered as statistically significant.

3. Result

The study targeted a total of 1053 samples and 1007 of the questionnaires filled by respondents returned back with 95.6% response rate. Figure 1 shows, the academic performance status of special need students was 76 % for pass mark and the remaining 24% were not promoted to the next class.

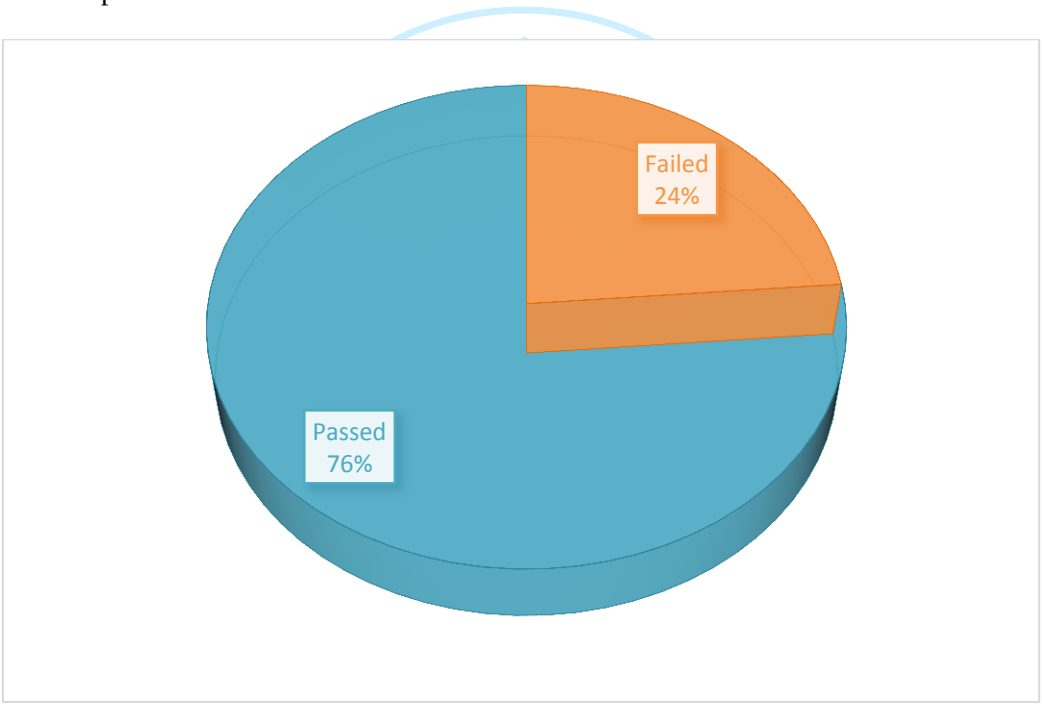

Fig. 1 Academic performance Status of special need students

On the other hand, the prevalence rate of children with special needs in Gurage Zone Primary Schools was high. Among children with special needs, 45.6 % of them were children with Emotional and behavioral disorder, 25.8% of them were children with visual impairments, 17.5% of them were children with hearing impairments, 3.4% of them were children with physical disabilities, 4.5% of them were children with intellectual disabilities, 10.2% of them had neurological problems, 2.9% of them had learning difficulties and the rest 3.95% of them had economical problem.

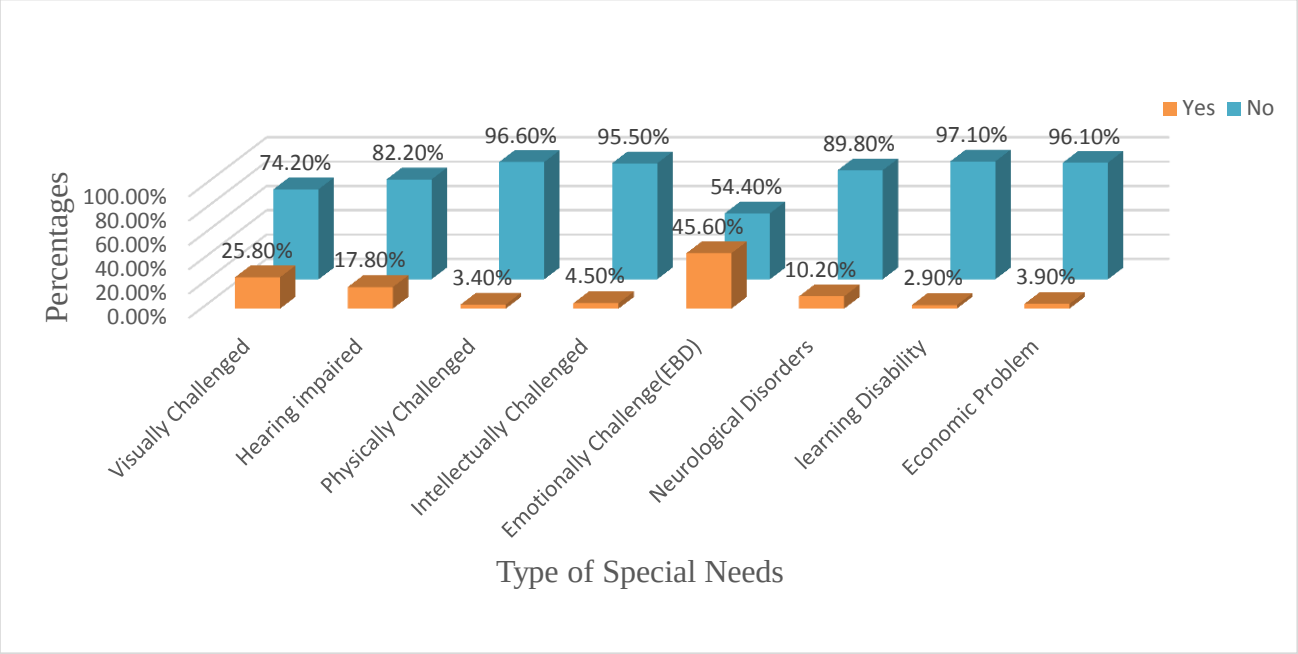

Fig. 2 Proportion of type of Special Needs

The major demographic and socioeconomic background characteristics of the SNS were presented in Table 1 below. The proportion of academic performance of special need students who were passed to next class were differs by type of place of residence: urban and rural. Accordingly, higher numbers of SNS Passed 449(58.5%) resided in urban areas. And relatively small number of failed students, 319(41.5%%) resided in rural areas. The academic performance of special need students, 41.1% born with disability and 58.9% not born with disability were passed to the next class.

Table 1 also reveals that the Academic performance status of Special need Students differs by their fathers' and mothers' education level as well as their family occupation type. *The* highest percentage of passed SNS was observed, fathers who have primary level of education 245(31.9%) and mothers who have no formal education 311(40.5%). The highest percentages of academic performance status SNS who passed were recorded, father who were involved in own business type of occupation 402(52.3%) and mother were farmer type of occupation 754(98.2%).

SNS who were successful in their Academics academic performance have almost full support and encouragements from their parents to go for further education were 754(98.2%).

Table 1 Academic performance of special need student by Demographic and socioeconomic variable.

Variables		Academic performance _				Chi-Square
		Failed		passed		
		Count	%	Count	%	P-Value
Gender	Male	133	55.6%	391	50.9%	0.200
	Female	106	44.4%	377	49.1%	
Residence	Urban	131	54.8%	449	58.5%	0.318
	Rural	108	45.2%	319	41.5%	
Born with Disability	Yes	17	7.1%	316	41.1%	< 0.000
	No	222	92.9%	452	58.9%	
Father Level of Education?	No formal education	14	5.9%	103	13.4%	0.002
	Primary	95	39.7%	245	31.9%	
	Secondary	87	36.4%	251	32.7%	
	Graduate	43	18.0%	169	22.0%	
Mother Level of Education	No formal education	132	55.5%	311	40.5%	< 0.000
	Primary	35	14.7%	204	26.6%	
	Secondary	38	16.0%	124	16.1%	
	Graduate	33	13.9%	129	16.8%	
Father Occupation	Unemployed	15	6.3%	55	7.2%	0.003
	Gov. Employed	42	17.6%	191	24.9%	
	own business	157	65.7%	402	52.3%	
	Farmer	25	10.5%	120	15.6%	
Mother Occupation	Unemployed	144	60.3%	377	49.1%	0.003
	Gov. Employed	39	16.3%	116	15.1%	
	own business	36	15.1%	197	25.7%	
	Farmer	20	8.4%	78	10.2%	
Parents' Encouragement	Yes	236	98.7%	754	98.2%	0.552
	No	3	1.3%	14	1.8%	

Table 1 also presents the chi-square test of association between the dependent and independent variables. The univariate findings show that academic performance of special need students is strongly associated with Born with Disability, Father Level of Education, Mother Level of Education, Father Occupation, Mother Occupation. Upon completion of the univariate analysis, variables can be selected for the multivariable analysis. Any variable whose univariate test has a p-value < 0.25 is considered as a candidate for the multivariable model. Accordingly, all the variables are candidates for the multivariate analysis except Residence and Parents' Encouragement variables.

Table 2 reveals the association of curriculum related factors on academic performance of Special need Student in Gurage zone primer schools. Students those passed to the next class perceived that: 759(98.8%) inclusive education system is better for special need student; 390 (50.8%) academic performance of special need student could be improvement by trained personnel; 409(53.3%) of them rate the current curriculum as average; 595(77.5%) curriculum supports friendly teaching as no extent; 595(77.5%) responded for curriculum allows for discussion as no extent; 699 (91.0%) Structured and Accessible Curriculum as no extent; 683(88.9%) practical's curriculum as no extent.

Table 2 Academic performance of special need student by Curriculum related variables.

Variables		Academic performance				Chi-Square
		Failed		passed		
		Count	%	Count	%	P-Value
Inclusive is Better	Yes	237	99.2%	759	98.8%	0.663
	No	2	0.8%	9	1.2%	
Academic performance Improvement	Trained personnel	79	33.1%	390	50.8%	< 0.000*
	Adapted teaching methods	5	2.1%	9	1.2%	
	Modified environment	154	64.4%	362	47.1%	
	specialized equipment	1	0.4%	7	0.9%	
Rating Current Curriculum	The best	1	0.4%	43	5.6%	< 0.000*
	Encouraging	3	1.3%	31	4.0%	
	Average	104	43.5%	409	53.3%	
	Need to be revised	131	54.8%	285	37.1%	
Curriculum Supports Friendly Teaching	No extent	143	59.8%	595	77.5%	< 0.000*
	Small extent	92	38.5%	116	15.1%	
	Moderate extent	1	0.4%	48	6.3%	
	Great extent	3	1.3%	9	1.2%	
Curriculum Allows for Discussion	No extent	141	59.0%	595	77.5%	< 0.000*
	Small extent	97	40.6%	123	16.0%	
	Moderate extent	1	0.4%	46	6.0%	
	Great extent	0	0.0%	4	0.5%	
Structured and Accessible Curriculum	No extent	230	96.2%	699	91.0%	0.004
	Small extent	8	3.3%	25	3.3%	
	Moderate extent	0	0.0%	41	5.3%	
	Great extent	1	0.4%	3	0.4%	
Practical's Curriculum	No extent	225	94.1%	683	88.9%	0.003
	Small extent	10	4.2%	27	3.5%	
	Moderate extent	2	0.8%	54	7.0%	
	Great extent	2	0.8%	4	0.5%	

Table 2 summaries the chi-square test of independence between the curriculum related variables and academic performance of special need students. The response variable academic performance of special need student was significantly associated with academic performance improvement; rating current curriculum; curriculum supports friendly teaching; curriculum allows for discussion; structured and accessible curriculum; practical's curriculum.

Table 3 below shows how support services enhance academic performance of learners with special needs and to what extent passed SNS agreed up on the support service given in the in their school. The majority SNS 403(52.5%) rating support services as poor and 207(27.0%) rate as excellent support service; 551(71.7%) SNS responded ''teacher understands needs of special needs'' as no extent; the government supports through bursary kitty for special need students rated as no extent 558(72.7%); 702(91.4%) no extent peer support between the student; 707(92.1%) no extent specialist come from institutions to mentor; 709(92.3%) no extent donors fund education; 275(35.8%) no extent and 323(42.1%) moderate extent offered guidance and counseling regularly.

Table 3 Academic performance of special need student by variable Support Service.

Variables		Academic performance				Chi-Square
		Failed		Passed		
		Count	%	Count	%	P-Value
Rating Support Services	Excellent	17	7.1%	207	27.0%	< 0.000*
	Good	5	2.1%	44	5.7%	
	Average	51	21.3%	114	14.8%	
	Poor	166	69.5%	403	52.5%	

Teacher Understands Needs of Special Needs	No extent	123	51.5%	551	71.7%	< 0.000*
	Small extent	113	47.3%	156	20.3%	
	Moderate extent	0	0.0%	17	2.2%	
	Great extent	3	1.3%	44	5.7%	
Government Supports Through Bursary Kitty	No extent	124	51.9%	558	72.7%	< 0.000*
	Small extent	115	48.1%	164	21.4%	
	Moderate extent	0	0.0%	10	1.3%	
	Great extent	0	0.0%	36	4.7%	
Peer Support	No extent	222	92.9%	702	91.4%	< 0.000*
	Small extent	17	7.1%	18	2.3%	
	Moderate extent	0	0.0%	9	1.2%	
	Great extent	0	0.0%	39	5.1%	
Specialist Come from Institutions to Mentor	No extent	217	90.8%	707	92.1%	< 0.000*
	Small extent	22	9.2%	13	1.7%	
	Moderate extent	0	0.0%	12	1.6%	
	Great extent	0	0.0%	36	4.7%	
Donors Fund Education	No extent	206	86.2%	709	92.3%	0.005
	Small extent	26	10.9%	36	4.7%	
	Moderate extent	6	2.5%	22	2.9%	
	Great extent	1	0.4%	1	0.1%	
Offered Guidance and Counseling Regularly	No extent	35	14.6%	275	35.8%	< 0.000*
	Small extent	6	2.5%	28	3.6%	
	Moderate extent	152	63.6%	323	42.1%	
	Great extent	46	19.2%	142	18.5%	

Table 3 also displays the chi-square test of independence between the academic performance of special need students and support service. The response variable academic performance of special need student was significantly associated with rating support services; teacher understands needs of special needs; government supports through bursary kitty; peer support; specialist come from institutions to mentor; donors fund education; offered guidance and counseling regularly Determining the connection between learning environment and resource availability on academic performance of learners with special needs in Gurage zone primary schools was one of the objectives of this study.

According to Table 4.4 the academic performance status of special need student who was passed to next class revealed that on the learning environment and availability resource in their school as well as its association with students' academic performance , 204(26.6%) Wheelchair Ramps is available in the school; 706(91.9%) presences of sign language; 712(92.7%) of the special need students responded horse shoe sitting arrangement was practiced in their school; 208(27.1%) braille is available in their school; 203(26.4%) special sanitary facilities is available; 209(27.2%) presences landmark for the blind; availability of auditory room, adequate toilets and flattened ground were 230(29.9%), 200(26.0%) and 201(26.2%) respectively.

Table 4 Academic performance of special need student by variable Learning Environment and Resource availability variables.

Variables		**Academic performance**				**Chi-Square**
		Failed		**Passed**		
		Count	**%**	**Count**	**%**	**P-Value**
Wheelchair Ramps	Yes	19	7.9%	204	26.6%	< 0.000*
	No	220	92.1%	564	73.4%	
Wide Doors	Yes	20	8.4%	205	26.7%	< 0.000*
	No	219	91.6%	563	73.3%	
Sign Language	Yes	223	93.3%	706	91.9%	0.098
	No	16	6.7%	62	8.1%	
Horse Shoe Sitting Arrangement	Yes	223	93.3%	712	92.7%	0.754
	No	16	6.7%	56	7.3%	
Braille Available	Yes	18	7.5%	208	27.1%	< 0.000*
	No	221	92.5%	560	72.9%	
Special Sanitary Facilities	Yes	18	7.5%	203	26.4%	< 0.000*
	No	221	92.5%	565	73.6%	
Landmark for the Blind	Yes	18	7.5%	209	27.2%	< 0.000*
	No	221	92.5%	559	72.8%	
Auditory Room	Yes	18	7.5%	230	29.9%	< 0.000*
	No	221	92.5%	538	70.1%	
Adequate Toilets	Yes	17	7.1%	200	26.0%	< 0.000*
	No	222	92.9%	568	74.0%	
Flattened Ground	Yes	18	7.5%	201	26.2%	< 0.000*
	No	221	92.5%	567	73.8%	

Table 4 Shows the chi-square test of independence between learning environment and resource availability with academic performance of learners with special needs variables. The response variable academic performance of special need student was significantly associated with variable of wheelchair ramps, wide doors, sign language, horse shoe sitting arrangement, braille available, special sanitary facilities, landmark for the blind, auditory room, adequate toilets, flattened ground.

4. Logistic Regression Analysis

In this study, binary logistic regression models were employed to identify the associated explanatory variables with the dependent variable of academic performance of special need students. Accordingly, The result of the binary logistic regression analysis is summarized in the table 4.7 below the odds of passing to the next grade for SNS of indicator variable in the model compared to with reference category of independent variables were-: Age [OR = 1.132, 95% C.I = 1.034-.239, P = 0.007] ; Learning Disability(Yes) [OR = 0.201, 95% C.I = 0.057-0.706, P-value = 0.012] ; Emotionally Challenge(Yes) [OR = 0.586, 95% C.I. = 0.356-0.963, P-value = 0.035] ; Neurological Disorders (Yes) [OR = 0.400, 95% C.I. = 0.213-0.753, P-value = 0.005] ; Born with Disability (Yes) [OR = 12.044, 95% C.I. = 6.432-22.551, P-value =< 0.000]; Mother Education Level (No formal education) [P-value = 0.029 [OR = 0.559, 95% C.I. = 0.293-1.065, P-value= 077] and (Secondary) [OR = 0.380, 95% C.I. = 0.177-0.814, P-value = 0.013]; The Curriculum Supports Friendly Teaching (best) [P-value = 0.047] [OR = 15.597, 95%, C.I. = 1.113-218.601, P-value = 0.041]; Rating Support Services(Excellent) [P-value = 0.014] [OR = 5.299, 95%, C.I. = 1.189-23.622, P-value = 0.029] (Average) [OR = 1.968, 95%, C.I. = 1.142-3.394, P-value = 0.015]; Donors Fund Education [P-value = < 0.000);Guidance and Counseling Regularly [P-value = 0.036] Teacher Understands Needs [P-value = < 0.000]; (3) [OR = 0.517, 95% CI = 0.308-0.866, P-value = 0.012]; Lighting (Yes) [OR = 8.210, 95% CI = 2.694-25.020, P-value = < 0.000]; Horse Shoe Sitting Arrangement (Yes) [OR = 0.170, 95% C.I = 0.059-0.490, P-value = 0.001]; Braille (Yes) [OR = 20.005, 95% CI = 2.944-135.953, P-value = 0.002]; Auditory Room (Yes) [OR = 0.046, 95% CI = 0.006-0.346, P-Value = 0.003] were statistically significant associated variables with dependent variables and included in the model.

Table 5 Parameter estimate of Logistic Regression Model.

Variables		B	S. E.	Wald	df	P-value	Exp (β)	95% C.I. for EXP (β)	
Age		.124	.046	7.206	1	.007	1.132	1.034	1.239
Learning Disability	Yes	-1.605	.641	6.263	1	.012	.201	.057	.706
	No (Ref)								
Emotionally Challenge	Yes	-.535	.254	4.449	1	.035	.586	.356	.963
	No (Ref)								
Neurological	Yes	-.916	.323	8.069	1	.005	.400	.213	.753
	No (Ref)								
Born with Disability	Yes	2.489	.320	60.467	1	< .000	12.044	6.432	22.551
	No (Ref)								
Mother Education Level				9.024	3	.029			
	No formal education	-.582	.329	3.126	1	.077	.559	.293	1.065
	Secondary	-.968	.389	6.192	1	.013	.380	.177	.814
	Graduate (Ref)								
The Curriculum Supports Friendly Teaching				7.972	3	.047			
	Moderate extent	2.747	1.347	4.159	1	.041	15.597	1.113	218.601
	Great extent (Ref)								
Rating Support Services				10.629	3	.014			
	Excellent	1.668	.763	4.781	1	.029	5.299	1.189	23.622
	Average	.677	.278	5.936	1	.015	1.968	1.142	3.394
	Poor (Ref)								
Donors Fund Education				28.502	3	< .000			
Guidance and Counseling Regularly				8.562	3	.036			
Teacher Understands Needs				37.075	3	.000			
	Moderate extent	-.661	.263	6.290	1	.012	.517	.308	.866
	Great extent (Ref)								
Lighting	Yes	2.105	.569	13.714	1	< .000	8.210	2.694	25.020
	No (Ref)								
Horse Shoe Sitting Arrangement	Yes	-1.773	.540	10.769	1	.001	.170	.059	.490
	No (Ref)								
Braille	Yes	2.996	.978	9.389	1	.002	20.005	2.944	135.953
	No (Ref)								
Auditory Room	Yes	-3.079	1.029	8.953	1	.003	.046	.006	.346
	No (Ref)								

5. Discussion

The overall objective of this study was to investigate the associated factors on academic performance of students with special needs in Gurage zone public primary schools. The findings revealed that the academic performance status of special need students was 76 % for pass mark. The majority of the special need students 98.8% passed to the next class perceived that inclusive education system is better for special need students. The result agreed with findings of [12], who said that that pupils with special need should learn together with pupils without special need in the same class. The reasons given by those who agreed were that they need teamwork that ensures the pupils appreciate and encourage each other.

The study findings show that most of the learners with special need indicated that the learning environment and availability resource in their school was associated with the academic performance status of special need student who was passed to next class. The study matched with the findings of [7] and [3] which support learning environment and availability resource should consider the learners learning pace; hence it should be equipped with rich learning areas for learners to learn at their own pace. According to a social assessment survey conducted a few years ago [13], the main social blockages to accessing education for children with disabilities include lack of readiness and support by schools (finance, teaching, materials and facilities as well as human support) and services [10, 13]. The door of the school may be open, but the compound/environment is not receptive in many cases. The physical layouts do not support mobility of children with visual impairments; children with physical disabilities face tough times walking through the usually bumpy way to classrooms, or children with hearing problems are expected to get into classroom listening to the ringing school bell. To encourage the academic performance of special need student schools, need to have an atmosphere that is friendly, caring, accommodative, supportive and conducive social environment in terms environment and resources [4, 14].

The findings show that the association of curriculum related factors on academic performance of Special need Student in Gurage zone primer schools. Students those passed to the next class rating current curriculum used as not sufficiently encouraging to the pupils with special needs. This finding in line with finding of [9, 15] in that a flexible curriculum could facilitate the development of a more inclusive setting. Teachers can make adaptations that can make better sense in the local context and for the individual learner. Children with special needs face different kinds of barriers in accessing education. There should be flexibility to accommodate the diverse abilities and interests of a heterogeneous learner population. The curriculum should be structured and implemented in such a way that all learners can access it. This entails much more than a watered-down version of mainstream curricula. The guidelines enable teachers and schools to establish significant and flexible connections between the key skills and knowledge in the curriculum guidelines and the content of mainstream curricula [16-18].

The majority of Special need student agreed up on the support service given in their school was poor and they were not satisfied. The finding support with [19, 20] this might relate to absence of sufficiently trained and orientation programs or short-term training and training institutions are not well equipped with resources and experts that help in preparing qualified special educators with skills to facilitate the education of special need students. Teachers had a negative attitude towards the inclusion of children with special needs and they did not welcome them in many cases. Even worse, regular teachers discriminated against not only children with special needs but also special needs education teachers [19]; [21-24].

6. Conclusions

From the study findings it can be concluded that students with special needs in Gurage zone primary school associated with different factors like; learning environment, learning resources, Curriculum, Support services and socioeconomic and demographic variables that have negative or positive influence on their academic performance of special need students.

The study also concludes that most of the learning environment and resources were not available and inadequate. The significantly associated factors to the academic performance special need students very essential and supportive but not available were like wheelchair ramps, wide doors, horseshoe sitting arrangement, braille available, special sanitary facilities, landmark for the blind, auditory room, adequate toilets and flattened ground.

Our findings also revealed curriculum-related factors such as the rating of the current curriculum, supportive teaching practices, opportunities for discussion, a structured and accessible curriculum, and practical curriculum activities. These factors were practiced to no extent and were statistically significant in influencing the academic performance of special needs students in Gurage Zone primary schools.

The study further concludes that the rating of support services for special needs students in schools by teachers and other parties concerned was poor, which negatively impacted the learning process. Factors such as teachers' understanding of the needs of special needs students, government support through bursary funds, peer support, mentorship from specialists from institutions, donor-funded education, and regular guidance and counseling were significantly associated with the academic performance of special needs students in Gurage Zone primary schools.

References

1. World Health Organization, *International Classification of Functioning, Disability, and Health: Children &Youth Version: ICF-CY*. 2007: World Health Organization.
2. World Conference on Education for All, *World Declaration on Education for All and Framework for Action to Meet Basic Learning Needs*. 1990: Inter-Agency Commission.
3. UNESCO, *Reaching the marginalized*. 2010: Oxford University Press.
4. Abosi and Okey J, *Educating children with learning disabilities in Africa*. Learning Disabilities Research, 2007. 22(3): p. 196-201.
5. Lasonen, J., R. Kemppainen, and K. Raheem, *Education and training in Ethiopia: An evaluation of approachingEFA goals*. 2005: Institute for Educational Research.
6. Bines, H. and P. Lei, *Education's missing millions: including disabled children in education through EFA FTI processes and national sector plans*. 2007, Milton Keynes, World Vision UK.
7. Otiato, C.J.N.K.P., *Teaching and learning strategies in an inclusive setting.* 2002.
8. Suleymanov, F., *Academic achievements of students with special needs in inclusive education*. 2014.
9. Mutisya, C.M.S.J.U.M.E.T.N., Kenyatta University, *Factors influencing inclusion of learners with special needs in regular primary schools in Rachuonyo District, Kenya.* 2010.
10. Smith, A., *The influence of education on conflict and peace building, Background paper prepared for the Education for All Global Monitoring Report 2011 The Hidden Crisis: Armed conflict and education, Paris: UNESCO.* 2010.
11. Tefera, B., F. Admas, and M.J.T.E.J.o.E. Mulatie, *Education of children with special needs in Ethiopia: analysisof the rhetoric of „Education For All" and the reality on the ground.* 2015. 35(1): p. 45-97.
12. Bulala, T., K.J.A.J.o.E. Malima, and S. Studies, *Gender as a Factor in Predicting Academic Performance in Agriculture in Primary School Leaving Examination in Gaborone, Botswana.* 2019: p. 1-8.
13. Jennings, M., et al., *Social assessment for the education sector, Ethiopia.* 2011. 20: p. 2013.
14. Abosi, O. and T.L. Koay, *Attaining Development Goals of Children with Disabilities: Implications for InclusiveEducation.* International Journal of Special Education, 2008. 23(3): p. 1-10.
15. Mittler, P.J.E., University of Manchester, Manchester, UK, *International experience in including children with disabilities in ordinary schools*. 2002.
16. Chalchisa, D.J.A.A.U., Ethiopia, *Continuous teacher professional development: The Ethiopian context.* 2010.
17. Frost, M. and A.W.J.O.R.o.E. Little, *Children's learning practices in Ethiopia: observations from primary schoolclasses.* 2014. 40(1): p. 91-111.
18. Fulcher, G., *Disabling policies?: A comparative approach to education policy and disability*. 2015: Routledge.
19. Belay, T., A. Fantahun, and M. Missaye, *Education of Children with Special Needs in Ethiopia: Analysis of theRhetoric of „Education For All" and the Reality on the Ground.* The Ethiopian Journal of Education, 2015. Vol. XXXV No. 1
20. Abosi, O.C.J.T.J.o.S.E., *Trends and issues in special education in Botswana*. 2000. 34(1): p. 48-53.
21. Wasielewski, L.M., *Academic Performance of Students with Disabilities in Higher Education: Insights from a Study of One Catholic College.* Journal of Catholic Education, 2016. 20(1).
22. Al-Zu'bi, M.A.A., Al-Mseidin, K.I.M., Yaakob, M.F.M. et al. The impact of the school educational environment on primary school teachers' commitment to educational quality. Discov Sustain 5, 449 (2024). https://doi.org/10.1007/s43621-024-00633-4
23. Taddese, E.T., Gebresilase, B.M., A. Shorouk, Dinsa, M.T. & Aslam, S. *The practice of inclusive education in Central Ethiopia Regional State: a case study of primary schools*. Education 3-13, (2025). https://doi.org/10.1080/03004279.2024.2449462
24. Taddese, E.T. *The impact of mandated collaboration in the workplace: a case study of Ethiopian primary school teachers.* Irish Educational Studies, (2023). https://doi.org/10.1080/03323315.2023.2269902