Attitudes of Pre-Service and In-Service Teachers Towards Students Who Stutter in Selected Zambian Schools

by

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Abstract

To establish whether there are differences in attitude of regular education teachers, special education teachers, regular student teachers, and special education student teachers toward stuttering and students who stutter (SWS) in some selected institutions of learning in the Copperbelt, Luapula, Lusaka, and Muchinga provinces of Zambia. It also sought to determine whether attitudes of teachers differed based on gender, geographic location or educational level. The survey had a random sample of 324 participants who completed the Public Opinion Survey of Human Attributes - Stuttering (POSHA-S) questionnaire. Nonparametric analyses were employed to determine any significant differences among the four groups of teachers surveyed. Significant differences in attitude toward stuttering and SWS were noted between practicing teachers and student teachers ($N = 133 < 191$, $Mdn = 95.0 < 96.0$), $U = 9663.500$, $p = .000$., and between special education teachers and regular education teachers ($N = 62 < 71$, $Mdn = 95.0 > 97.0$), $U = 1526.000$, $p = .002$. However, no significant differences were observed in attitude of teachers based on gender and geographic location except for educational level. Neither exposure to college curricular on special education alone nor classroom interactions with learners who stutter without a special education background is enough to instill a positive attitude in teachers towards stuttering. In-service special education teachers have a comparatively positive attitude toward stuttering because of the nature of their training and experience

of working with learners with special education needs. Finally, the study asserts that the concept of attitude toward stuttering should be considered as a continuum and not as a negative-positive dichotomy.

Keywords: *Stuttering; Teachers' Attitudes; Students Who Stutter; Pre- service and In-service teachers.*

Introduction

Several studies show that beliefs and attitudes of the general public toward stuttering and people who stutter (PWS) transcend geographic, cultural, and demographic barriers (St. Louis, Sonsterud, Junuzovic-Zunic, Tomaiuoli, Del Gado, Caparelli et al., 2016; Valente, Leah, Jesus & St. Louis, 2015). A substantial amount of research further indicates that most professional groups around the world hold negative attitudes toward PWS. Speech-language pathologists (Woods & Williams, 1971), medical professionals (Silverman & Bongey, 1997; Yairi & Carrico, 1992), and educators (Crowe & Walton, 1981; Dorsey & Guenther, 2000; Ruscello, Lass, Schmitt & Pannbaker, 1994; Silverman & Marik, 1993) are among professional groups that hold negative attitudes toward stuttering and PWS.

Stuttering, a fluency disorder, falls under the speech impairments category. Over the past five decades, speech impairments in Zambia have been referred to as "speech defects" (Education Reforms, 1977), "speech deficits" (Focus on Learning, 1992), "speech impairments" (Educating Our Future, 1996), "communication disabilities" (Central Statistical Office (CSO), 2012); and as "communication impairments" (Smate & Zimba, 2012). Although speech impairments have been recognized as a distinct disability category, they have not gained much curricular prominence compared to other disability groups that are emphasized and often resourced in schools and colleges of education. Therefore, while abundant literature from other countries exist, Zambia has a paucity of information on public attitudes toward stuttering and PWS. More precisely, there is a lack of information about teachers' attitudes toward stuttering

and students who stutter (SWS). This article uses attitudes of teachers in Zambia towards learners with disabilities as the contextual framework to understanding attitudes of teachers toward stuttering and SWS.

The Zambian Context

Attitudes of regular teachers towards learners with special education needs in Zambia are generally poor. Negative attitude of regular teachers towards difference has been identified as a critical impediment to inclusive education and as a factor that affects identification and placement of learners with special education needs in ordinary Zambian schools (Kelly, 1991; Mandyata, 2002; Ndhlovu, 2008). Regular teachers display discriminatory attitudes based on race, class, gender, culture, disability, religion, and labels they attach to learners that in turn create barriers to the identification process and education of learners with special needs (Kelly, 1991). Lack of awareness and knowledge about the needs of learners with special education needs have also been cited as underlying causes of negative attitudes of ordinary teachers (Kelly, 1991). Many mainstream teachers refuse to teach learners with special education needs because of over enrollment, absence of incentives, and lack of training in special education (Mandyata, 2002). However, anecdotal data suggests that even teachers who have received special education training refuse to teach learners with special education needs, citing lack of monetary incentives from the government, among other grievances.

Although some data exist about the attitude of Zambian teachers toward learners with disabilities, there is no accessible data about their attitudes toward stuttering and SWS. Additionally, despite availability of some data on communication disability, currently estimated at 4%, and speech impairment at 3.8 % of the general population, data on prevalence and incidence of stuttering in Zambia are not currently available (Loeb, Eide & Mont, 2008; CSO, 2012). Similarly, statistics on incidence and prevalence of stuttering about learners does not exist at the Ministry of General Education and the Ministry of Higher Education. However, given the widely used prevalence rate of 1% there could be as many as

160,000 people who stutter in a population of approximately 16 million people (Bloodstein & Ratner, 2008; CSO, 2016; 2012), some of whom could be in schools. Despite non-availability of data on stuttering, there are reasons to hypothesize that SWS exist in Zambian schools. It is therefore, important to understand attitudes of teachers toward stuttering and SWS.

Need for Current Study

An investigation into attitudes of teachers toward stuttering and SWS is an important undertaking for several reasons. First, teachers are authority figures in the lives of students. What they say and do has a lasting impact on the academic life of students. If teachers have erroneous beliefs about stuttering, that may negatively impact how they perceive and interact with SWS (St. Louis, Wesierska & Polewczyk, 2018). Secondly, teachers are role models that students look up to. Therefore, SWS need all the positive support they can get from their teachers given their struggle in public speaking, group discussion, and challenges with interpersonal communication. If teachers do not have a positive attitude toward SWS, it may adversely impact their academic success and social interaction with peers and even endanger their future (Walden & Lesner, 2018). So, if 'no one is to be left behind,' (UN Sustainable Development Report, 2016; The Seventh National Development Plan, 2017), then attitudes of teachers towards SWS need to be investigated to determine whether teachers are providing them with school environments that ensure academic success, emotional support, care and mentorship.

Research Questions

Three questions guided the current study:

1) Is there a difference in attitudes toward stuttering and SWS between practicing regular teachers and practicing special education teachers?
2) Are there significant differences in attitudes of practicing education teachers and student education teachers toward

stuttering and SWS?

3) Are there differences in attitudes toward stuttering and SWS of practicing education teachers and student teachers based on educational level, gender, and geographic location?

Methodology

A survey design was used (Creswell, 2014). Data were collected in selected schools of the Copperbelt, Luapula, Lusaka, and Muchinga provinces of Zambia. A randomly selected sample of 324 respondents drawn from 30 randomized sites (i.e., ten primary schools, ten high schools, eight schools with special education units, and two colleges) were selected across four provinces. Table 1 shows the sample size and gender distribution of respondents.

Table 1: Distribution of Participants

Respondents	No	Male	Female	Gender not Indicated
Regular Student Teachers	116	69	42	5
Special Student Teachers	75	29	45	1
Practicing Regular Teacher	71	28	40	3
Special Education Teachers	62	28	34	0
Total Number of Respondents	**324**	**154**	**161**	**9**

Characteristics of respondents

Of the 324 respondents 71, (21.9 %), (Male = 28, Female = 40, three = no gender indicated) were practicing regular education teachers; 62 (19.1 %), (M =28, F =34) were practicing special

education teachers; 116 (35.8 %), (M =69, F = 42, five = no gender indicated) were regular student teachers; and 75 (23.1 %), (M =29, F = 45, one = no gender indicated) were special education student teachers. A total of 313 (96.6 %) respondents indicated their education level as follows: 165 (52.7 %) had completed 12 years of schooling equivalent to a high school diploma (grade 12 school certificate); 5 (1.6 %) had completed 13 years of schooling equivalent to a skills certificate; however, they were excluded from the analysis; 97 (31.0 %) had completed 14 years of schooling equivalent to a college diploma; 40 (12.8 %) had completed 16 years of schooling equivalent to a bachelor's degree; 6 (1.9 %) had completed 18 years of education equivalent to a master's degree; while the other 11 (3.4 %) did not indicate their education level. Out of 324 respondents, 291(89.81%) indicated their age while 33 (10.19 %) did not. The respondents who indicated their age had a chronological age range of 18.55 – 57.66, M = 29.65, SD = 9.41. A total of 315 (97.2 %), M = 5.51, SD = .501 respondents indicated their gender while the other 9 (2.8 %) did not. Of those who indicated their gender, 154 (48.9 %) were male and 161 (51.1 %) were female. A total of 322 (99.4 %), M = 7.73, SD = .443 respondents indicated their geographic location while the other 2 (0.6 %) did not. Of those who reported their geographic location, 86 (26.7 %) lived in the rural areas, while 236 (73.3 %) were from urban areas.

Instrument.

The Public Opinion Survey of Human Attributes – Stuttering (POSHA-S) questionnaire was used to collect data. The POSHA-S is a 45-item questionnaire designed to collect quantitative data on beliefs and attitudes of the general public toward stuttering and PWS. It is a standardized survey instrument used globally by researchers and specialists in fluency disorders (Li & Arnold, 2015; St. Louis, Katarzyna & Polewsczyk, 2018; St. Louis, 2012). Its test-retest reliability, construct and discriminate validity, and internal consistency have been evaluated several times and declared satisfactory (Li & Arnold, 2015; St. Louis et al., 2018). Its universal claim is attested to by the number of translations it has

undergone. By 2011, for example, it had been translated into 22 different languages (St. Louis, 2011); and by, "March 2014, there were 9,297 respondents gathered across 33 countries," using the POSHA-S questionnaire (Li & Arnold, 2015:11). According to St. Louis et al., (2018) by October 2017, the POSHA-S database had more than 13,000 respondents from 43 countries and translations had been undertaken in 27 different languages.

For scoring purposes, it is subdivided into three major subsections. First, the demographic subsection, contains descriptive characteristics of respondents such as age, place of residence, place of birth, gender, education level, occupational status, and comparative income levels. Next, is a general subsection with four items on stuttering and four other attributes, including intelligence, left-handedness, mental illness, and obesity. This subsection aims to provide predictors of stuttering attitudes based on attitudes toward other positive, neutral, and negative human attributes (St. Louis, 2011). Finally, there is a detailed subsection on stuttering covering areas such as knowledge level of respondents regarding their source of information about stuttering, causes, and what they would do if a given hypothetical scenario were to occur.

The scoring procedure of the POSHA-S used in this study was a standardized POSHA-S spreadsheet by St. Louis (2011) in which 45 items of the POSHA-S questionnaire are averaged into component scores. They are further averaged into three sub-scores, two of which relate to the beliefs about persons who stutter and self-reactions to PWS, which are later averaged into an overall stuttering score (OSS). The other sub-score is generated for obesity and mental illnesses. Means of individual POSHA-S items are converted to a – 100 to + 100 scale, with higher ratings reflecting positive responses and lower ratings reflecting negative responses. This conversion makes it possible to use statistical analysis packages like the International Business Machines Statistical Package for Social Sciences (IBM SPSS) on total POSHA-S scores, as was the case in this study.

Instrument distribution procedures

The researcher distributed the POSHA-S questionnaire in person and occasionally with help from colleagues. Ozdemir, St. Louis & Topbas (2011), have indicated that the POSHA-S is not affected by whether distribution is done by the researcher, colleagues, or partners. A total of 443 questionnaires were distributed as presented in Table 2.

Table 2: POSHA -S Questionnaire Distribution

No	RegEdTrs	SpEdTrs	RegEdStu	SpEdTu	Total
Distributed	131	76	150	86	443
Not Collected	49	8	0	7	64
Collected	82	68	150	79	379
Rejected	11	6	34	4	55
Accepted	71	62	116	75	324

Note: RegEdTrs = Regular Education Teachers, SpEdTrs = Special Education Teachers, RegEdStu = Regular Education Student teachers, SpEdTu = Special Education Student teachers.

A total of 131 (29.6 %) questionnaires were distributed to practicing regular teachers at 20 rural and urban schools while 76 (17.2 %) were distributed to special education teachers at eight primary schools with special units in Luapula, Copperbelt, and Muchinga provinces. 150 (33.8 %) questionnaires were distributed to 3rd and 4th year regular student teachers enrolled in science degree programmes at Mufulira college of education; while 86 (19.4 %) were distributed to 2nd and 3rd year special education student teachers enrolled in a special education diploma program with a teaching subject at the Zambia Institute of Special Education (ZAMISE) in Lusaka province.

Data analysis and presentation

The POSHA-S spreadsheet analysis software developed by St. Louis (2011) was used to input raw data from the POSHA-S questionnaires. Next, raw data from the POSHA-S spreadsheet was imported onto Microsoft Excel and analyzed with the IBM - SPSS software.

Although data generated by the POSHA-S is considered categorical or nominal, all its data entries are converted to scaled data. This conversion makes it possible to perform comparison tests (Koutsodimitropoulos et al., 2016). For this reason, it was possible to calculate descriptive statistics for demographic data of respondents and all group comparisons using the SPSS.

Ethical Considerations

Permission from the Ministry of General Education and relevant learning institutions in Zambia was sought and granted. Oral or written consents were sought from all participants. This ensured protection and preservation of the respondents' rights and dignity. No means of coercion was applied on them to participate in the study. They were free not to provide any piece of information if they felt uncomfortable sharing it with the researcher. All identifying information was redacted and replaced with pseudonyms. This ensured confidentiality of personal data and protection of identity of participants. They were also at liberty to leave the study at any time during the research process. To further ensure that individual privacy of participants was not violated, study findings are generic and not attributable to one specific participant.

Results

Results presented were derived from non-parametric tests and descriptive statistics. Nonparametric statistics were utilized because the POSHA-S scores are ordinal/categorical in nature. For most of the results presented, the alpha level of significance was set at $< .05$.

Attitudes of Regular Teachers and Special Teachers

Question One: What are the attitudes toward stuttering and SWS of practicing regular education teachers and special education teachers?

A Mann-Whitney U test was conducted to observe for statistically significant differences between practicing, regular education teachers and special education teachers' responses to the POSHA-S questionnaire on beliefs and attitudes toward stuttering and SWS. Table 4 shows test results and descriptive statistics.

Table 3: Regular Education Teachers and Special Education Teachers' Attitudes Toward Stuttering and Students Who Stutter

	Regular Education Teachers Vs Special Education Teachers
Number of Participants	71 > 62
Total Number of Participants	133
Score Range	81.0 – 105.0
Median	95.0 < 97.0
Mean Rank	57.49 < 77.89
Range	20.0 < 20.0
Mann-Whitney -U	1526.0
Sig.	.002

The result indicates that attitudes of special education teachers (N = 62, Mdn = 97.0) were significantly positive than those of regular education teachers (N = 71, Mdn = 95.0), U = 1526.000, p =.002. It suggests that special education teachers are likely to have positive attitude toward SWS than regular education teachers. Implications of this finding are considered in the discussion section.

Attitudes of Practicing Teachers and Student Teachers

Question Two: Are there significant differences in the attitudes

of practicing education teachers and student education teachers toward stuttering and SWS?

A Mann-Whitney U test was used to determine whether significant differences exist between practicing education teachers and student teachers. Table 4 displays test results and descriptive statistics obtained.

Table 4: Attitudes of Practicing Education Teachers and Student Education Teachers Toward Stuttering and Students Who Stutter

	All Practicing Education Teachers Vs All Student Education Teachers
N	133 < 191
Total	324
Mean Rank	185.34 > 146.59
Median	96.0 > 95.0
Range	24.0 > 22.0
Min.	81.0 < 85.0
Max.	105.0 < 107.0
Mann- U	9663.500
Sig.	.000

The results in Table 4 suggest significant differences in attitudes toward stuttering and SWS between practicing education teachers and student education teachers. They suggest that a combined group of regular and special education teachers dubbed "practicing teachers" (N = 133, Mdn = 96.0) demonstrate a positive attitude toward stuttering and SWS compared to a combined group of regular and special student teachers (N = 191, Mdn = 95.0), U = 9663.500, p = .000. Implications of this finding are discussed in the next section.

3.3. Teacher's Attitudes Based on Educational Level

First, a Kruskal-Wallis test found unequal distribution of POSHA-S score across all levels of education (N = 313, Chi square = 27.655, df =4, p=.010). therefore, the H0 was rejected and a post hoc pairwise comparison test on education levels of teachers' responses was conducted to observe for differences. Results are presented in Table 5.

Table5: Responses of Regular Education Teachers and Special Education Teachers based on a Pairwise Comparisons of Educational Levels. Pairwise Comparison of Education Levels

Education Attainment Level	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
Grade Twelve School Certificate Vs Teacher Diploma	-6.190	11.488	-.539	.590	1.000
Grade Twelve School Certificate Vs College certificate	-57.342	40.760	-1.407	.159	1.000
Grade Twelve School Certificate Vs Bachelor's Degree	-73.905	15.825	-4.670	.000*	.000
Grade Twelve School Certificate Vs Master's Degree	-86.776	37.318	-2.325	.020	.201
Teacher Diploma Vs College Certificate	51.153	41.178	1.242	.214	1.000
Teacher Diploma Vs Bachelor's Degree	-67.715	16.873	-4.013	.000*	.001
Teacher Diploma Vs Master's Degree	-80.586	37.774	-2.133	.033	.329
College Certificate Vs Bachelor's Degree	-16.563	42.592	-.389	.697	1.000
College Certificate Vs Master's Degree	-29.433	54.372	-.541	.588	1.000
Bachelor's Degree Vs Master's Degree	-12.871	39.311	-.327	.743	1.000

Asymptomatic Significances (2-sided tests) are displayed. The alpha level is .01. Significant results are shown with*

Teachers' Attitudes Based on Gender and Geographic Location

Other Mann-Whitney U tests were conducted based on gender, and geographic location to observe for significant differences in attitudes of teaches toward stuttering and SWS. Results are presented in Table 6.

Table 6: Responses of Teachers based on Gender and Geographic Location

	Male Vs Female Teachers	Rural Vs Urban Teachers
N	154 < 161	86 < 236
Total	315	322
Mean Rank	186.03>148.40	177.76>155.57
Median	95.0 < 97.0	95.0 > 96.0
Range	18 < 24	26 > 20
Min. Score	89 > 81	81 < 85
Max. Score	107 > 105	107 > 105
Mann-Whitney U	10852.000	8749.500
Sig.*	.054	.057

* =Asymp. Sig. (2-tailed)

The results obtained suggest that gender and geographic location did not influence teachers' attitudes toward stuttering and SWS. However, the results also indicate that while responses of teachers in general do not significantly differ, male teachers (N = 154, Mdn = 95.0) are likely to be more negative toward stuttering and SWS than female teachers (N = 161, Mdn = 97.0), U = 10852.000, p = .054. Similarly, teachers in rural areas (N =86, Mdn = 95.0) are more likely to be negative toward stuttering and SWS than teachers in urban areas (N = 236, Mdn = 96.0), U = 8749.500, p = .057. Implications of these results are discussed in the next section.

Discussion

Several comparative studies have looked at attitudes of teachers towards stuttering and SWS. However, to my knowledge, none has attempted to compare attitudes of four groups of teachers in the manner the current study has done. Moreover, few studies have attempted to delineate the subject by age, gender, and educational level of respondents as the current study. This section first presents the main findings and its implications and describes them in light of the existing literature on attitudes of practicing and student teachers toward stuttering and PWS. The section concludes with limitations of the study and suggestions for future research engagements.

Major Findings

Three major findings emerged from the current study: (i) there are significant differences in attitudes toward stuttering and SWS between special education teachers and regular education teachers, and between practicing education teachers and student teachers; (ii) attitudes of teachers toward stuttering and SWS do not differ based on gender and geographic location but do so on an educational level; (iii) attitudes of special education teachers are comparatively positive than those of regular practicing and student teachers.

Over seven decades, studies on attitudes have generally established a consistent pattern of negative attitudes toward stuttering and students who stutter among educators (A-Shdifat et al., 2018; Crowe & Walton, 1981; Dorsey & Guenther, 2000; Hughes et al., 2010). Studies have further demonstrated that both regular teachers and special education teachers hold negative attitudes toward stuttering and students who stutter (Ruscello et al.,1994; Yeakle & Cooper, 1986). However, more recent investigations have begun to show a generally improved knowledge of and change in attitudes toward stuttering among teachers (Adriaensens & Struyf, 2016; Iran, Abdalla & Gabel, 2012; Iran & Gabel, 2008). This study echoes recent findings. It shows that while previous studies depict educators' attitudes

toward stuttering as generally negative, special education teachers attest to the contrary.

Attitudes of in-service regular teachers and special education teachers

Previous studies have asserted that attitudes of special education teachers towards stuttering and PWS are similar to many "helping professionals" that have been studied. For example, when Ruscello, Lass, Schmit & Pannbacker (1994), administered a questionnaire to 82 special educators, in 6 states of the USA, they found that special educators' perception of PWS was not any better than those of other professionals. Similarly, Panico, Daniels, Hughs, Smith & Zelenak (2018), used a mixed-methods approach to explore perceptions of 117 student teachers and 107 regular education teachers toward students who stutter. Their quantitative findings revealed few significant differences between the two groups. In contrast, the current study shows a statistically significant difference between special education teachers and regular teachers. The study established that attitudes of special education teachers (N =62, Mdn =97.0) were significantly positive than those of regular education teachers (N = 71, Mdn = 95.0), U = 1526.000, p =.002.

These results suggest that, generally, special education teachers in Zambia are likely to have positive attitudes toward SWS than regular education teachers. One explanation for this difference would be that most Zambian teachers, who dedicate themselves to teaching students with special education needs, do so out of passion other than monetary reasons. As Mandyata (2002) suggests, they do so despite the stigmatizing environment in which they work and lack of incentives from the government. A passion for and relatively positive attitude toward disability in general offers a good explanation for the observed difference because until recently, special education teachers in Zambia were not mandatorily required to teach in special schools or units upon graduation. Many trained special education teachers left for mainstream schools due to poor incentives (Ndhlovu, 2008; Mandyata, 2002), and those that remained did so out of passion.

For example, the Statistical Bulletin (MoGESB – 2017) shows that 1,795 teachers had special education qualifications yet very few were working in special schools, inclusive settings or units. It can be inferred therefore, that those who remain are likely to have positive attitudes towards teaching students with disabilities. It is, therefore, not surprising to observe that in general, special education teachers, working in these settings, have relatively positive attitudes toward stuttering than their counterparts.

The other explanation for the current findings is that attitudes toward stuttering and PWS among educators could be positively changing as other studies have earlier postulated (Adriaensens & Struyf, 2016; Iran, Abdalla & Gabel, 2012; Iran & Gabel, 2008). However, this change is not arbitrary. Knowledge about and experience with stuttering, and not merely awareness, could be a possible reason for the recent change in attitudes among educators. If this is the case, then special education teachers who have experience with and knowledge about disabilities in general are more likely to inspire that positive change among educators. This is exemplified by the findings of Yeakle & Cooper (1986).

There are implications to this finding. One such implication is that teachers' experience with PWS and exposure to curriculum content on stuttering could help influence beliefs, knowledge level, and attitudes of teachers toward stuttering and SWS. Even though Iran et al., (2008) found teachers' experience with PWS, coursework and professional readings in stuttering to have no effect on teachers' attitudes toward stuttering, other studies point to the contrary. For example, given the role of teachers in the academic life of SWS, Yeakle & Cooper (1986) interpreted results of their study as suggesting a need for teachers to receive either pre-service or in-service education about the problem of stuttering. Adriaensens & Struyf (2016) have also suggested the need for teachers' increased awareness and knowledge about stuttering to help them understand the complexity of stuttering and its possible implications for SWS. In the Zambian context, increased knowledge either through Continuous Professional Development or expanded curriculum content in colleges of

education are possible avenues to enhancing knowledge levels of both regular and special education teachers about stuttering and SWS.

Attitudes of In-service Teachers and Student Teachers

Results for the second question suggest significant differences in attitudes toward stuttering and SWS between practicing teachers and student teachers. Abdalla & St. Louis (2012) investigated attitudes of pre- and in-service teachers in Kuwait. Their findings showed a generally stereotypical view of PWS among their respondents even though both groups of teachers perceived PWS to be friendly and intelligent. Current findings however, show practicing teachers to hold a more positive attitude towards SWS than student teachers. Implications of the current finding could be that exposure to college curricular on special education is probably not enough to bring about the positive change in attitudes of student teachers towards SWS. Experience with SWS in an instructional or social setting would possibly help to positively influence their attitude toward stuttering. It is for similar reasons Panico et al., (2018) argue for increased knowledge and information of both pre- and in-service, regular teachers about stuttering.

Attitudes of Special Teachers, Regular Teachers and Student Teachers.

Further data analysis revealed that the difference in attitude toward stuttering and SWS between practicing teachers and student teachers was principally necessitated by the integration of the group of special education teachers with regular teachers. The results in Table 7, based on individual comparisons of all possible groups, attest to this assertion.

Table 7: Attitudes of Practicing Education Teachers and Student Education Teachers Toward Stuttering and Students Who Stutter

	SpT Vs RegSt	RegT Vs SpeSt	RegT Vs RegSt	RegSt Vs SpeSt	SpeT Vs SpeSt
N	62 >116	71 > 75	71 < 116	116 > 75	62 < 75
Total	178	146	187	191	137
Mean Rnk	111.64>77.66	77.59>69.63	96.39>92.54	98.43>92.25	88.44>52.93
Median	97.0>95.0	95.0>95.0	95.0>95.0	95.0>95.0	97.0>95.0
Range	20.0<22.0	20.0>16.0	20.0<22.0	22.0>16.0	20.0>16.0
Student Education Teachers Toward Stuttering and Students Who Stutter					
Min	81.0<85.0	85.0>85.0	85.0>85.0	85.0>85.0	81.0<85.0
Max	101.0<107.0	105.0>101.0	105.0<107.0	107.0>101.0	101.0<101.0
Mann-U	2223.000	2373.000	3948.500	4068.500	1120.000
Sig.	.000	.252	.635	.447	.000

Note: RegT = Regular Education Teachers, RegSt = Regular Education Students, SpeT = Special Education Teachers, SpeSt = Special Education Students.

The consistent pattern observed in Table 7 was that differences were only noted whenever special education teachers were compared with either regular education teachers, regular student teachers, or special student teachers. These findings consolidate the view that special education teachers as a group are more likely to hold relatively positive attitudes toward stuttering and SWS compared to regular practicing teachers and student teachers. This is in contrast with previous studies that have found that special education teachers' attitudes toward stuttering are as negative as any other professionals (Ruscello et al., 1994).

The implication of this particular finding could be that formal training in special education and experience with SWS are important components that positively influence attitudes

of teachers towards stuttering. Yeakle & Cooper (1986) also concluded that teachers with positive attitudes toward stuttering were those who had both experience with SWS and a formal coursework in speech disorders. It appears student teachers and regular education teachers in the current study held relatively negative attitudes toward stuttering because they possibly lacked either experience with SWS or sufficient formal knowledge about stuttering compared to special education teachers. Attitude of special education teachers is comparatively positive as they possibly have both experience with disability and some knowledge about stuttering given their nature of training and work setting.

Possibly lack of awareness, insufficient knowledge about and insensitivity to stuttering and SWS among regular education teachers and student teachers as compared to special education teachers could be another explanation to the observed difference in attitude. For example, Kelly (1991) asserts that lack of awareness and knowledge about the needs of learners with special education needs have been cited as the underlying causes of regular teachers' negative attitudes toward them. It is, therefore, likely that lack of awareness, knowledge and sensitivity towards stuttering and SWS could be factors underlying the observed differences in attitude of teachers.

Attitudes of teachers based on gender.

Current study shows no significant gender difference in attitudes of teachers toward stuttering and SWS. This is supported by some previous studies that investigated the variable of gender in relation to beliefs and attitudes of teachers toward stuttering. Panico et al., (2018), for example, found no significant difference in responses to what pre-service and in-service teachers considered to be causes of stuttering between male and female participants regardless of the teacher status. However, while responses of Zambian teachers in general did not significantly differ, male teachers ($N = 154$, $Mdn = 95.0$) were more likely to be negative toward stuttering and SWS than female teachers ($N = 161$, $Mdn = 97.0$), $U = 10852.000$, $p = .054$. This finding could mean that male teachers probably hold less accurate views about stuttering

and SWS. For example, Li & Arnold, (2015) compared beliefs of teachers about stuttering and PWS to those of the general public and found that men, regardless of status, held less accurate views about stuttering and PWS than women.

Attitudes of teachers based on geographic location.

There was no significant difference found between attitudes of teachers in rural areas and their counterparts from urban areas. This differs from the findings of Doody, Kalinowski, Armson & Stuart, (1993) who found a difference between attitudes of teachers in rural areas and those from urban areas in Newfoundland. For several years now, Latane's (1996) dynamic and social impact theory has been used to understand beliefs and attitudes related to stuttering (Crowe & Walton, 1981; Hurst & Cooper, 1983; Walden & Lesner, 2018). It contends that members of the same social group are likely to influence one another's attitudes and behaviors. Consistent with this theory, findings from POSHAS-based studies have consistently shown that members within a given culture or geographical region generally hold common attitudes toward stuttering (Glover, St. Louis & Weidner, 2019). The current study is in line with this theoretical posture and pattern of previous studies related to geographic variable.

Attitudes of teachers based on educational level.

The education variable suggests a significant difference in attitudes of teachers. Although Iran & Gabel (2008) found that educational and experiential factors did not have a significant effect on teachers' attitudes toward PWS, other studies show that such a difference exists (Li & Arnold, 2015; Panico., et al., 2018; St. Louis et al., 2014).

Education, regardless of the profession, creed or geography, is heralded as a change agency. It is assumed that the more education people get, the better their beliefs and attitudes toward stuttering and PWS. Results of a pairwise comparisons of education levels of teachers surveyed in the current study attest to this score. Holders of a grade twelve certificate were likely to have negative attitudes toward stuttering and SWS compared to

holders of a bachelor's or master's degree. This finding suggests a positive correlation between the factor of higher educational attainment and positive attitudes towards stuttering and PWS. Similar findings have been recorded in the past. Li & Arnold, (2015) found that educational attainment was positively correlated with accurate beliefs about PWS.

Study Limitations

The external validity of the present study could be limited for the following reasons: First, the randomized sample of 324 respondents, though adequate, was not homogenously drawn from both rural and urban areas. There were more respondents from urban than rural areas. Secondly, teachers' curricular exposure about and experience with stuttering differ and may therefore not be an adequate representation of all teachers in the country. Results of the current study also may not be immune to possible personal biases of respondents and the sociocultural context in which it was conducted. Generally, Zambian people tend to be conservative in their expression of personal opinions about disabilities given the traditional and religious norms the country largely upholds. This might inhibit openness of responses from participants.

Implications and Suggested Research Areas

Findings of the current study have educational implications. It calls for understanding the gaps within the curriculum of teacher education to ensure that it addresses the educational needs of SWS. There is need, therefore, to examine educational programmes for teacher education in institutions of learning to determine how much content on stuttering education student teachers cover. This could positively impact the preparedness of teachers to address needs of SWS.

A future study could investigate beliefs of teachers and their knowledge level about stuttering and SWS. It could be also necessary to interrogate how special education teachers and regular education teachers treat and /or interact with SWS in classroom setting. Such a study might employ classroom

observations and interviews of both teachers and SWS to explicate the impact such interactions have on academic performance and social interaction of SWS. It could also reveal whether special education teachers and regular education teachers interact with SWS differently. Another future study could explore attitudes of the general population in Zambia towards stuttering and PWS.

Conclusions

The present study shows that attitude of regular teachers and student teachers toward stuttering and SWS is generally negative (Adraensens & Struyf, 2018; Panico et al., 2016; Hughes, 2008). However, signs for positive change are evident among special education teachers. Special education teachers could provide a starting point if teachers' attitudes toward stuttering and SWS are to positively change. However, more than initial teacher training and teaching experience are required to positively change attitudes of teachers. Exposure to and social interaction with people who stutter may help. Exposure to college curricular on special education alone or classroom interactions with learners, without a special education background, may not be enough to instill a positive attitude in teachers. Public education, sensitization efforts about the nature and impact of stuttering on academic and social life of learners who stutter could possibly influence that change. The study further underscores the need to look at the concept of attitude toward stuttering and SWS as a continuum and not as a purely negative-positive dichotomy.

Disclosure Statement

Study was self-financed. Author reported no financial or political conflict of interest.

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