



EXAMINING THE PERCEIVED EFFECTIVENESS OF TEACHERS AND THEIR PREPAREDNESS IN TEACHING STUDENTS WITH AUTISM IN MAINSTREAM SCHOOLS IN GHANA

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ABSTRACT

With an emphasis on teacher preparedness, perceived efficacy, and performance hurdles, this mixed methods study investigates the instruction of autistic pupils in mainstream Ghanaian schools. Fifty-one educators, drawn from five schools using purposive sampling, participated in the research. We used semi-structured interviews and the distribution of questionnaires to gather data. The study investigated educators' experiences, viewpoints, and approaches to instructing autistic pupils using various techniques. The results reveal complex perspectives on how teachers' understanding of autism and the difficulties they encounter in the classroom shape their perceptions of efficacy. Through focused teacher training and support programmes, the study gives implications for improving inclusive practices and advances our understanding of the challenges of supporting autistic students in Ghanaian mainstream classrooms.

Keywords: Autism, Students with Autism, Mainstream schools, Teacher preparedness, Perceived effectiveness, Barriers to performance

INTRODUCTION

According to the American Psychiatric Association (2022), autism spectrum disorder (ASD) is a neurodevelopmental syndrome with several facets that is typified by ongoing challenges with social interaction, communication, and repetitive or restricted behaviours. Estimations indicate that the prevalence of ASD has been rising globally, with 1 in 54 American children estimated to have an ASD diagnosis (Baio, 2018). However, there remains a paucity of knowledge about ASD in Africa (Franz, Chambers, Isenburg & de Vries, 2017). As awareness of ASD continues to grow, there is a heightened emphasis on inclusive education, aiming to integrate students with ASD into mainstream school settings alongside their neurotypical peers (Hunt, 2019). In Ghana, like in many other countries, mainstream schools bear the responsibility of accommodating students with diverse learning needs, including those with ASD. Nonetheless, several elements must come into play for students with ASD to be successfully included in mainstream classrooms, with teachers playing a critical role. Teachers play a critical role in fostering inclusive environments, implementing appropriate teaching strategies, and offering specialised support to children with ASD to address their specific needs (Cayupe, Bernedo-Moreira, Morales-García., Alcaraz, Peña, & Saintila, 2023). Effectively teaching students with ASD in mainstream schools requires not only adequate teacher preparedness but also a nuanced understanding of the challenges encountered in this endeavour. Even though the value of inclusive education is becoming more widely acknowledged, there is still a dearth of information about Ghanaian mainstream schoolteachers' experiences, particularly about instructing pupils with ASD. Therefore, there is a strong need to investigate the viewpoints, methods, and difficulties that educators encounter in this setting.

Research Context

The Education Strategic Plan (ESP) 2018–2030 is the most recent education policy that builds on previous ones. It is the only education strategy plan to be commissioned during the Sustainable Development Goals (SDG 4) period. It aims to ensure inclusive and equitable quality education and create opportunities for lifelong learning for everyone (UN, 2019). Thus, the Education Strategic Plan 2018–2030 (Ministry of Education 2018a) adopts a sectorial approach to inclusive education. As per the Ministry of Education 2018a, the Education Strategic Plan 2018–2030, critical economic sectors in Ghana collaborate to guarantee that every child with a disability receives an education. The policy indicates that educational institutions are essential to the success of all students with special needs (Ministry of Education 2018a). However, the effective implementation of inclusive education practices, particularly concerning students with ASD, presents challenges that warrant further investigation.

STATEMENT OF THE PROBLEM

Even though it is becoming more widely acknowledged that inclusive education is crucial for fostering the overall growth and wellbeing of learners with autism spectrum disorder (ASD), mainstream schools in Ghana struggle to accommodate and support these learners. There is little knowledge of the unique experiences, viewpoints, and difficulties educators face in Ghanaian mainstream schools when instructing learners with ASD, despite efforts to advance inclusive education policies and activities (Opoku, Nketsia, Mprah, Agyei-Okyere, & Safi,

2021). According to Cayupe et al. (2023), the body of research emphasises how important educators are to foster inclusive classrooms, use effective teaching techniques, and offer individualised support to learners with ASD. Research on the circumstances of mainstream schools in Ghana and the variables affecting teachers' readiness, perceived efficacy, and capacity to meet the needs of learners with ASD is, nevertheless, lacking.

The paucity of empirical research regarding the difficulties faced by instructors in educating students with ASD in mainstream schools in Ghana hampers the creation of focused interventions, training programmes, and support mechanisms. Consequently, there is a pressing need to explore the perspectives, practices, and barriers encountered by teachers in this context to inform policy and practice and enhance inclusive education for students with ASD in Ghana. For this reason, the following research questions are the focus of this study:

1. What are teachers' perceived effectiveness in Ghanaian mainstream schools in teaching students with ASD?
2. What is the relationship between teachers' knowledge of ASD and their preparedness, skills, and perceived effectiveness in teaching students with ASD?

This study aims to illuminate the difficulties educators experienced and the variables affecting their efficacy in instructing learners with ASD in Ghanaian mainstream schools. By examining these issues, these findings would aid the development of evidence-based tactics and interventions to assist educators and improve inclusive education for students with ASD in mainstream Ghanaian schools.

LITERATURE REVIEW

Teachers Perceived Effectiveness in Teaching Students with Autism

Self-assurance influences teaching competency. A teacher's confidence in their abilities impacts their capacity to carry out tasks in ways that lead to attainment of the intended result. To define teacher self-efficacy, (Zee Koomen, Jellesma, Geerlings and de Jong (2016) extended Bandura's social learning theory and identified two dimensions. They clarify that the purpose of this model is to avoid the efficiency traps associated with microscopic operationalization while accommodating the importance of domain-specificity to teacher assessments of their efficacy. This multidimensional model represents an intermediate domain-specific level on a continuum that extends from teachers' broad ideas about their confidence in their capacity to carry out their professional roles to extremely task-specific beliefs about their capabilities. According to Granziera and Perera (2019), instructors' ideas about their efficacy influence their decisions on what to choose, how much time and energy to devote, and how long to stick with goal-directed activities. According to teacher motivation and engagement models, teachers' work circumstances, particularly their teaching level, are connected to their perceptions of their efficacy (Perera, Granziera & McIlveen, 2018). Montgomery and Mirenda (2014) recently examined educators' beliefs, anxieties, and self-efficacy. Researchers discovered that lower levels of teacher anxiety and favourable attitudes and beliefs on integrating children with developmental disabilities were linked to greater teacher self-efficacy for cooperation. When teachers believe, they are prepared to instruct their students, they are more likely to display high levels of self-efficacy. According to Zed and Koomen (2016), poor teacher efficacy causes low student efficacy and academic accomplishment, which in turn causes further drops

in teacher efficacy. Donohoo (2016) states that highly efficacious teachers put forth more effort and perseverance, are open to experimenting with different teaching strategies, and pay more attention to the needs of their less-progressing pupils. They also embrace more parental involvement, promote student autonomy, and communicate high expectations. Educators who have a collective efficacy also inspire pupils to think highly of themselves in the classroom. Self-assured teachers expect positive performance outcomes, but those who lack confidence expect poor outcomes.

Teachers' self-perception significantly impacts their ability to foster effective learning environments. Memisevic, Dizdarevic, Mujezinovic and Djordjevic (2021) found that teachers' confidence in teaching children with autism correlated with their willingness to provide necessary support for a conducive learning environment. According to Hodkinson (2016), there is a growing likelihood that students with autism spectrum disorder (ASD) will be integrated, at least physically, into regular educational environments. Bullying is substantially more common among students with ASD than it is among TD students, according to parent, teacher, and self-report data (Humphrey & Hebron, 2015). Amaireh (2017) discovered that teachers who disagreed with inclusion were less likely to individualize lesson plans or implement individualized education plans, indicating low self-efficacy in teaching students with special needs. Brown, Myers and Collins (2021) surveyed pre-service and experienced teachers to identify factors contributing to high self-efficacy. While experienced teachers cited confidence in knowledge gained through teaching experience, preparation, and professional development, pre-service teachers emphasized personal qualities like caring attitude and motivation. One of the most critical factors in developing self-efficacy in teaching is direct contact with children with special needs (Aronson, Nolan, Schaeffer, Hieftje, Kimberly, Kortney & Calhoun, 2024). Byrd and Alexander (2020) state that teachers have long taught special education students in regular classrooms. However, many studies have revealed that many general education teachers may need to be fully aware of what is required to provide an inclusive learning environment. Alshehri (2022) compared the self-efficacy of regular and special education teachers in instructing autistic children. Compared to general education teachers, special education teachers showed reduced concerns about teaching children with autism and better levels of personal self-efficacy. Although both groups showed similar levels of general teaching efficacy, special education teachers exhibited greater self-efficacy specifically in teaching children with autism. These results offer insightful information for strengthening teacher effectiveness in Ghana and enhancing special needs student care.

The Influence of Teachers Knowledge of Autism on Teachers Preparedness, Skills and Perceived Effectiveness.

Exploring the competence of teachers involves understanding the impact of their knowledge of autism on their training, skills, and self-perceived effectiveness in teaching students with diverse needs, including autism. According to Gallego-Ortega and Rodríguez-Fuentes (2021), sensitivity, knowledge, and training boost educators' self-efficacy, confidence, and positive attitudes toward people with disabilities, affecting their capacity to support students with special needs. The study conducted by Bannister-Tyrrell, Mavropoulou, Bailey, and O'Donnell-Ostini (2018) aimed to examine the correlation between general education teachers' perceived

level of preparedness to train students who have ASD and their actual competence in pertinent teaching domains. The study, involving 204 teachers, found a significant positive correlation between perceived academic training levels and actual knowledge of teaching methods and characteristics of ASD. Similarly, perceived levels of professional development training correlated positively with knowledge of effective teaching methods for students with autism.

Monsen, Ewing and Kwoka (2014) investigated teachers' perspectives regarding including students with behavioural or emotional issues in standard education. The study aimed to determine how age, experience, qualifications, and level of assistance influenced views toward including learners with behavioural or emotional issues. It also sought to determine whether attitude and readiness to assist children with behavioural or emotional issues could be related. The study showed that age, time spent in the field, and help received significantly predicted attitudes towards inclusion, which greatly impacted willingness to include. The findings indicated that when examining attitudes toward inclusion, more emphasis should be placed on training and education than on teachers' credentials (Butakor, Ampadu, & Suleiman, 2021). Due to a lack of professional teaching skills, negative teacher attitudes, and a lack of understanding of inclusion among school administrators, many disabled students in Ghana did not benefit from inclusive education. This finding aligns with Chaille's conclusions about teachers' need for more expertise, training, and resources for instructing students with behavioural disorders. The confidence levels of pre-service teachers in students with exceptional needs were examined by (Coates, Harris & Waring, 2020). Except for knowing current teaching techniques and procedures, pre-service teachers in special education had much higher confidence levels than pre-service teachers in general education. This finding supports the notion that increased training enhances teachers' knowledge and confidence in catering to students with special needs.

THEORETICAL FRAMEWORK

Ecological Systems Theory

Considering the study's focus on exploring the experiences, perspectives, and challenges educators encountered in Ghanaian mainstream schools when teaching learners who exhibit autism spectrum disorder (ASD), the Ecological Systems Theory would be the most appropriate theoretical framework. Bronfenbrenner (1979) established the Ecological Systems Theory, which highlights the impact of several interconnected structures on humanity's growth and development, ranging from the local environment (microsystem) to larger cultural contexts (macrosystem). This theory aligns well with the study's aim to examine the various levels of influence on teachers' practices and experiences in inclusive education (Bronfenbrenner, 1979).

In the context of teaching students with ASD in Ghanaian mainstream schools, the Ecological Systems Theory allows for the exploration of factors at different levels, including school policies and practices, interactions with colleagues and administrators, support from parents and community resources, and broader cultural attitudes towards disability. By considering these multiple levels of influence, the Ecological Systems Theory offers a comprehensive framework for understanding the complex interplay of factors shaping teachers' attitudes, behaviors, and practices in inclusive education.

Ecological Systems Theory offers a sound theoretical framework for analysing the data and interpreting the study's conclusions. This framework helps clarify the opportunities and problems related to inclusive education for learners exhibiting ASD symptoms in mainstream Ghanaian schools.

Application of the Ecological Systems Theory to the current study

From the immediate environment to larger social contexts, Bronfenbrenner's (1979) Ecological Systems Theory provides a thorough framework for comprehending the numerous degrees of impact that environmental factors have on human development. Applied to the current study on exploring the experiences, perspectives, and challenges encountered by teachers in Ghanaian mainstream schools when teaching for learners exhibiting ASD symptoms, the Ecological Systems Theory provides valuable insights into the multifaceted nature of inclusive education practices. Teachers' immediate school environment has a significant impact on how they experience and approach educating learners who exhibit ASD symptoms at the microsystem level. This includes factors such as school policies and practices, availability of resources and support services, interactions with colleagues and administrators, and classroom dynamics. For instance, teachers' interactions with colleagues who may or may not have experience or training in teaching students with ASD can influence their attitudes and approaches towards inclusive education (Bronfenbrenner, 1979).

As we move up to the mesosystem level, understanding how various microsystems interact within the educational setting becomes more significant. This includes the coordination and collaboration between teachers, administrators, special education professionals, parents, and community resources in supporting learners who exhibit ASD symptoms. Effective communication and collaboration among these stakeholders are essential for creating inclusive environments and providing appropriate help to address the diverse needs of students with ASD (Bronfenbrenner, 1979). At the exosystem level, external environments indirectly impacting teachers' practices and experiences in teaching students with ASD come into play. This may include district-level policies and regulations, availability of funding for special education programs, and community attitudes towards disability. For example, inadequate funding or lack of specialized training opportunities for teachers may hinder their ability to effectively support students with ASD in mainstream classrooms (Bronfenbrenner, 1979).

Furthermore, the macrosystem level encompasses broader cultural attitudes, beliefs, and values that influence inclusive education practices. Cultural perceptions of disability, stigma surrounding ASD, and societal expectations regarding education can significantly impact teachers' approaches towards teaching students with ASD. Understanding and addressing these cultural factors are essential for promoting inclusive education and fostering positive attitudes towards diversity and inclusion (Bronfenbrenner, 1979). Finally, the chronosystem level acknowledges the dynamic nature of human development and the changes that occur over time. This includes changes in policies, practices, societal attitudes, and individual experiences that may impact teachers' practices and experiences in teaching students with ASD. By considering these various levels of influence, the Ecological Systems Theory provides a comprehensive framework for understanding the complexities of inclusive

education practices and identifying opportunities for intervention and improvement (Bronfenbrenner, 1979).

RESEARCH METHODOLOGY

The study combined quantitative and qualitative processes to give a thorough picture of instructors' abilities to teach learners with ASD using a mixed methods approach. Research utilising mixed methods integrates the advantages of qualitative and quantitative techniques, augmenting the resilience of the investigation (Creswell & Plano-Clark, 2017). This investigation used both a case study and a survey approach. The purpose of the case study approach was to learn more about the effectiveness of teachers in instructing learners with autism (Creswell, 2018). Additionally, a survey design was employed to collect numeric descriptions of attitudes and opinions from a sample of the population (Creswell, 2018). This design was particularly useful for ascertaining correlations between variables related to teachers' knowledge, preparedness, skills, and perceived effectiveness in teaching students with ASD.

The population of interest comprised approximately 90 teachers who teach in regular mainstream schools attended by students with autism. A total of 51 teachers from five schools participated in the study. The sample size was determined based on the limited number of teachers with exposure to students with autism in regular schools in Ghana. Purposive and random sampling techniques were employed. The four teachers who participated in interviews were purposively sampled due to their extensive knowledge of teaching students with autism. We chose the remaining teachers through random sampling to ensure equal representation from all schools. The researchers collected data through semi-structured interviews and questionnaire. This questionnaire consisted of 20 closed-ended questions, adapted from previous research studies and modified for the present study. Likert scales were used for scoring, with reverse scoring applied to negatively worded questions. Semi-structured interviews were conducted to allow teachers to discuss their competencies in teaching students with autism in detail. The reliability of the questionnaire was assessed, yielding a coefficient of 0.81, indicating good internal consistency. Peer debriefing and expert review were employed to ensure the validity of the questionnaire and interview guide (Cohen, Manion & Morrison, 2017).

The Department of Special Education at the University of Education, Winneba, gave the researchers an introductory letter outlining the study's objectives, which was subsequently, which was subsequently distributed to the participating schools. The teachers gave their informed consent, guaranteeing their privacy and ability to leave the study at any time. Researchers analysed questionnaire data using IBM SPSS statistics software, employing frequencies, multiple regression analysis, and a Pearson correlation matrix. They analysed interview data through thematic analysis, involving transcription, coding, and categorisation of recurring themes and sub-themes (Braun & Clarke, 2006). By employing a mixed methods approach and utilising both case study and survey designs, this study aimed to provide a comprehensive understanding of teachers' competency in teaching students with autism in Ghanaian mainstream schools (Creswell, 2018).

RESULTS AND DISCUSSION

Results

Research Question One: What is the perceived effectiveness of teachers in teaching students with autism?

Table 1: Teachers perceived effectiveness in teaching students with autism

| Statement | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
|---|-------------------|------------|----------------------------|------------|----------------|
| 1. I can motivate students with autism who show low interest in schoolwork to be interested | 6 (11.8%) | 14 (27.5%) | 20 (39.2%) | 6 (11.8%) | 5 (9.8%) |
| 2. I can implement alternative strategies in my class for students with autism | 5 (9.8%) | 20 (39.2%) | 11 (21.6%) | 11 (21.6%) | 4 (7.8%) |
| 3. I can make students with autism do well in school | 6 (11.5%) | 20 (39.2%) | 8 (15.7%) | 11 (21.6%) | 6 (11.8%) |

Table 1 presents the results from a questionnaire on teacher’s perceived effectiveness in teaching students with autism. The result from the table indicates that 20 (39.2%) of the teachers neither agreed nor disagreed that they could motivate students with autism who had low interest in schoolwork to develop interest, while 14 (27.5%) of the teachers disagreed that they could motivate their students. With respect to whether the teachers believed they could implement alternative strategies for students with autism, 20 (39.2%) and 11 (21.6%) disagreed and neither agreed nor disagreed. Lastly 20 (39.2%) and 11 (21.6%) disagreed and agreed respectively that they could make students with autism do well in school. It can be deduced from the results that majority of the teachers believed they could not motivate students with autism, implement alternative strategies for students with autism or make students with autism do well in school. This indicates a low sense of perceived effectiveness on the part of majority of the teachers. This result conflicts with studies (Memisevic et al., 2021) that showed teachers were more eager to provide the assistance required to help their autistic students learn in a positive atmosphere and that they felt secure teaching students with autism.

For the purposes of triangulation, the teachers were also interviewed on their perceived effectiveness. Confidence in meeting the needs of students also emerged as a theme from the individual interviews conducted with the four respondents. The theme will be discussed below.

Confidence in Meeting the Needs of Students

Teachers’ level of confidence in meeting the needs of their students emerged as a theme under perceived effectiveness.

Teacher D revealed that:

“Since I started teaching the child with autism, he has improved a lot. He is benefiting from the regular school. He learns better habits in the school too.”

I like teaching people with autism. I can take care of them even though some other teachers cannot teach them” (Female participant, 35 years).

Teacher A commented as follows:

“It is not easy teaching the students, it is not our duty to teach them. They are not part of the schools, and we are just doing them a favour by admitting them, so there is nothing much that we can do for them. They do not benefit from school. But it is good that they are mixed with the other children, it helps them socialise” (Male participant, 29 years).

Teacher C also remarked that:

“The students have improved since they started school, but it is much better that a special teacher teaches them, regular teachers cannot teach them” (Female participant, 40 years)

It can be deduced from the response of teacher D that the teacher believes he or she could effectively teach his or her student. The teacher can bring significant improvement in his or her students' academic performance, making the teacher have a high sense of self efficacy and competence. The teacher even compares his or herself to other colleagues who cannot teach students with autism.

However, it can also be deduced from the responses of teacher A and C that even though the teachers disclosed the benefits of regular schooling on students with autism. The educators' views towards instructing autistic students were unfavourable, and they lacked confidence. It can also be deduced that they underestimated the benefits of schooling on students with autism, limiting the benefits to only being during peers without autism. This finding justifies (Stewart, Henderson, Michaluk, Deshler, Fuller and Rambo-Hernandez, 2020) affirmation that, how a person conducts him or herself is determined by what they believe they are capable of, rather than what they may be capable of accomplishing. So, because the teachers underestimated the students and believed it was not their responsibility to teach the students, they perceived that they could not do much in effectively teaching the students with autism, therefore the students will not benefit from school academically. The present results corroborate Amaireh's (2017) findings, which found that general education teachers with unfavourable views towards inclusion are less confident in their ability to carry out the necessary student-centred individualization plans. Cage, and Doyle, (2021) assertion that teachers who are confident in coping with students with autism expressed more positive attitudes about integrating children with autism in mainstream skills and verse versa, was supported with present study finding negative attitudes towards teaching students with autism contributes to low levels of perceived effectiveness. The results, however, conflict with Gregor and Campbell (2001) research found that mainstream teachers had positive attitudes about the advantages of integrating autistic students into regular classrooms and were considerably more confident in their ability to deal with typical autism behaviours. The results of this study are consistent with those of Byrd and Alexander (2020), who found that most general educators who work with children with impairments need more skills to address the requirements of their more special needs students effectively.

The findings also show that teacher D has a strong sense of confidence and personal efficacy. However, some of the teachers did not manifest confidence in teaching students with

autism. The findings also show that a strong sense of personal efficacy positively influences the performance of teachers. Teachers' perception of their ability to motivate students to learn is their efficacy (Özben & Kilicoglu, 2021). Educators who possess high levels of efficacy are professionals who believe they can achieve desired goals concerning student outcomes. Conversely, teachers with low levels of efficacy believe they cannot (Lera, León-Pérez, & Ruiz-Zorrilla, 2021). According to (Stewart et al., 2020), people will not be motivated to act in trying circumstances unless they think their activities will benefit them. Therefore, Baş (2022) made clear that highly effective teachers tend to be more receptive to new ideas, eager to try out novel approaches, dedicated to their craft, and forgiving of their pupils' mistakes.

RESEARCH HYPOTHESIS

Null Hypothesis H₀:

There will be no significant contribution of teachers' knowledge of autism towards their preparedness, skills, and perceived effectiveness in teaching students with autism.

Results for the Hypothesis

This section presents the results and discussion of the stated hypothesis. We illustrated the results using a multi-regression table and a Pearson product-moment correlation table. The researchers employed multiple regression analysis to uncover the unique variance of a variable that two or more variables can explain. For instance, the unique variance of teacher's knowledge elucidates their preparedness, skills, and perceived effectiveness in teaching students with autism. The Pearson product-moment correlation coefficient elucidates the relationship between two variables. Researchers apply Pearson r when measuring the same subjects on two variables, with the level of measurement on each variable being on an interval scale. This study uses Pearson r to further elucidate the multiple regression analysis by providing the relationship between each variable under study. We discussed the findings from both Table 2 and Table 3.

Table 2: Results of standard multiple regression analysis for teachers' preparedness, skills and perceived effectiveness as predictors to teachers' knowledge

| Variables | B | SE B | Beta β |
|-------------------------|---------|-------|---------|
| (constant) | 3.554 | 0.309 | - |
| Teachers' preparedness | - 0.123 | 0.114 | - 0.186 |
| Teachers' skills | - 0.118 | 0.156 | - 0.144 |
| Teachers' effectiveness | - 0.005 | 0.090 | - 0.009 |

Note: Adjusted R² = 0.030 *p < 0.05 F (3, 50) = 1.522, P = .221

SE, standard error; β, beta, R², coefficient of determination

This table presents results of the hypothesis using multiple analysis regression. The results from the table show that, teacher's knowledge of autism did not uniquely contribute towards their preparedness, skills, and effectiveness. Also, computed ANOVA analysis from the table indicated that there was no significant effect of the teacher's knowledge on their

preparedness, skills, and effectiveness [F (3, 50) = 1.522, P = .221]. Therefore, the alternative hypothesis (H1) was not supported by the findings of this study.

Table 3: Pearson Correlation matrix between teachers’ knowledge, teachers’ preparedness, teachers’ skills, and teachers’ effectiveness (N= 51)

| Variable | 1 | 2 | 3 | 4 |
|-----------------------------------|--------|---------|----------|---|
| 1. Teacher’s knowledge (constant) | - | | | |
| 2. Teacher’s preparedness | -.270* | - | | |
| 3. Teacher’s skills | -.257* | .585*** | - | |
| 4. Teacher’s effectiveness | -.125 | .250* | 0.484*** | - |

Note = *p< .05, ***p<.001

This table presents results of the relationship of the between the variables of study. The results from the table show that a negative but small relationship was found to exist between the teachers’ knowledge and teachers’ preparedness and teachers’ skills. These correlations were for teachers’ preparedness (r= -.270, p < .05) and teachers’ skills (r= -.257, p<.05). However, there was no significant relationship between teachers’ knowledge and effectiveness (r=-.125, p= ns).

The findings from the table also revealed that a strong positive correlation existed between teachers’ skills and their preparedness (r= .585, p <.05). A positive correlation was also found between teachers’ effectiveness and their skills (r = .484, p <.05) and a small but positive relationship between teachers’ effectiveness and their preparedness (r= .250, p <.001).

DISCUSSION

Regardless of resource limitations, the study's results, which align with earlier research Monsen et al. (2014), highlight the significance of instructors' attitudes and abilities in providing successful support for students with behavioural or emotional problems. The findings emphasise the need for focused professional development initiatives that improve teachers' competence, self-assurance, and understanding when instructing pupils with autism spectrum disorder (ASD) in mainstream Ghanaian classrooms. These programmes ought to focus on developing a favourable attitude towards inclusive education as well as the acquisition of specialist teaching skills. These kinds of interventions are essential for encouraging inclusive behaviours and raising the academic performance of Ghanaian students who have ASD. Furthermore, the research highlights the importance of continuous professional development and training for teachers, considering the dynamic character of education and the changing requirements of varied student bodies in regular classrooms.

Also, results of the study revealed that the teachers’ knowledge did not uniquely and significantly contribute towards their preparedness, skills and training, there by rejecting the alternative hypothesis. The Pearson r results also supported this finding when, a very small relationship was found to exist between teachers’ knowledge and preparedness and skills and when no relationship was found to exist between the teachers’ knowledge and their perceived effectiveness.

The above findings implies that the knowledge levels of the teachers who handled the students with autism was not enough and therefore did not significantly impact on their preparedness, skills, and perceived effectiveness in teaching students with autism. The results also implies that other factors may have also influenced the skills of the teachers, thus the teachers may have been using improvised knowledge and skills, other than knowledge and skills specific to autism. Conversely, since the teachers training and knowledge of autism were inadequate, their skills in teaching the students were also limited in nature. This finding was supported by Wolff, Jarodzka and Boshuizen (2021) who asserted that knowledge influences the decision teachers make about the appropriate course of actions to take to meet the needs of their students. The finding of the current study is in affirmation with the Bandura's Self efficacy theory on mastery experience, which is a determinant of self-efficacy. Lera, León-Pérez, and Ruiz-Zorrilla (2021) stressed that for individuals to gain mastery of a skill or experience they must have prior exposure (knowledge, training, and experience) about what they intend doing and apply the prior exposure continuously, which intends makes them skilled and effective. A teacher's mastery in his or her work will increase feelings of competence and self-efficacy. However, a teacher, who has little or no prior exposure of autism, can hardly translate their knowledge to reflect in their practices in teaching students with autism. This in turn will not help the students in class, thereby make the teacher feel less competent and have low self-efficacy in handling the students, as was revealed in the present study. The outcomes concur with Butakor et al.'s (2021) conclusion that inclusive education only helped a few impaired children in Ghana.

School officials' ignorance of inclusion caused this shortage, educators' negative attitudes, and a need for specialised teaching skills.

Even though knowledge did not uniquely contribute to the other variables of interest, small or no relationships was found to exist between some variable as mentioned above. The study revealed that a small but positive relationship exists between teachers' knowledge and their skills. This finding is consistent with research conducted by Bannister-Tyrrell et al. (2018), which provided new insights into the relationships between the sociodemographic characteristics of special education instructors and how well-prepared they felt to educate students with SD in inclusive classrooms. According to earlier research, which is in line with the results of this study, SETs who had more outstanding experience teaching students with disabilities also had higher levels of confidence when teaching in inclusive classrooms. This growth shows that SETs acquire new skills and information when instructing and training.

The study's findings also showed no appreciable relationship between the teachers' level of knowledge and their perception of their effectiveness in mainstreaming autistic students. This result aligns with a study conducted by Monsen et al. (2014) on teachers who demonstrate a more optimistic attitude and have better skills to work with students who have behavioural or emotional issues, irrespective of the resources available to them. According to Donohoo (2016), teachers with high levels of efficacy put up more effort and perseverance, are open to experimenting with different teaching strategies, and pay more attention to the needs of their less-progressing students. The study's findings, which revealed a substantial relationship between teaching self-efficacy and course level and students' perceptions of teachers'

competence and respect and teachers' assessments of students' qualities, validated the claim made by Miller, Ramirez, & Murdock (2017) in their studies.

CONCLUSION

The findings of this study highlight the complex landscape of teaching students with autism spectrum disorder (ASD) in Ghanaian mainstream schools. Despite efforts to promote inclusive education policies, teachers' perceived effectiveness in teaching students with ASD remains uncertain. Many teachers expressed doubts about their ability to motivate students with autism, implement alternative strategies, and facilitate their academic success. These findings underscore the need for targeted interventions to enhance teachers' confidence and competence in supporting students with ASD effectively. Moreover, interviews revealed varying levels of confidence among teachers, with some expressing optimism about their ability to meet the needs of students with autism, while others exhibited negative attitudes and low confidence. Addressing these disparities in teachers' beliefs and attitudes is crucial for fostering inclusive learning environments where students with ASD can thrive. While the study did not find a significant contribution of teachers' knowledge of autism to their preparedness, skills, and perceived effectiveness, it identified small but significant relationships between certain variables. For instance, there was a positive correlation between teachers' skills and their preparedness, as well as between teachers' skills and their perceived effectiveness. These findings underscore the importance of continuous professional development and training to equip teachers with the necessary skills to support students with autism effectively. By enhancing teachers' knowledge, skills, and confidence, and fostering positive attitudes towards inclusive education, it is possible to create more supportive and inclusive learning environments for students with ASD, thereby promoting their holistic development and well-being in Ghanaian mainstream schools.

RECOMMENDATION

The study suggests implementing focused professional development initiatives to enhance teachers' expertise, confidence, and understanding in teaching students with ASD in mainstream Ghanaian schools.

Implication

One implication of the findings from this study is the urgent need for policy interventions and resource allocation to support teachers in Ghanaian mainstream schools who are teaching students with autism spectrum disorder (ASD).

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Data sharing statement: Data supporting the findings and conclusions are available upon request from the corresponding author.

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