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### The impact of teacher attributes on intentions to practise inclusive education in secondary schools in Ghana

**Abstract**

Advocacy for inclusive education has been connected with the United Nations’ global poverty alleviation guidelines, the Sustainable Development Goals, which appeal to countries to extend universal access to education, from primary to secondary schooling. In the Ghanaian context, the implementation of inclusive education in secondary schools has been under-explored. In this study, we adopted Ajzen’s theory of planned behaviour as a framework to explore demographic variables which could impact on teachers’ intentions to practise inclusive education in secondary schools. We recruited 457 teachers from five districts in one region in Ghana. *T-*test and analysis of variance were used to ascertain the association between demographic variables and intentions. We found no significant differences between participants based on school resourcing or location. However, participants in private schools had attitudes that were more positive, they felt they received more support, had higher self-efficacy, and were more willing to include children with disabilities in their classrooms than teachers in public schools. Also, we found difference between participants on units of study taken in inclusive education during pre-service training and their level of confidence to practise inclusive education. The need for teacher educators to embed more inclusive teaching practices in all courses at teacher training institutions is discussed, as well as other study implications.

Keywords:*Theory of planned behaviour, secondary schools, inclusive education, teachers, Ghana*

**Introduction**

Inclusive education is a major revolutionary education policy, which is intended to promote access to education to all students across the world (Ainscow & Sandill, 2010). In 1994, discussions at the Salamanca Conference on Special Needs Education in Spain paved the way for the adoption of inclusive education in many countries. In response, developed countries and agencies, such as UNESCO and UNICEF, have provided technical and financial support to low-income developing countries to reform their education systems and enact inclusive education (Miles & Singal, 2010; Sharma, Loreman, & Macanawai, 2016). However, according to Anthony (2011), Kalyanpur (2014) and Sharma et al. (2016), international agencies lack knowledge about the contexts of developing countries. This has contributed to the transplanting of practices which have been shown to be incompatible with the current education systems of these countries. Consequently, arguments have been advanced about the need to develop a more contextualised understanding of the factors impacting on inclusive practices (e.g., Sharma et al., 2017). Implementation of inclusive education is widely known to be complex, as various factors may impact on acceptance of the policy among stakeholders such as teachers (Ainscow & Miles, 2009). Thus, developing an in-depth understanding of inclusive practices requires a broad lens to obtain a clear picture about practices. The complexity surrounding practices may be compounded in sub-Saharan African countries such as Ghana, where factors such as culture, poverty and resource scarcity seem to influence policies and daily life experiences. Indeed, teachers in Ghana are struggling to adopt inclusive practices in the classroom (Opoku, Rayner, Pedersen & Cuskelly, 2019), which lends support for the need for more studies to focus on the variables which impact on the determinants of intentions of secondary school teachers to teach students with disabilities.

In this study, the narrow definition of inclusive education, as captured by Sharma et al. (2017), was adopted, namely promoting and encouraging participation of students with disabilities in regular schools. The importance of teachers to the implementation of inclusive education has been well explored (e.g., Sharma & Nuttall, 2016). This has prompted research studies to assess the factors that might impact on teachers. However, studies have been inconsistent in identifying the variables that may impact on teachers with respect to inclusive practices. In a review of the literature, De Boer et al. (2011) reported a lack of uniformity with respect to the variables that had been found to be associated with the attitudes of teachers towards inclusive education. Similarly, in an earlier review of the literature, Avramidis and Norwich (2002) broadly categorised the variables that may impact on teachers’ acceptance of inclusive education into two groups: environment-related variables and teacher-related variables. They concluded that the research was generally consistent with respect to environment-related variables (e.g. policies and pre- and in-service training in inclusion); however, they found inconsistencies with respect to teacher-related variables (e.g. age, gender and contact with individuals with disabilities). A recent example of this inconsistency related to the role of gender: Ahmmed, Sharma and Deppeler (2012) and Bhatnagar and Das (2014) reported that male teachers had more positive attitudes than female teachers; however, Ahsan et al. (2013) and Ahsan, Sharma and Deppeler (2012) reported that pre-service female teachers’ attitudes were more positive regarding teaching students with disabilities than those of male teachers. The lack of consensus in the literature warrants a need for more studies to be conducted, to develop an in-depth understanding of the variables influencing inclusive practices in sub-Saharan African country such as Ghana.

In Ghana, the variables impacting on teachers’ attitudes towards practising inclusive education (e.g. Butakor et al., 2018; Mamah et al., 2011; Nketsia, 2017; Vanderpuye et al., 2019) and the variables impacting on teachers’ perceived competence with respect to using inclusive instructions (e.g., Alhassan & Abosi, 2014; Kuyini et al., 2016) have received some attention. For instance, in a quantitative study, Butakor et al. (2018) assessed the variables influencing attitudes of Ghanaian primary and secondary school teachers towards practising inclusive education. They found no significant relationship between level of teaching and no significant differences between genders with respect to behavioural, affective and positive attitudes; however, they found a significant difference between male and female teachers on the negative attitudes subscale. Male teachers were found to be more negative than female teachers. They also found that teachers with different qualifications held different attitudes, with those with lower qualifications being more negative with respect to intentions to behave in a way that supported the inclusion of children with disability. Additionally, they reported that teachers with more years of teaching experience were more negative in their perceptions about inclusion of students with disabilities in regular classrooms than colleagues with fewer years of teaching experience. Although the above study provided insights into the attitudes of teachers, other influences of inclusive education such as self-efficacy and support to teachers were not considered. Therefore, the purpose of this study was to explore the association between teacher demographic variables and intentions (attitudes, subjective norms and self-efficacy) towards practicing inclusive education.

**Research Context**

Ghana is located in West Africa with an estimated population of 24 million (Ghana Statistical Service, 2012a). Education is recognised as a fundamental right and efforts are being made to promote the participation of children at all levels of education. There is a three-tier education structure in Ghana: eight years of primary education (inclusive of two years pre-school education), six years of secondary education (3 years each junior secondary and senior secondary) and two to four years of tertiary education (Ministry of Education, 2015). Private schools form a very substantial part of the education sector and providing teaching and learning services to children. In Urban or metropolitan areas, there are more private schools than public schools. (Butakor et al., 2018). Anecdotal evidence suggest that they provide quality education to children compared to public schools which are funded by the State. However, the comparison between public and private schools in terms of suitable avenue to teach students with disabilities is unreported. While there is free education in public schools to all children up to secondary level, participation is not equal across all members of the society (Ajayi & Telli, 2012). For instance, individuals with disabilities are often denied equitable access to services such as education (e.g., Opoku, Badu et al., 2015; Opoku, J-F et al., 2017), although there is intense campaigning for them to be educated in regular schools.

Since the 2003/4 academic year, the government has taken steps to include students with disabilities in schools located in their communities. In 2006, the government promulgated the Persons with Disability Act, 2006 (Act No. 715), which was described as a giant step towards promoting the rights of persons with disabilities in all societies (Anthony, 2011). In 2012, the Parliament of Ghana ratified the Convention on the Rights of Persons with Disabilities, which enhanced government’s commitment to respect the rights of persons with disabilities in society. Unfortunately, there are inconsistencies in the practice of inclusive education in Ghana. While some districts are already practising inclusion, other districts are yet to implement inclusive education (Opoku, Badu et al., 2015). Schools identified to pilot inclusion have failed, due to a myriad of reasons, including a lack of inclusive teaching skills among teachers (Kuyini et al., 2016; Ministry of Education, 2015; Mprah et al., 2016; Opoku, Tawiah et al., 2019), unavailability of teaching and learning materials (Gregorius, 2016; Opoku, Badu et al., 2015) and insufficient funds and infrastructure to promote the participation of all students (Mantey, 2017; Opoku, J-F et al., 2017). These barriers have prompted calls for reforms of the education system for successful implementation of inclusive education.

Generally, in Ghana, there is an evident relationship between where one lives and the type of secondary school one will attend (Ajayi & Telli, 2012). For example, students who attend junior secondary schools in rural communities (where there are few qualified teachers or there is limited access to electricity or facilities and funds to procure teaching materials) are more likely to end up in the least-resourced schools (categories C and D) and are less likely to attend category A (i.e. the best-resourced) senior secondary schools (Ajayi, 2011). The impact of level of resourcing – operationalised in this study as school categorisation – on inclusive practices is currently unresearched. Furthermore, it is common knowledge in Ghana that more affluent parents are more likely to educate their children at a private junior secondary school, where teaching is effective and there are greater prospects of subsequent enrolment in a category A senior secondary school. Research is yet to explore whether private school teachers are more willing to practise inclusive education than teachers in public schools. Disability is ‘abhorred’ in Ghanaian societies (Anthony, 2011), which underscores the need to understand in detail the personal characteristics of teachers which might influence the teaching of students with disabilities in secondary schools. Due to complexities surrounding inclusive practices (De Boer et al., 2011), we adopted Ajzen’s (1991) theory of planned behaviour (TPB) as the theoretical framework since it encompasses key variables influencing inclusive practices (attitudes, subjective norms and self-efficacy), to understand secondary school teachers’ intentions to practise inclusive education in Ghana. This framework is further explored below.

**Theoretical Framework**

The TPB is an extension of Fishbein’s theory of reasoned action (TRA), which states that intention is a product of two types of beliefs, namely behavioural beliefs and normative beliefs (Fishbein & Ajzen, 1975). However, Ajzen (1991) expanded the scope of the TRA and added a third component, namely control beliefs. Ajzen argued that this third variable could (alongside behavioural and normative beliefs) explain an individual’s intention towards a given behaviour. These interrelated beliefs, namely behavioural beliefs, normative beliefs and control beliefs, accumulate to form attitudes towards the behaviour, subjective norms and perceived behavioural control, respectively (Ajzen, 2011). The TPB has been widely used to assess behaviour in various disciplinary areas, including assessing teachers’ intentions to practise inclusive education (e.g., Ahmmed et al., 2014). In the study reported here, ‘attitudes towards the behaviour’ is understood as teachers’ perceptions of practising inclusive education, ‘subjective norms’ refers to teachers’ perceptions of the support school leaders provide to them in implementing inclusive education, and ‘perceived behavioural control’ is conceptualised as self-efficacy, which refers to teachers’ confidence in their capacity to teach students with disabilities.

Behaviour takes place within a context, and Ajzen (2011) argued for examination of demographic variables to shed light on the origins of beliefs. However, researchers who have adopted the TPB have rarely reported the associations between teachers’ demographic data and all the theory’s variables. Exceptions are studies by Sharma et al. (2018) and Yan and Sin (2014). In a quantitative study, Sharma and colleagues recruited in-service teachers in Australia and Italy and examined their intentions with respect to practising inclusive education. They found significant differences between the two countries on all the TPB variables. Specifically, teachers in Italy were more receptive to inclusive education than Australian teachers, who reported higher self-efficacy than the former. Unfortunately, Sharma and colleagues’ conceptualisation of subjective norm (the social pressure that influences the intentions of individuals) (Ajzen, 2011), as teachers’ concerns (barriers to inclusive practices) does not adequately reflect the construct. Therefore, the instrument they used for collecting information regarding subjective norms cannot be considered a valid tool to measure subjective norms.

In another quantitative study conducted in Hong Kong, Yan and Sin (2014) found a significant interaction of age and level of teaching (primary school and secondary school). Specifically, younger primary school teachers in the study reported more positive attitudes and higher self-efficacy and were more likely to practise inclusive education than older secondary school teachers. Since inclusive practices appear easier and are emphasised more in primary schools than in secondary schools (Forlin, 2011; Miles & Singal, 2010), there is a need to study each level separately to understand teachers’ experiences (Chao et al., 2018).

The purpose of the study reported here is to explore the demographic variables that might impact on secondary school teachers’ intentions to teach students with disabilities. We collected data from senior and junior secondary teachers to address the following questions: (1) Are there associations between demographic variables of secondary school teachers and the determinants of intentions (attitudes, subjective norms and self-efficacy)? and (2) Does level of resourcing of secondary schools moderate the relationship between teachers’ demographic profile and the determinants of intentions?

**Method**

**Study Participants**

This paper reports data on the associations between a number of demographic variables on teachers’ intentions to teach students with disabilities in secondary schools, and on the beliefs that are hypothesised to contribute to these intentions. Participants for the project were recruited from 35 junior and senior secondary schools in five districts in a region of Ghana. The region and districts were selected based on convenience and schools were randomly selected within districts. In all, 550 questionnaires were distributed to the teachers in these schools, and 465 questionnaires were returned, representing an 85% return rate. Since many of the statistical analyses used in the study are sensitive to outliers (Pallant, 2016), these were identified in preliminary investigations, resulting in eight entries being deleted. This left 457 questionnaires, which were used in this study.

Table 7 and Table 8 provide the demographic data of the teachers who participated in this study. Seventy-nine percent of the participants were male, 50% were between 26 and 35 years, and 63% had a bachelor degree. As there were few schools in category D, they were combined with those in category C.

**Instruments**

**Demographic Information*.***A review of the literature influenced the decisions regarding the demographic data collected for this study (Ahmmed et al., 2014; Butakor et al., 2018; Yan & Sin, 2014). We collected data on the participants’ gender, year level of teaching (junior or senior secondary), teaching subject, participation in professional development in inclusive education, school category (resourcing), age, education level, years of teaching experience, location of the school, familiarity with inclusive policy and pre-service training in inclusive education.

**Scales.** The four scales adopted for this study had previously been used to explore teachers’ intentions to practise inclusive education in studies which used the TPB as their framework. Scores are calculated for each scale by summing responses and dividing by the number of items. Sharma and Jacobs (2016) developed theIntentions to Teach in Inclusive Classrooms Scale (ITICS). This instrument is made up of seven items and responses are provided on a seven-point Likert scale, with response options ranging from ‘extremely unlikely’ (1) to ‘extremely likely’ (7). The ITICS consists of two subscales: intention to implement curriculum changes and intention to consult with others. Some items on the ITICS include ‘I am willing to include students with disabilities in mainstream classrooms if provided with the necessary support’ and ‘I am willing to include students with severe disabilities in a range of social activities in my class’. The Cronbach’s alpha for the ITICS was .88, which is comparable to what has been reported in previous studies (e.g., Sharma et al., 2018).

Attitudes were examined usingthe Attitudes Toward Inclusion Scale (AIS; Sharma & Jacobs, 2016), which is specifically based on the TPB’s attitude variable. The AIS is made up of ten items, and each item is rated on a seven-point Likert scale, with response options ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (7). AIS consists of two types of items, namely feelings about inclusion and beliefs about inclusion which are combined to produce a single score. Some of the items on the scale are ‘I believe that inclusion benefits all students academically’ and ‘I am excited to teach students with a range of abilities in my class’. The scale was internally consistent, as the Cronbach’s alpha was .85.

Subjective norms were assessed using the Perceived School Support for Inclusive Education (PSSIE) scale (Ahmmed, 2013). The scale was specifically based on Ajzen’s conceptualisation of subjective norms and designed to measure the influence of social pressure on teachers. This scale is made up of eight items, and has a five-point Likert-type scale, with response options ranging from ‘none at all’ (1) to ‘a great deal’ (5). The PSSIE scale has no subscales. Items on the scale include ‘I receive the necessary support from the principal to implement inclusive education at classroom level’ and ‘I receive support from the school leadership to implement inclusive education in my classroom’. Similar to previous studies (e.g., Ahmmed, 2013), the Cronbach’s alpha of the PSSIE scale was .91.

Self-efficacy was evaluated using the Teacher Efficacy for Inclusive Practices (TEIP) scale (Sharma et al., 2012). The scale is made up of 18 items, and each item on the scale is rated on a six-point Likert scale, with response options ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (6). The TEIP scale is made up of three subscales: efficacy to manage behaviour, efficacy to use inclusive instructions and efficacy to collaborate. Examples of items on the TEIP scale are ‘I can make my expectations clear about student behaviour’, ‘I can make parents feel comfortable coming to school’ and ‘I am able to provide an alternative explanation or example when students are confused’. The Cronbach’s alpha for TEIP was .88.

**Procedures**

This study is part of a larger project which explored the intentions of secondary school teachers to practise inclusive education in Ghana. The Committee on The Social Sciences and Human Research Publication and Ethics at University of Tasmania approved the study and its protocols (H0016994). In Ghana, because there is no national research ethics committee, approval was sought from the Special Education Division of the Ghana Education Service, the regional and district directorates of education and the relevant school principals. Out of the 40 schools that the first author contacted, 35 principals gave permission for their schools to participate in this study. The principals introduced the first author to the teaching staff in the schools’ staff common rooms. The study and its objectives were explained to the teachers, and they were provided with an opportunity to ask questions for clarification. Afterwards, the printed questionnaires were distributed to the teachers who had consented to participate in the study, and they were given a week to complete the questionnaires, which were then collected in person by the first author.

**Data Analysis**

The survey data were entered and analysed using the Statistical Package for the Social Sciences (SPSS), version 24. Little’s Missing Completely at Random test (MCAR test) was performed to ascertain whether the missing data were missing at random. The missing data were less than 5%, and the results of the MCAR test were not significant. Thus, we concluded that the data were missing at random. We used the expectation-maximisation algorithm to impute missing values. Preliminary analysis was conducted to test homogeneity of variance in each computation, using Levene’s test.

We first calculated the means and standard deviations for each of the determinants of intentions. To answer research question 1, we performed an independent *t*-test or an analysis of variance (ANOVA) to compare groups. A *t*-test was calculated for the demographic variables with categorical data with two levels, while ANOVA was used for demographic variables with more than two levels. Following Pallant’s (2016) guidelines for performing *t*-test analyses, in the event that the homogeneity of variance assumption was violated, we reported the data from the section ‘equal variance not assumed’. With respect to ANOVA results, we reported Welch’s *t*-test statistic in the event of violation of homogeneity of variance. A post-hoc comparison was computed using the Tukey HSD test to examine where the differences between scores lay. To answer research question 2, a two-way factorial ANOVA was computed to ascertain the moderation effect of level of school resourcing on the TPB variables. While there are accepted processes for dealing with violations of homogeneity for both t-test and one-way ANOVA (Pallant, 2016), there is no such process available when two-way factorial ANOVA is used. As a consequence, we needed to exclude the following variables from the analysis: education status, years of teaching, pre-service training in inclusive education, professional development, school and gender. The demographic variables that were included at this stage were age group, teaching subject and familiarity with inclusive policy.

**Results**

Overall, the teachers held positive attitudes (*M* = 5.00; *SD* = 1.36), believed they had low support from their school for inclusive practice (*M* = 2.11; *SD* = 0.95), had high self-efficacy with respect to including students with disabilities in their classroom (*M* = 4.87; *SD* = 0.84) and high intentions to practise inclusive education (*M* = 5.52; *SD* = 1.20).

**Association of the Demographic Variables with Intentions**

Table 7 presents the results of the independent-sample *t*-tests conducted to compare means of categorical variables with two levels and the TPB variables. There were statistically significant differences between teachers in public schools and independent schools on all four scales; however, the effect size was very small in all four analyses (see Table 7 for details). There was a significant difference between senior and junior secondary teachers on the intention scale and the self-efficacy scale. Although effect sizes were very small, senior secondary school teachers had higher intention and higher self-efficacy than junior secondary school teachers. There was a statistically significant difference between the genders with respect to intentions, with male teachers reporting more positive intentions than female teachers (see Table 7). Again, the magnitude was very small (partial eta squared = .01).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Categories (N=457) | Sample size | A | B | C | D |
| Gender  | MaleFemale*t* *Eta squared* | 36097 | 5.03 (1.32)4.88 (1.49)0.980.002 | 2.10 (0.95)2.17 (0.97)-0.640.001 | 4.90 (0.80)4.73 (0.97)1.780.01 | 5.58 (1.11)5.28 (1.42)1.97#\*0.01 |
| Level of teaching  | Junior secondarySenior secondary*t* *Eta squared* | 135322 | 4.84 (1.48)5.07 (1.30)-1.680.01 | 2.14 (0.90)2.10 (0.97)0.440.004 | 4.74 (1.00)4.92 (0.76)-1.91#\*0.01  | 5.27 (1.40)5.62 (1.09)-2.67##\*\*0.02 |
| #Teaching subject | Art and Social ScienceSTEM*t* *Eta squared* | 229224 | 5.02 (1.36)5.00 (1.33)0.170.001 | 2.15 (0.96)2.08 (0.94)0.750.001 | 4.90 (0.87)4.85 (0.80)0.610.001 | 5.53 (1.21)5.53 (1.15)0.0110.000003 |
| School type | Public school Private school*t* *Eta squared* | 37582 | 4.94 (1.37)5.28 (1.27)-2.05\*0.01 | 2.06 (0.96)2.35 (0.89)-2.50\*0.01 | 4.80 (0.88)5.16 (0.54)-4.81#\*\*0.05 | 5.46 (1.24)5.81 (0.92)-2.42\*0.01 |
| #PD in IE  | No PD Taken PD *t* *Eta squared* | 145304 | 5.02 (1.29)4.98 (1.38)0.310.0002 | 1.94 (0.94)2.18 (0.94)-2.58\*\*0.01 | 4.76 (0.80)4.92 (0.86)-1.890.01 | 5.49 (1.13)5.53 (1.24)-0.340.0003 |

Table 7

Comparison of Mean Ratings for Variables with Two Level

A= Attitude towards Inclusion Scale; B = Perceived School Support for Inclusive Education;

C = Teacher Efficacy towards Inclusive Practices; D = Intentions to Teach in Inclusive Classrooms Scale; #Not all participants completed demographic information; *##* Equal variance not assumed reported because of violation of homogeneity of variance

*\*p < .05; \*\*p < .01*

Regarding the variable of professional development, there was a significant difference between teachers who had not had professional development and those who had had professional development, on subjective norms only. Specifically, participants who had had professional development in inclusive education indicated that they received more support from school leaders than those without any training. There was no significant difference between teachers who were teaching arts and social science-related subjects and those who were teaching STEM-related subjects.

Table 7 presents the results of the one-way between-groups analysis of variance calculated to compare responses of groups with three or more levels and the TPB variables. None of the independent variables contributed to the dependent variables of intentions and attitudes towards inclusive education. The variables of school category, education level and school location made no significant contribution to scores on any of the dependent measures.

There was a significant difference between groups with different levels of familiarity with inclusive education policy on subjective norms. A post-hoc comparison was computed. There was no significant difference between the groups in this analysis. Regarding self-efficacy, we found that the mean score for teachers who were familiar with inclusive education policy was significantly higher than that of those who claimed they were unfamiliar with inclusive policy. This was the only comparison to reach significance in this analysis.

Regarding pre-service training in inclusive education, there was a significant difference between participants on the self-efficacy scale only. A post-hoc comparison revealed that participants who had taken two or more units in inclusive education had higher self-efficacy than and those who indicated that they had not taken any unit in inclusive education (see Table 7).

Table 8

Comparison of Mean Ratings for Variables with More than Two Levels

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Categories (N=457) | Sample size | A | B | C | D |
| #School Category | Category ACategory BCategory C*F**Eta squared* | 5395174 | 5.04 (1.27)4.99 (1.06)5.12 (1.43)0.329# 0.001 | 2.15 (0.90)2.07 (0.94)2.10 (1.01)0.1130.0007  | 4.96 (0.80)4.87 (0.58)4.94 (0.83)0.3310.002 | 5.65 (1.02)5.58 (0.99)5.64 (1.16)0.1190.0007 |
| Age  | 18-25 years26-35 years36-46 years>46 years*F**Eta squared*  | 6622413532 | 5.16 (1.40)4.99 (1.29)4.99 (1.42)4.79 (1.52)0.5800.0004 | 2.04 (0.89)a2.02 (0.96)a2.02 (0.91)a2.59 (1.10)b3.28\*\*0.02 | 4.87 (0.73)4.83 (0.87)4.90 (0.87)5.03 (0.64)0.6190.004  | 5.54 (1.16)5.50 (1.22)5.50 (1.22)5.49 (1.09)0.1730.001 |
| #Education level  | Secondary Diploma/CertificateBachelorMasters*F**Eta squared* | 158728765 | 5.70 (0.92)4.97 (1.37)4.98 (1.38)4.94 (1.26)0.2440.01 | 2.55 (1.21)2.23 (1.01)2.10 (0.92)1.95 (0.92)2.193 0.014 | 4.89 (1.26)4.80 (0.85)4.84 (0.86)5.05 (0.57)1.250.01 | 5.51 (1.49)5.34 (1.25)5.53 (1.20)5.68 (1.03)1.110.01 |
| Years of teaching  | 5 years or less6-10 years11-15 years16 or more years*F**Eta squared* | 1391548678 | 5.15 (1.26)4.83 (1.40)5.06 (1.25)4.99 (1.52)1.41#0.01 | 2.30 (1.02)a1.97 (0.91)b1.98 (0.83)b2.21 (0.95)a3.97##\*\*0.03 | 4.88 (0.77)4.82 (0.85)4.91 (0.92)4.90 (0.85)0.2930.002 | 5.54 (1.13)5.48 (1.27)5.64 (1.20)5.43 (1.18)0.500.003 |
| School location | Urban areaSub-urban areaRural area *F**Eta squared* | 24415657 | 4.82 (1.32)5.06 (1.43)5.10 (1.31)0.4240.002 | 2.09 (0.96)2.08 (0.90)2.32 (1.03)1.500.01 | 4.90(0.77)4.87 (0.82)4.71 (1.11)1.270.01 | 5.55 (1.13)5.55 (1.25)5.28 (1.33)1.250.01 |
| #Familiar with IE Policy  | Very familiarFair understandingUnfamiliar*F**Eta squared* | 19721737 | 5.01 (1.37)5.03 (1.35)4.64 (1.39)1.350.01 | 2.24 (0.95)a2.04 (0.93)a1.85 (0.95)a3.76\*0.2  | 4.95 (0.81)a4.83 (0.87)ab4.58 (0.82)b3.39\*0.02 | 5.58 (1.18)5.52 (1.22)5.18 (1.20)1.720.01 |
| #Pre-service training in IE | No unit1 unit2 or more units*F**Eta squared* | 105183151 | 4.81 (1.36)4.98 (1.31)5.11 (1.42)1.640.01 | 1.95 (0.95)2.16 (0.92)2.16 (0.96)2.030.01  | 4.69 (0.98)a4.86 (0.75)ab5.00 (0.83)b3.54##\*0.02 | 5.36 (1.25)5.51 (1.09)5.60 (1.31)1.230.01 |

A= Attitude towards Inclusion Scale; B = Perceived School Support for Inclusive Education; C = Teacher Efficacy towards Inclusive Practices; D = Intentions to Teach in Inclusive Classrooms Scale; #Not all participants completed demographic information; ## Welch statistic reported due to violation of homogeneity of variance; Different letters indicate differences in means following Tukey HSD Post-hoc test; *\*p < .05; \*\*p < .01*

With respect to age, there was a significant difference between participants on subjective norms only, with a small effect size. The post-hoc comparison test revealed that the mean score of participants who were older than 46 years was significantly higher than the scores of the other age groups, which did not differ from each other. In addition, there was a significant difference between participants regarding teaching experience on subjective norms. A post-hoc comparison revealed a significant difference between participants who had taught for five years or less and those who had taught for 6–10 years, with those with less experience reporting receiving more support.

**The Moderation Effect of School Category**

Table 9 presents a summary of the moderation effect of school resourcing on the demographic variables and the TPB variables. In all the calculations, the interaction effect between the three variables (age, teaching subject and familiarity with inclusive policy) and school resourcing was not significant for any of the TPB variables.

Table 9

Summary of Two-way factorial ANOVA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | A | B | C | D |
|   | A | B | C | A | B | C | A | B | C | A | B | C |
| *Age* 18-25 years26-35 years36-45 years>46 years*F* *Eta squared* | 6.00 (.03)4.92 (1.29)5.02 (1.28)4.93 (1.59).45.004 | 5.13 (1.24)5.06(.94)5.02(1.14)4.42(1.14) | 5.34(1.45)5.13(1.38)5.14(1.39)4.24(1.90) | 2.13(.49)2.12(.90)1.83(.62)3.45(1.08)1.19.006 | 1.98(.97)1.98(.91)2.11(1.02)2.50(.84) | 1.99(.88)2.18(1.08)2.02 (.94)2.24(1.23) | 4.81(.19)4.93(.79)4.84(.93)5.66(.25).73.004 | 4.97(.40)4.88(.55)4.81(.75)4.87(.36) | 4.94(.71)4.90(.88)4.99(.86)5.00(.43) | 5.56(.38)5.64(1.03)5.65(1.16)5.78(.97).95.003 | 5.69(.66)5.68(.92)5.46(1.16)5.31(1.21) | 5.87(1.12)5.61(1.17)5.56(1.18)5.79(1.12) |
| *Teaching subject*Art and Social Sc.STEM*F* *Eta squared* | 5.24 (1.28)4.89(1.26).49.002 | 4.97(1.07)5.02(1.07) | 5.11(1.42)5.13(1.44) | 2.32(1.09)2.02(.74).57.001 | 2.06(.93)2.08(.97) | 2.09(1.00)2.12(1.04) | 5.05(.96)4.89(.68).93.003 | 4.92(.71)4.66(.42) | 4.89(.86)5.00(.79) | 5.75(1.11)5.58(.96)1.76.001 | 5.74(1.00)5.42(.97) | 5.56(1.20)5.74(1.12) |
| *Familiarity with inclusive policy*Very familiarFair understandingUnfamiliar*F* *Eta squared* | 4.95 (1.35)5.11(1.28)4.44(.27).22.003 | 4.95 (.96)5.10(1.18)4.79(1.00) | 5.14(1.43)5.09(1.42)5.11(1.66) | 2.07 (.81)2.21 (.98)1.75(.18).54.005 | 2.29(.95)1.86(.87)2.10(1.13) | 2.19 (1.10)2.07 (.93)1.94 (1.10) | 5.27(.42)4.85(.85)4.22(1.81)1.40.008 | 4.92(.44)4.91(.68)4.50(.57) | 5.06 (.70)4.83(.95)4.99(.64) | 5.69(.91)5.64 (1.09)5.56(.97).38.004 | 5.72(.74)5.58(1.18)5.10(.87) | 5.74(1.10)5.55(1.24)5.67(1.05) |

A= Attitude towards Inclusion Scale; B = Perceived School Support for Inclusive Education; C = Teacher Efficacy towards Inclusive Practices; D = Intentions to Teach in Inclusive Classrooms Scale **Note:** The *F* results and *Eta squared* are for all the three categories.

**Discussion**

In this study, we examined the association of a number of identified demographic variables with measures that reflect Ajzen’s (1991) TPB. We adopted the TPB framework to explore teacher beliefs that could influence inclusive practices in secondary schools; however, it is clear that these beliefs themselves are open to a range of influences. According to Ajzen, behaviour is a product of related beliefs (attitudes, subjective norms and self-efficacy) mediated through intentions. Ajzen (1991) predicted that some person and environment-related variables would provide additional insight into individuals’ intentions. This view suggests that teachers’ working in different cultural settings and/or under different systemic approaches may be open to different influences.

While not all demographic variables were found to be associated with the TPB measures used in the study, there were some interesting findings that deserve consideration. Although the effect sizes were small, one contribution of this study to the literature is the comparison between public and private school teachers’ implementation of inclusive education. Specifically, there were significant differences between participants in public schools and those in private schools on each of the TPB variables. Teachers in private schools reported more positive attitudes, were more certain that others in their schools supported inclusive practice and had greater confidence in their ability to teach students with disabilities than their colleagues in public schools. These teachers also reported being more inclined to practise inclusive education than their colleagues in public schools. These findings are partly consistent with studies conducted in India by Bhatnagar and Das (2013, 2014), who found that secondary school teachers in private schools held positive attitudes and appeared to have few concerns about practising inclusive education. These findings may also be particular to Ghana as anecdotal evidence suggests that, although teachers in Ghanaian private schools are paid low wages and have lower qualifications that those in public schools, students from private schools perform better than those in public schools. In a recent Ghanaian study, Butakor et al. (2018) reported that teachers with higher qualifications held more positive attitudes than teachers with lower qualifications. However, Butakor et al. (2018) did not include teachers from private schools which might have influenced their results. It is widely believed in Ghana that private schools are beacons of excellence who hold their teachers accountable to render effective teaching services to all students. Potentially, the high academic standards expected of private schools puts pressure on their teachers to advance the learning of all students, including those with disabilities. In addition, if high standards are a feature of these schools then there will naturally be benefits for those learners with disability. As noted earlier, private schools make up a large proportion of the Ghanaian schooling system. These findings, therefore suggest the need for the government to pay attention to the education of students with disabilities in private schools. Since private schools are distributed across the country, they might offer quality education to students with disabilities.

There were significant group differences with respect to level of teaching. Specifically, senior secondary school teachers who took part in this study were more confident and prepared to teach students with disabilities than teachers in junior secondary schools. This finding is inconsistent with a previous study conducted in Ghana by Butakor et al. (2018). While Butakor et al.’s (2018) study drew on participants from a metropolitan area where there might be teaching resources for inclusive practices, in this study, the participants were diverse and representative of the political administration (recruiting teachers from metropolitan area, municipal and district assemblies) in Ghana. The difference between teachers on level of teaching could be linked to the distributive leadership in senior secondary schools compared to junior secondary schools. In senior secondary schools, aside from the principal and assistants, there are other teachers in leadership roles such as heads of departments, chaplains, house-masters and form masters who oversee the learning needs and welfare of students. Perhaps, such leaderships are able to offer some leverage or assistance to teachers when it comes to teaching students with disabilities. For instance, it has been reported that distributed leadership is effective for inclusive practices (Ainscow & Sandill, 2010; Poon-McBrayer & Wong, 2013). It is important for future studies to explore various leadership structures in senior secondary schools and their impact of inclusive practices in Ghana.

In this study, we found that teachers who had received professional development in inclusive education were more positive about the support they received from significant others to practise inclusive education. This finding is partially consistent with previous studies, which have found an association between teachers who teach in supportive inclusive environments and access to professional development in inclusive education (Ahmmed et al., 2012; Yan & Sin, 2014). Some teachers who are currently working in Ghana graduated from college/university before inclusive education was introduced. This makes it necessary for teachers to have access to professional development focussed on inclusion if they are to competently enact this policy. It is possible that access to professional development in inclusive education makes teachers aware of structures put in place and required resources needed to enhance practices. With this information, they might be able to effectively engage school leaders in terms of resources needed to support the teaching of students with disabilities. Alternatively, principals who are supportive of inclusive education may be those who approve or organise professional development in this topic (see, Ainscow & Sandill, 2010).

Familiarity with the inclusive education policy document was associated with participants’ intentions towards practicing inclusive education. Specifically, we found that participants who were familiar with inclusive policies and legal frameworks reported that they had received more support from significant others and had higher intentions than other participants. This latter finding supports a previous study by Forlin and Chambers (2011), who reported that awareness of inclusive education policy improves teachers’ knowledge about inclusive practices. Perhaps participants who have been exposed to concepts relating to inclusive education and accompanying legal documents were more willing to collaborate with school leaders to ensure that they had the necessary resources to teach all students. It is also possible that these participants were aware of their legal obligations, and thus were encouraged to teach every student they encountered. Potentially, education about inclusive education policy could form part of pre-service education or professional development on inclusive education for teachers. This may be needed in Ghana to enable all secondary teachers to be aware of their responsibilities and contributions towards effective practices.

Gender was another variable which had a relationship with intentions towards practicing inclusive education. It is important to mention here that the ratio of male and female teachers who took part in this study reflects the national population of teachers (see, Republic of Ghana, 2012). Male teachers who took part in this study indicated that they were more prepared to practice inclusive education than female teachers. This finding is somewhat inconsistent with a previous Ghanaian study by Butakor et al. (2018) which reported that female teachers held more positive attitudes. In understanding practices in schools, it is important to have a sample that reflects the national statistics. In this study, the reduced willingness of females in comparison to males to include students with disabilities in their classrooms is surprising because in traditional Ghanaian societies, females are noted for motherly and caregiving responsibilities. It might be expected that they would be more likely to portray themselves as caring and capable of working with children with disabilities. Future study could explore in-depth, the perception of male and female teachers towards practicing inclusive education.

**Study Limitations**

The results of this study should be interpreted with caution, because of a number of limitations. Firstly, the participants were self-selected and so their intentions may therefore be different in some ways from those teachers who did not volunteer. Secondly, the instrument that measured subjective norms was limited in scope: the items focused only on the perceived support from school leaders to teachers. In Ghana, school leaders are constrained by a lack of appropriate resources. Future studies could expand the investigation of subjective norms to encompass external support to school leaders. Despite these limitations, this study has added to the literature by recruiting a large of participants to explore their intentions to practise inclusive education in secondary schools in a low-resourced context, such as Ghana.

**Implications of the Study**

There are a number of implications that can be drawn from this study, although these need to be quite tentative, as the findings generally had low effect sizes, suggesting that the findings were not powerful. It is worthy of further investigation to ascertain if there are transferrable policies and procedures that impact positively on intentions to include students with disabilities. For instance, the low mean score on the perceived school support measure warrants deeper exploration by researchers to understand the concerns or barriers faced by school leaders in their efforts towards supporting inclusive education in their school. Furthermore, the government could expedite awareness creation about implementation of inclusive education as well as prioritising teacher training and allocation of resources targeted at supporting students with disabilities. Also, school principals may benefit from further education on ways through which they can promote inclusive practices. Such education and awareness campaigns will enable them to support teachers through the adoption practices that will enhance implementation at schools. Moreover, private school teachers were found to have higher intentions to practice inclusive education than public school teachers. In Ghana, researchers might be interested in studying the management and practices in private schools to propose guidelines to other schools and teachers when it comes to practicing inclusive education. Additionally, since training and knowledge of inclusive education was found to impact the intentions of teachers, policymakers could consider ways to provide more training opportunities in inclusive education for teachers. Teacher educators could explore the training needs of teachers so as to inform curricular revision and inclusive training manuals.

**Conclusion**

The results of this study have provided useful insights into teacher-related variables which could impact on inclusive practices. Indeed, this study has given credence to Ajzen’s (1991) assertion that background variables could provide additional information about teachers’ intentions towards a behaviour. In this study, while some demographic variables were associated with teachers’ intentions to practise inclusion (e.g., level of teaching, school type), school resourcing did not moderate the relationship between demographic variables and teachers’ intention to practise inclusion. The success of inclusive education is measured by accessible schools, availability of qualified teachers and learning resources (Ainscow & Miles, 2009). Therefore, it is important for policymakers to empower school leaders and make resource provision to all schools if the effort towards implementing inclusive education in secondary schools in Ghana is to be successful.