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Students with Disabilities Inclusion in Higher Education: Forgotten Issue in Disability Literatures

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Abstract

The purpose of this study was to look into the inclusion of disabled students in higher education institutions. A quantitative technique was utilized in conjunction with a cross-sectional survey design. A total of 246 SWDs were chosen from five Ethiopian public HEIs using a stratified proportionate random sampling technique. Frequency, percentage, mean, standard deviation, correlation, one-sample t-test, multiple regressions, Independent samples t-test, and One Way ANOVA were used to examine data acquired through a college student experience questionnaire. The pupils were found to be enrolled in the institutions, according to the findings. When compared to male students, female students scored higher on inclusion. Pupils who were blind were more included than students who were deaf or had physical limitations. However, the pupils' inclusion does not seem to be affected by their year level. The conclusion is that, despite the fact that inclusion has been discussed in disability literature for a long time, there is no scale to quantify it in higher education. As a result, the advice is that a scale be devised, and that males who are deaf and have physical limitations, for example, be assisted by institutions.

1 Introduction

1.1 Background of the Study

In Ethiopia, the number of public higher educational institutions (HEIs) has expanded from 11 to 45 in the recent few years. Undergraduate enrollment went from 447,693 in 2010/11 to 593,571 in 2013/14; masters enrollment increased from 10, 211 in 2007/08 to 58, 286 in 2013/14; and third-degree enrollment increased from a low base of only 258 in 2007/08 to 3169 in 2014 (Ministry of Education, 2015:24). However, the number of students with disabilities (SWDs) at higher education institutions (HEIs) remains low (Tirussew, Daniel, Alemayehu, Fantahun, Sewalem, Tilahun & Yirgashewa, 2014; Ahmed, 2016). Those who have enrolled in HEIs are facing a variety of problems, ranging from academic to social to physical. On instance, according to Yared (2008), Ethiopian HEIs have no defined policy for SWDs, and the available provision, if any, is minimal.

Furthermore, Almaz (2011) found that Ethiopian HEI students exhibit a negative attitude toward students with visible disability in her research. Birhanu (2015) found that SWDs face a lack of understanding regarding disability, instructor and student misconceptions, negative attitudes, and a lack of effective training materials in his study of three experienced HEIs (Addis Ababa, Haramaya, and Adama Science and Technology universities). Abebe (2017) conducted a comparison research

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with Kenya and Tanzania, visiting ten technical and vocational education and training (TVET) colleges in five areas of Ethiopia to assess the availability of policy and legal frameworks, as well as the training packages provided to SWDs. He discovered that the institutional training of SWDs was inadequate due to a lack of proper strategy, priority, and implementation, as well as a shortage of facilities and qualified human resources. Yohannes (2015) conducted a qualitative case study in Hawassa and Mekelle universities to investigate the situation of students with visual impairments (SWVIs). He discovered that SWVIs faced non-interest-based department placement, inflexible curriculum, non-accommodating assessment, and unfriendly learning/institutional environments.

Ethiopia, on the other hand, aspires to and is determined to have an inclusive society in all of its growth and development domains in the future (Ministry of Labor and Social Affairs, 2012, p.IV). The aforementioned studies, on the other hand, made no attempt to record whether SWDs were included or not in the institutions using a standardized scale; instead, they chose to describe only problems, despite they were informative about the condition of SWDs in the institutions. As a result, a study of this nature in the country is worthwhile.

1.2 Statement of the Problem

The majority of studies on SWDs at HEIs, both internationally and locally, focus on the diverse kinds of problems (in academic, social, and physical areas) that students face in the institutions. As we can see in the survey of related literature section on SWDs' "inclusion" in HEIs, research tended to focus on relaying qualitative experiences as inclusion demonstrations. Even yet, they place a greater emphasis on academics and less on social and physical elements. Furthermore, there is no "inclusion scale" that can be used to study the inclusion of SWDs in HEIs, according to the researchers' expertise and reach in the disability literature. The current study did not address the problem; instead, it used a scale to suggest what the scientific community and other stakeholders in the field should do in the future, both worldwide and nationally.

The following research questions were posed in order to achieve the study's goal:

1. to what extent are students with disabilities included in the higher education institutions?
2. is there a substantial difference in the enrollment of disabled students in higher education institutions due to demographic characteristics (gender, disability types, and year levels)?

2 Review of Related Literature

2.1 Examples of Studies focusing on Challenges of SWDs in HEIs both Internationally and Nationally

On the academic challenges, those studies reviewed internationally (e.g. Abu-Hamour, 2013 cited in Edna, 2016; Alsalem, & Doush, 2018; Blinn, 2017; Erten, 2011 cited in Birhanu, 2015; Joseph, 2010; Mccray, 2013; Matonya, 2016; Moores, 2010 cited in Suubi 2013; Ntombela & Soobrayen, 2013; Oppong, Fobi & Acheampong, 2018; Suubi, 2013; Zambrano, 2016) indicated that the challenges are related to faculties' expressed in not allowing late comers, non-accommodative methodology, assessment, evaluation, poor knowledge of legislation and lack of teaching experience with SWDs, family poverty/financial, HEIs' settings suitable for non-deaf students only, lack of department cooperation, information inaccessibility and non-uniformity function of HEIs, non-availability of sign language interpreters, ill-prepared interpreters, lack of guidance counseling service, and technology and lack of computer skills.

The local studies (e.g., Endalkachew & Dessalegn, 2017; Getachew, 2018; Teferi, 2018; Tirussew *et al*., 2014; Walga, 2018; Yared, 2008; Yohannes, 2015) unraveling the academic challenges of Ethiopian SWDs in HEIs more or less came up with similar findings with studies discussed in the international ones. Yet, two things need to be stressed in the findings. First, the findings talk about only some HEIs in the country. Namely, Adiss Ababa, Hawassa, Gondar, Semera, Dilla, Haramaya, Axum, Bahir Dar, Mekelle, Jigjiga, Debretabor, Adama Science and Technology, Jimma, Welkite, Mizan-Tepi, and Mekelle Universities in particular and dominated by

Addis Ababa University in general. Second, SWDs who participated in the study were none other than students with visual, hearing impairments, with physical disabilities, and more of on SWVIs. May be because, these three types are mostly recognized as disability types by HEIs in Ethiopia. For example, disability offices in HEIs in the country serve only students with these disability types. Though not solved in this study, the researcher would like to suggest future studies need to incorporate other HEIs and other disability types too.

On social challenges, those studies (e.g., Chanika, 2010; Joseph, 2010; Lourens, 2015; Matonya, 2016; Suubi, 2013; Zambrano, 2016) reviewed internationally indicated SWDs' social challenges are the following: difficulty in finding oneself in HE setting, hostile environment, marginalization and disempowerment, communication problem, difficulty to make social networking, dating problem, lower expectation, and attitudinal barrier related to toilet use and sharing food.

The social problem of SWDs' as indicated by local studies (e.g., Almaz, 2011; Birhanu, 2015; Endalkachew & Dessalegn, 2017; Teferi, 2018; Tirussew *et al*., 2014; Tirussew & Lehtomki, 2010, cited in Walga, 2018; Walga, 2018; Yohannes, 2015) were primarily negative attitude of faculties' and SWODs' and its resultant hostile relationship and the uneasiness of interaction with others due to fear of sexual harassment.

On physical challenge, those studies (e.g., Blinn, 2017; Kabuta, 2014; Matonya, 2016; Mutanga, 2015; Okoye, 2010 cited in Walga, 2018) reviewed internationally indicated that there were bureaucratic problems while requesting access by SWDs, lack of health service, difficulty in daily living activity due to access inadequacy and unattractiveness, and generally the physical environment challenge seem to be more or less similar in the majority of HEIs.

The same thing was also witnessed in the local ones. A study done by (e.g., Abdulfettah, 2018; Endalkachew & Desalegn, 2017; Getachew, 2018; Teferi, 2018; Tirrusew *et al*, 2014; Walga, 2018; Yared, 2008) in different HEIs in the country reported similar findings that the physical environment of the HEIs' is inaccessible. For instance, dormitory, dining room, toilet, shower, road, recreational centers/campus playgrounds, library, and the likes were inaccessible. Therefore, some of these studies reported that SWDs were challenged in their mobility, incur mark reductions and negative relationships with faculty due to lateness from class, unable to enjoy services due to inability to access the whole campus settings, asking help from passersby while moving inroads, and fatigue in a library.

In summary, we understand that though the above studies were insightful in reporting the challenges existing in the inclusion process of SWDs in HEIs, the current researchers believe studies in the area should transcend investigating inclusion of the students using a measurement scale.

2.2 Examples of Studies focusing on Inclusion of SWDs in HEIs

It is important to note that most of the studies described in this section were not conducted using standardized measurement scales; rather, they were primarily qualitative in nature and relied on students' personal accounts. Findings at both the international and national levels reveal mixed outcomes—some positive, some negative—and in many cases, differences across disability types were reported, which were often linked to variations in campus environments.

At the international level, Matonya (2016), in a study of women with disabilities (WWDs), explained that higher education contributed significantly to self-awareness and identity formation. Participants indicated that their educational experiences helped them transition from marginalization to becoming literate and empowered individuals. They also reported opportunities to meet others facing different challenges, which enhanced their ability to interact and live in diverse communities. As a result, families and community members began to value their opinions, involve them in decision-making processes, and consult them on issues such as the education of younger relatives.

In the Ethiopian context, Yohannes (2015) investigated the perspectives of visually impaired students regarding equal learning opportunities compared

with their sighted peers. Although participants acknowledged having the same opportunity to enter HEIs, they strongly argued that once admitted, the overall learning environment was far from equitable. The most common concern was the inadequate provision of learning materials, which was considerably lower compared to what was available for sighted students.

Another encouraging finding was reported by Tirussew *et al*. (2014), who examined students' self-assessment of their academic performance. Results showed that 4.6% rated themselves below average, 60.8% considered themselves average, and 34.7% identified as above average. This indicates that a substantial proportion of students with disabilities are achieving reasonably well in HEIs. With the exception of a few institutions such as Samara and Dilla Universities, the majority of respondents reported an average level of performance.

However, differences in inclusion levels have been documented across disability types. For example, Suubi (2013) found that students with visual impairments (SWVIs) generally felt more included than their deaf or hard-of-hearing peers. While some deaf students perceived higher education as manageable, others described it as highly challenging. Despite their confidence in academic abilities, both groups struggled due to limited institutional support. Suubi (2013) noted that although universities were aware of the needs of these students, little had been done to adequately address them.

Overall, levels of inclusion among SWVIs and deaf/hard-of-hearing students were not satisfactory. Many visually impaired students felt only partially included, while deaf students frequently expressed feeling excluded. Only hard-of-hearing students reported somewhat better integration. Interaction between deaf and hearing students was minimal, and relationships with instructors were often limited. Consequently, satisfaction with inclusion was much lower among deaf and hard-of-hearing students compared to SWVIs.

At both local and global levels, the number of comprehensive studies addressing inclusion remains limited. In Ethiopia, for instance, only a few investigations—such as those by Tirussew *et al*. (2014) and Yohannes (2015)—have attempted to explore the matter systematically. A key challenge is the absence of a standardized scale to measure inclusion.

Nevertheless, different initiatives have been introduced internationally to promote inclusive practices. One such initiative is the concept of the Least Restrictive Environment (LRE), established through the U.S. Individuals with Disabilities Education Act (IDEA, 1975), which emphasizes that students with disabilities should be educated in mainstream classrooms to the maximum extent possible. Another approach is the Universal Design for Instruction (UDI), which calls for integrating accessibility into course development from the outset. According to McGinty (2016), UDI provides guidelines that ensure teaching strategies and curricula accommodate diverse learners, thereby supporting the social rather than the medical model of disability. Gale and Mills (2013) further identified belief, design, and action as three central dimensions of inclusive pedagogy, stressing that teaching should value all learners and actively engage them.

Similarly, inclusive teaching and learning frameworks emphasize that curricula and assessment should be designed to engage all students in ways that are meaningful, relevant, and accessible (Hockings, 2010; 2011). This anticipatory approach acknowledges learner diversity and reduces barriers to participation. Another important concept is the development of a disability-friendly institutional climate, which, according to Huger (2011), benefits not only students with disabilities but the entire student body by fostering sensitivity, acceptance, and positive interaction across diverse groups.

Together, these frameworks advocate for higher education systems that uphold values of inclusivity, belonging, and social cohesion for both disabled and non-disabled students. However, the present study did not evaluate the extent to which such approaches are being applied in Ethiopian HEIs. Instead, it focused on how students with disabilities perceive their own inclusion in academic, social, and physical aspects of campus life.

In summary, the reviewed literature suggests that although inclusion has been widely discussed, much

of the existing work has emphasized challenges rather than quantifiable outcomes. The lack of a standardized measurement tool makes it difficult to evaluate inclusion consistently. This study, therefore, aims to address this gap by assessing the inclusion status of students with disabilities in selected Ethiopian HEIs.

3 Research Design and Methodology

3.1 Description of the Study Areas

There are around 45 public HEIs in Ethiopia. Despite this, the research focused on the 10 first-generation public universities. Addis Ababa, Jimma, Haramaya, Mekelle, Hawassa, Bahir Dar, Gondar, Arbaminch, Dilla, and Adama University of Science and Technology were among them. The justification is that among the remaining 35 public HEIs, the 10 HEIs with a solid track record in accepting SWDs are deemed to have a good track record (e.g., Tirussew *et al*., 2014). However, using simple random picking, five universities were chosen for this study: Addis Ababa, Haramaya, Hawassa, Bahir Dar, and Gondar universities.

3.2 Research Design and Approach

The study employed a cross-sectional survey design with quantitative approach. The design enabled the collection of data from respondents within a very short period of time to investigate the relationships between variables of interest of the study, from May 1 to June 25, 2019.

3.3 Population, Sample, and Sampling technique

The population of SWDs from Addis Ababa, Haramaya, Hawassa, Bahir Dar, and Gondar universities is shown in Table 1. The study employed Taro's (1967) formula to calculate the sample size, n, from the study population, N, and e is the chance of error (within the desired precision of 0.05 for 95 percent confidence level). In our situation, the sample size was determined to be 264 SWDs from a target population of 773 SWDs. To choose sample SWDs from the five HEIs, stratified proportionate random sampling techniques (deaf, blind, and physical impairments strata) were used. Finally, the indicated SWDs from each HEI were chosen using a systematic random sampling technique based on a name list of students acquired from each of the five HEIs.

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{773}{1+733(0{,}05)^2} = 263.59 \approx 264$$

Table 1: Population, sample size, and sampling technique

University	Target Group (SWDs)	Target Population	Sample Size	Percentage from Target Population
Addis Ababa	Blind	108	37	12.1%
University	Deaf	146	50	16.3%
	Physical impairments	53	18	5.9%
	Total	**307**	**105**	**34.3%**
Haramaya	Blind	82	28	26.2%
University	Deaf	2	1	1%
	Physical impairments	23	8	7.5%
	Total	**107**	**37**	**34.7%**
Hawassa	Blind	110	37	28.5%
University	Deaf	5	2	1.5%
	Physical impairments	15	5	3.8%
	Total	**130**	**44**	**33.8%**
Bahir Dar	Blind	121	41	32.5%
University	Deaf	0	0	0%
	Physical Impairments	5	2	1.6%
	Total	**126**	**43**	**34.1%**
University of	Blind	51	17	16.5%
Gondar	Deaf	4	2	2%
	Physical impairments	48	16	15.5%
	Total	**103**	**35**	**34%**
	Total	**773**	**264**	**34.2%**

Source: Computed by the current researcher from data obtained from each sampled HEIs.

3.4 Instrument of data collection

Questionnaire

Having the same demographic characteristics of SWDs as sex, year of study, disability types, the College Student Experience Questionnaire (CSEQ, 4th eds.) of Pace and Kuh, (1998) which were adapted with permission was used. The pace and Kuh's questionnaire consist of over 150 items with categories of (a) college activities, (b) the college environment, and (c) estimate of gains (Gonye *et al*., 2003). However, leaving (a) the college activities and (b) the college environment, the CSEQ was used to collect data on (C) inclusion ("estimate of gains" as put in the questionnaire) consists of about 25 items of different areas about academic, social and physical inclusions (yet, an estimate of gains is non-dimensional). Items are evaluated on a 1— 4 Likert scale: 1— very little; 2 — some; 3 — quite a bit; 4— very much. It must be understood that CSEQ "estimates of gains" were used to measure inclusion, the fact that to the reach of the current researchers they were unable to get inclusion scale none other than CSEQ

Validity

Validity of the face and content were examined. The study took into account the following recommendation in doing so. The process of judgment entails having a group of specialists confirm the items in order to assure the assessment instrument's content validity. Domain specialists should be chosen based on characteristics such as expert knowledge, specific training, and/or professional experience in the field. When establishing content validity, it is recommended that at least three experts be involved.

The use of a large number of experts (more than ten) reduces the likelihood of agreement (Polit & Beck, 2006). The minimal number of experts necessary for content validity is three to ten (Streiner, Norman, & Cairney, 2015; Yaghmale, 2003), whereas others recommend at least two (Gable & Wolf, 2012; Waltz, Strickland & Lenz, 2016). As a result, three Ph.D. dissertation supervising committees, two from Haramaya University and one from the University of Gondar, as well as four special need and inclusive education professionals and experts from the latter HEI, were consulted to assess the face and content validity of the three instruments.

Constructive recommendations and comments were gathered from these seven professionals. Punctuation, subject-verb agreement, wordings, phrasing, ordering, additions of demographic information, and clear directions on how students fill out the questionnaire are among the suggestions and critiques. As a result, the expert feedback was taken into consideration, and clear directions on how students fill out the questionnaire. Hence, the feedback given by the experts were considered accordingly.

Reliability

First and foremost, the valid instrument (CSEQ) in its English language version was translated into Amharic by a professional translator who was unfamiliar with the questionnaires' aims at the Bahir Dar City Administration prior to the pilot test. The translation, on the other hand, contained a few faults as a result of its straight translation, which shifted the focus away from the notion. As a result, the researcher re-corrected these minor inaccuracies in order to bring the instruments up to par with an accurate translation. It was a scientific procedure. Guillemin, Bombardier, and Beaton (1993) and Beaton, Bombardier, Guillemin, and Ferraz (2007), for example, suggested that a naive translator who is unaware of the questionnaire's objective should produce the translation so that the researcher can detect subtle differences in the original questionnaire.

A pilot research was conducted at Mekelle University's Adi Haqi Campus with 30 SWDs consisting of 10 blind, 18 with physical disabilities, and 2 deaf to maintain the instrument's dependability, as shown in Table 2. Following the pilot study, the questionnaire item numbers were kept the same as they were in the original instruments.

As indicated in the table below, the total Cronbach's alpha (α) internal consistency reliability coefficient was calculated for the total scale for CSEQ was to be .93.

Table 2: Reliability index of measures

Variable	Sub-scale	Number of items	Cronbach Alpha
Inclusion	Inclusion	25	.93

Thus, it was adequately justifiable to proceed with the final data collection for the study that the scale's value satisfactorily met the standard of very good internal consistency reliability of a scale. For example, DeVellis (2003) as cited in (Pallant, 2010 p. 97) stated that, "ideally, the Cronbach alpha coefficient of a scale should be above .7" Pallant (2010, p.100) further strengthened that, "Values above.7 are considered acceptable; however, values above .8 are preferable."

3.5 Methods of data analysis

The responses collected through the questionnaire were coded and entered into an Excel spreadsheet, then transferred to SPSS version 21 for statistical analysis. Prior to analysis, the researcher carefully cross-checked each entry in Excel with the SPSS database to ensure accuracy, and no mismatches were found. To verify data quality, the minimum and maximum values of each variable were examined to detect possible outliers or impossible values; none were identified. Consequently, the dataset was confirmed to be free of entry errors, with an accuracy rate of 100%. Missing responses were

recorded as "missing" and excluded from analysis using pairwise deletion (n = 10). For participants who had completed more than 80% of the items on a given measure, the remaining missing values were replaced using mean substitution based on the responses they had provided. After this cleaning process, a total of 255 out of the initial 264 cases were retained for analysis.

Descriptive statistics such as frequencies and percentages were first computed to summarize the socio-demographic profile of respondents. Before conducting inferential analyses, preliminary checks for assumptions (including normality, linearity, absence of outliers, and homogeneity of variance) were carried out, and the requirements were adequately met.

Subsequently, inferential tests were performed to address the research questions. A one-sample t-test was used to determine the overall extent of inclusion of students with disabilities in higher education institutions. Independent-samples t-tests were applied to examine whether gender differences existed in perceived inclusion. Furthermore, one-way ANOVA tests were conducted to investigate whether significant variations in inclusion were observed across disability types and year levels.

4 Results

4.1 Respondents' demographic characteristics

A total of 178 (69.8%) males and 77 (30.2%) female SWDs participated in the study. Coming to disability type, more than half of the participants (59.6%) were blind, followed by deaf (21.1%), and with physical disabilities (19.2%). Concerning year level, 31%, 28.2%, and 25.9% were second-year, first-year, and third-year students respectively.

Table 3: Percentage of respondents across gender, disability type, and year level

Variables	Categories	Number	Percent
Gender	Male	178	69.8
	Female	77	30.2
	Total	**255**	**100.0**
Disability type	Deaf	54	21.2
	Blind	152	59.6
	Physical Disability	49	19.2
	Total	**255**	**100.0**
Year level	First Year	72	28.2
	Second Year	79	31.0
	Third Year	66	25.9
	Fourth Year	23	9.0
	Fifth Year	15	5.9
	Total	**255**	**100.0**

4.2 Extent of SWDs inclusion in HEIs

Table 4: One sample *t*-test on measuring the extent of inclusion

Variable	Mean	SD	T	Df	Sig.	Mean difference	Test value
Inclusion	72.10	13.28	11.539	254	.000	9.60196	62.5

The one-sample t-test in the above indicated a significant difference in the sample mean score of inclusion and the test value, t=11.53, df = 254, p = .000. The sample means score of inclusion (M = 72.10, SD = 13.28) was greater than the test value (62.5). This shows that the extent of inclusion of the respondent SWDs was higher.

Gender difference in inclusion

Table 5: Independent samples t-test comparing engagement between male and female SWDs

Gender	N	Mean	SD	t	df	sig.
Male	178	70.4719	12.95851	3.026	253	.003
Female	77	75.8701	13.35975			

As shown in the above table, there was a significant difference in inclusion between male and female SWDs (t=3.026, p<.05). Interestingly, female students had a higher score of inclusion as compared to males.

Inclusion difference across the different disability types

Table 6: School Response (SD in the parenthesis)

Variables	Academic Response	Administrative Response	System Response	Students Response
Mean	2.00	2.27	2.77	1.80
	(1.20)	(0.95)	(0.87)	(1.13)

Table 6 shows the extent to which schools respond to the pandemic. For the sake of analysis, the variables were categorized into academic responses, administrative responses, system responses, and responses related to students. The mean scores of all variables (x = 2.00, SD = 1.20, x = 2.27, SD = 0.95, SD = 2.77, SD = 0.87, x = 1.08, SD = 1.13) revealed that the school's response to the pandemic was considered to be low. Just to be relative, the response from the system (structural activities) is far superior to any response made by the schools.

The one–Way ANOVA result demonstrated a significant difference in inclusion among the blind, deaf, and students with physical disabilities (F=88.45, p<.05). The Tukey posthoc test confirmed that the inclusion score of blind students was significantly higher than deaf and students with physical disabilities. This implies that blind students are in a better position of inclusion as compared to deaf and physically disabled students.

Table 7: One Way ANOVA comparing inclusion among deaf, blind and physically disabled students

Disability types	N	Mean	SD	F	df	sig.
Deaf	54	66.8333	14.38126	88.45	2	.000
Blind	152	74.8092	12.88448			
Physical Disability	49	69.5102	11.07008			

Inclusion difference across year levels

As demonstrated in the above Table, there was no significant difference in inclusion among first, second, third, fourth, and fifth-year SWDs (F=.475, p>.05). This shows that batch level does not have a significant influence on inclusion.

Table 8: One Way ANOVA comparing inclusion among first, second, third fourth and fifth year SWDs

Year levels	N	Mean	SD	F	df	sig.
First Year	72	71.2778	12.36103	.475	4	.754
Second Year	79	73.4430	13.03619			
Third Year	66	72.4394	13.91638			
Fourth Year	23	69.7826	15.00896			
Fifth Year	15	71.0667	14.31017			

5 Discussion

From the findings, only four major issues can be stated boldly. The first is, unlike those previous studies (e.g. Abu-Hamour, 2013 cited in Edna, 2016; Alsalem, & Doush, 2018; Blinn, 2017; Endalkachew & Dessalegn, 2017; Getachew, 2018; Teferi, 2018; Tirussew *et al*., 2014; Walga, 2018; Yared, 2008; Yohannes, 2015; Chanika, 2010; Joseph, 2010; Lourens, 2015; Matonya, 2016; Suubi, 2013; Zambrano, 2016; ., Blinn, 2017; Kabuta, 2014; Matonya, 2016; Mutanga, 2015; Okoye, 2010 cited in Walga, 2018) both internationally and nationally which dealt the diverse challenges of SWDs in HEIs; the present study investigated the inclusion status of SWDs in sampled HEIs which can be taken as a new research endeavor to be continued in the future by concerned researchers in the area.

The second is, worldwide, though there are initiatives in place like the least restrictive environment (LRE) (IDEA, 1975), Universal Design of Instruction (McGinty, 2016), Inclusive Teaching and Learning Movement (Hockings, 2010), and Disability-friendly Climate Concept (Huger, 2011) to realize inclusion of SWDs at all levels of education; it remains a vexed question why there is no so far inclusion scale, to measure the inclusion of the students at all different school settings.

The third is like as it was reported in the review of related literature similar to the study of Suubi (2013) differences of inclusion experiences was observed in this study due to disability types, which can be taken as consistent finding. Whereas, gender and year levels influences the level of inclusion of respondents' in the institutions though very difficult to label them as new and or consistent findings of this study the fact that exhaustive empirical evidence search was not undertaken at the review process, yet they should b taken as considerable findings.

The fourth and the most important finding as it should be, it is possible to infer the finding of the current study that respondents were found to witness inclusion, is attributed to decades of relentless efforts of policymakers, GOs, NGOs, special educational needs professionals, educators, and so on who are relentlessly working in crafting and enacting legal and policy directives, strategies, guidelines and so on disability issues for the inclusion of children, youth, and adults in schooling settings for example.

6 Conclusion and Recommendations

Based on the finding and discussion of this study two strong conclusions were drawn; i.e. through the issue of access and inclusion to the education of children, youth, and adults with disabilities in various school settings have been in disability literature for decades, it is a disappointing scenario that so far there is no inclusion scale to measure it, developed by special educational needs/inclusive education educators/researchers. Male students and students who are deaf and with physical disabilities are not that much included when compared to females and those blind students. Therefore, the recommendation of this study would be educators/researchers in the area should make up most effort to develop inclusion scales that can be applied to different education settings, in our case, HEIs and males and those with deaf and physical impairments need to be supported more by the institutions for example.

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Conflict of Interests

The authors declare that there is no conflict of interest.

Ethical approval

Consent was sought form the research participants. Confidentiality was maintained in reporting information.

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