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Profiling Teachers' Knowledge and Use of Evidence-Based Practices in Ghanaian Inclusive Classrooms

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ABSTRACT

This study profiles the knowledge and utilisation of evidence-based practices (EBPs) among basic school teachers in the Effutu Municipality, with a particular focus on their application in inclusive classrooms. A total of 480 teachers participated, responding to a carefully developed questionnaire that assessed both their understanding and instructional use of EBPs. The results indicated that, on average, teachers possessed a high level of knowledge of EBPs, with mean scores for all EBPs exceeding the criterion mean of 2.50. Furthermore, a relatively even distribution was observed between teachers reporting low (50.2%) and high (49.8%) usage of EBPs in their instructional methods. The independent sample t-test results revealed no statistically significant difference between male and female teachers' knowledge of EBPs and their reported use of EBPs. The findings suggest that basic school teachers use EBPs in inclusive classrooms. However, the distribution of usage levels highlights the need for tailored professional development programmes, peer collaboration, monitoring mechanisms, and resource allocation to enhance the quality and consistency of inclusive education practices.

Keywords: disability inclusive development, inclusive classrooms, evidence-based practices, knowledge, use, Ghana

INTRODUCTION

Background to the Study

Every learner deserves attention and care from their teachers or those mandated to guide their learning process. As such, it is a requirement for teachers to have the necessary skills and abilities to deal with all learners, regardless of their age and abilities (Binkley et al., 2012; Shutaleva et al., 2023; Zamora & Zamora, 2022). Generally, teachers frequently rely on established and widely employed practices and strategies,

drawing from their own experiences as well as those of their mentors without critically examining the empirical basis for these approaches (Care et al., 2018). Some studies have demonstrated that certain practices have demonstrated ineffectiveness or lack empirical evidence to substantiate their efficacy (Culyer et al., 2018; Yu & Jen, 2020). Numerous educational institutions globally have implemented a zero-tolerance policy on any form of classroom situation that marginalise learners (Santiago-Rosario et al., 2024). This is for the fact when marginalisation is accepted or encouraged in classrooms, it brings about inefficacy and negative learning outcomes on the part of those affected (Gaffney et al., 2021; Lacoe & Steinberg, 2018).

In order to enhance the calibre of teachers in the teaching and learning setting and the resultant achievements of learners, the field of education has diligently endeavoured over a significant period to incorporate evidence-based practices (EBPs). EBPs are scientifically proven skills, techniques, and strategies that are applied in the teaching and learning setting. In the process of meeting the needs of diverse learners, several evidence-based practices are proposed for teachers to use in engaging learners with disabilities (Cook et al., 2009). These evidence-based practices are often aligned with the field of special education and inclusive classrooms (Alhossein, 2021). In addition, these EBPs have been adopted into universal learning designs that accommodate and help hone the needs and abilities of all learners (Navaitienė & Stasiūnaitienė, 2021; Rogers-Shaw et al., 2018; Salend & Whittaker, 2018). Extant literature indicates that the implementation of evidence-based practices with fidelity has resulted in significant improvements in student performance, irrespective of their peculiarities (Alatifi et al., 2023; Combs et al., 2022). Furthermore, literature shows that the utilisation of evidence-based practices is a fundamental approach for attaining favourable results for learners, including individuals with diverse needs (Mursi & Sulaimani, 2022; Steinbrenner et al., 2020; Wong et al., 2015).

Regrettably, identifying and selecting an appropriate EBP in teaching is difficult for teachers due to their knowledge level or understanding of those EBPs and how they are used. Alhossein (2021) asserts that the extent to which teachers possess knowledge of evidence-based practices in teaching students in an inclusive learning environment serves as a crucial determinant of their utilisation of these practices. According to Alatifi et al. (2023), it is crucial for students' success to possess knowledge regarding the effectiveness and research-based backing of evidence-based practices in the classroom. This perspective aligns with other empirical investigations. For example, Paynter and Keen (2015) as well as Paynter et al. (2017) discovered that possessing substantial understanding of evidence-based practices by teachers help in managing diverse behaviours of their students. Furthermore, teachers surveyed in the United States indicated that they employ a combination of evidence-based practices and other traditional practices (Basckin et al., 2021; Merle et al., 2022). It is worth noting that only a limited number of these practices possess a certain degree of empirical support (Stahmer et al., 2019).

Similarly, in a study conducted by Khodari (2019) among educators in Saudi Arabia, it was discovered that teachers who worked with children diagnosed with autism spectrum disorder (ASD) possessed a limited to moderate understanding of evidence-based practices pertaining to the enhancement of communicative, social, and behavioural skills in students with ASD. According to the findings of Barry et al. (2022), educators exhibited little proficiency in and utilisation of evidence-based practices. However, the teachers demonstrated a high level of expertise in traditional teaching approaches (e.g., unified teaching curriculum), which are considered unsupported practices. In contrast, the research conducted by Paynter and Keen (2015) revealed that teachers exhibited a higher level of familiarity with and application of evidence-based practices in comparison to emergent and unsupported practices. Furthermore, their study demonstrated a positive association between knowledge and utilisation of EBPs, which remained consistent regardless of any notable associations with organisational culture and attitudes.

In light of existing scholarship on evidence-based practices (EBPs), it is necessary to engage with the literature on gender differences because gender has been repeatedly identified as a potential explanatory variable in teachers' professional knowledge, pedagogical decision-making, and responsiveness to educational

innovations. The inclusion of gender-related literature is therefore not incidental but theoretically and empirically justified, particularly within discussions of behavioural management and inclusive instructional practices. Beyond teachers' general knowledge of EBPs, prior research has highlighted an ongoing debate regarding gendered differences in teachers' abilities, capacities, and confidence in implementing educational reforms, including EBPs. This debate has been especially prominent in studies examining behaviour management in mainstream and inclusive classrooms, where instructional demands and emotional labour often differ by role expectations and professional socialisation. As such, reviewing gender-focused studies provides an important lens for understanding variability in EBP adoption and implementation.

Empirical evidence supports the relevance of this line of inquiry. For example, Alhossein (2021), in a study conducted in Saudi Arabia, reported significant gender differences in teachers' knowledge and utilisation of EBPs, with female teachers demonstrating higher levels of both knowledge and reported use compared to male teachers. Findings such as these suggest that gender may influence access to training opportunities, engagement with professional learning, or pedagogical orientations toward inclusive and behaviour-focused interventions. However, the literature also reveals inconsistencies across contexts, with some studies reporting gender-based differences and others finding no statistically significant effects. This variability underscores the need for continued examination of gender within different educational systems and cultural settings. Including this literature therefore establishes a clear empirical and theoretical gap, justifying the present study's examination of gender as a variable while avoiding assumptions of universality.

The results of the study indicated that female teachers exhibited a higher level of knowledge regarding evidence-based practices compared to male teachers. Additionally, female teachers reported a greater utilisation of EBPs compared to male teachers. This difference was also found to be statistically significant with a large effect size. Likewise, a study conducted by Ananga (2021) examined the utilisation of gender-responsive pedagogy by tutors and saw notable advancements in the application of this pedagogical approach by both male and female tutors in 2018. In the year 2015, a small proportion of male tutors (1.8%) exhibited gender-responsive pedagogy. In 2017, a significant proportion of male tutors (46%) exhibited the implementation of gender-responsive pedagogy in their instructional practices. This percentage increased further in 2018, with over half (68%) of male tutors demonstrating the use of gender-responsive pedagogy in their teaching methodologies. The study found that there was a significant increase in the application of gender-responsive pedagogy among female tutors, with the percentage rising from 3.6% in 2015 to 64.4% in 2018. Although prior research has documented changes in teachers' adoption of gender-responsive pedagogy over time, important gaps remain in how teachers' gender is theorised and analysed. Existing studies reporting increases in the proportion of male tutors demonstrating gender-responsive pedagogy tend to focus primarily on descriptive trends rather than explanatory mechanisms (Miralles-Cardona, 2025; Rarieya et al., 2024; Wango et al., 2024). While these studies illustrate progress, they do not sufficiently explain why such changes occurred or how gender interacts with professional learning, institutional policy, and pedagogical practice. Specifically, much of these prior research treats teachers' gender as a binary demographic variable, reporting percentages and comparative gains without examining the processes through which gender shapes access to training, pedagogical confidence, or responsiveness to reform initiatives. As a result, increases in gender-responsive pedagogy are often attributed to time or policy change, rather than to differentiated professional experiences, mentoring opportunities, or organisational expectations that may affect male and female teachers differently.

Moreover, prior studies rarely interrogate within-gender variation, implicitly assuming that male and female teachers form homogeneous groups. This overlooks how experience, subject specialisation, school context, leadership roles, and exposure to professional development may mediate the relationship between gender and pedagogical practice. Another critical gap is the lack of integration between gender-responsive pedagogy and evidence-based practices (EBPs) in prior research. While gender responsiveness is often examined in isolation, it appears less is known about how teachers' gender influences the knowledge, selection, and application of

EBPs, particularly in inclusive or behaviour-focused classroom contexts. This separation limits understanding of how gendered professional identities intersect with evidence-based instructional decision-making.

The Study Context

In the case of Ghana, the educational system hovers around inclusive education (Deku & Vanderpuye, 2017), supported by the inclusive education policy (Ametepee & Anastasiou, 2015; Nketsia et al., 2016; Opoku et al., 2015) and the Government of Ghana Act (Government of Ghana, 2008, p. 5). Based on these, teachers are required to practice inclusive education, where every student needs are met. However, in Ghana there are reported cases that most teachers lack prerequisite training on inclusive education, where most of the EBPs are applied (Gomda et al., 2022; Naami & Mort, 2023), thereby compelling them to resort to the generic traditional methods. This development, in part is caused by the lack of curriculum in the realm of EBPs. In mitigating this challenge, several non-profit institutions (e.g. hope autism foundation, autism compassion Africa, autism awareness care etc.) have consistently, advocated for teacher preparatory programmes that include evidence-based practices and strategies that can be used to train students with diversities in the inclusive learning settings (Naami et al., 2023).

In Ghanaian inclusive classrooms, there exists a pressing concern regarding the knowledge and utilisation of evidence-based practices among teachers, specifically those working with basic school students (Atakro et al., 2020; Gooden & Rous, 2018; Kaseka & Mbakaya, 2022; Yiridomoh et al., 2020). The effective implementation of inclusive education is contingent upon teachers' ability to employ EBPs, which have been proven to enhance learning outcomes and support diverse student populations (Alshehri, 2022). However, a notable gap exists in understanding the extent to which Ghanaian teachers in these specific grade levels possess the necessary knowledge of EBPs and effectively integrate them into their instructional practices (Almutairi, 2022; Antwi & Palaganas, 2023). This knowledge gap poses a significant challenge to the quality of inclusive education in Ghana and raises questions about the overall effectiveness of inclusive classroom environments.

In addition, it is alluded to that many teachers in Ghanaian basic schools may lack adequate awareness or training in evidence-based practices (EBPs), which can hinder effective support for learners with diverse needs (Knochel et al., 2021; Naami & Mort, 2023). Even when teachers know about EBPs, their implementation is often inconsistent, raising concerns about how regularly and effectively these practices are integrated into classroom routines. Limited use of EBPs may negatively affect learning outcomes, especially for children with disabilities or special educational needs. Challenges also intersect with gender-related inequities in access and inclusivity within the education system. Resource constraints such as insufficient training, instructional materials, and support services further complicate EBP implementation and are often worsened by unequal regional resource distribution (Kallam et al., 2018; Watkins et al., 2024). Additionally, gaps in educational policies and professional development opportunities contribute to the problem (Salend & Whittaker, 2018). Assessing these systemic issues is crucial to understanding the barriers to EBP adoption. To address these complex issues, there is a need for comprehensive research aimed at profiling the current state of teachers' knowledge and utilisation of EBPs in Ghanaian inclusive classrooms. This research can provide valuable insights into the gaps and challenges that need to be addressed at the individual, institutional, and policy levels to improve the quality and inclusivity of education in Ghana. Based on the issues raised above, the following questions were addressed:

1. What is the knowledge level of basic school teachers in EBP in teaching in Ghana?

2. To what extent do basic school teachers use EBPs in teaching in Ghana?

3. Does the gender of teachers have an influence on the knowledge level and use of EBPs in teaching in Ghana?

METHOD

Research Design and Participants' Selection

The study employed a cross-sectional survey design as the respondents were in several circuits and the data were collected at the same period. In the line with study's aim, the design was used to obtain a snapshot of the status of teachers' knowledge on EBPs and make immediate comparisons with existing studies and literature. The respondents for the study were recruited using the simple random sampling technique, specifically the table of random numbers. In all, we recruited 480 (N=3,875) basic school teachers in the Effutu Municipality, Ghana. The respondents had a mean age of 34.75 years with a standard deviation of 6.73 years. All the respondents majored in education and have been teaching in inclusive classrooms. All these teachers were trained as general education teachers for all learners in Ghanaian schools. Regardless of the learners they engage, the teachers teach all subject areas at the basic school levels, with their experience in teaching ranging from 1 to 30 years. This shows that most of these teachers have between 1 and 10 years of teaching experience (**Table 1**).

Data Collection Instruments

The researchers in the present study involved conducting comprehensive literature research and developed an instrument titled 'Teachers' Knowledge and Utilisation of Evidence-Based Practices' with 26-items. The items on the developed instrument were presented in statement format and assessed using a four-point Likert scale, with responses ranging from strongly disagreeing (1) to strongly agreeing (4). The instrument was taken through a rigorous evaluation process by experts in the field of student diversity and inclusivity, including professors and faculty members. Again, the instrument demonstrated satisfactory alignment with the existing literature (Paynter & Keen, 2015; Paynter et al., 2017). Their expertise was utilised to assess the suitability of the statements and to provide scores for the participants' responses. The estimated duration for completing the survey was between 20 and 30 minutes. The internal consistencies of the scales were determined for both the knowledge of evidence-based practices (α=.88) and the use of evidence-based practices (α=.79).

Table 1. Demographic Information of Teachers

Gender	Frequency	Percent
Male	270	56.3
Female	210	43.8
Total	480	100.0
Teaching Experience		
1- 5 years	160	33.3
6- 10 years	200	41.7
11- 15 years	74	15.4
16- 20years	20	4.2
21- 25 years	14	2.9
26- 30 years	12	2.5
Total	480	100.0

The instrument was used to collect demographic data such as gender, age, and years of teaching experience. Additionally, the instrument was used assessed the extent to which teachers had knowledge about and employed evidence-based practices in classrooms. Upon determining that the internal consistencies were regarded as acceptable, it was assumed that clear that the data generated were dependable and capable of fulfilling the criteria for data validation.

Data Collection Procedures

Prior to the commencement of data collection, the researchers sought ethical approval (College of Education Ethics Board, University of Cape Coast) for their study, as the data sources involved were individuals of the human species. Following the submission of the necessary documentation, the researchers received the required approval to proceed with their study. The exercise was communicated to the management of schools in advance, ensuring that the teachers were aware of it. The participants have an equivalent level of understanding regarding the purpose of the research. The participants' identities were protected through anonymization, and they were provided with assurances regarding the confidentiality of their data and the ability to withdraw from the study if desired. The data collection was done by the researchers, and this occurred between June 2023 and December 2023.

Data Analysis Procedures

In all, 480 filled questionnaires were retrieved and applied in the analysis. The obtained data were systematically assigned serial numbers and organised based on their level of completeness. The data were input into the Statistical Package for the Social Sciences Version 23 for the purpose of analysis. Following the completion of data entry, the data met the assumption of normality, as the values for both skewness (-.353) and kurtosis (.796) were within the required –2 and +2 and–7 and +7, respectively (Hatem et al., 2022). The questions were answered by employing measures of central tendency and variability, specifically means and standard deviations (**Table 2**). Additionally, the gender difference was examined using the independent sample t-test.

RESULTS AND DISCUSSION

This section provides information about the gender distribution of the teachers participating in the study. It also provides information about the distribution of teachers based on their years of teaching experience. **Table 1** presents the results. From **Table 1**, the participants comprised general education teachers drawn from the pre-tertiary school level, representing diverse teaching branches and subject specializations, rather than exclusively trained in inclusive or special education backgrounds. None of the participants were graduates of inclusive education programmes; instead, they were regular classroom teachers who had encountered learners with special needs within mainstream school settings and taught core curriculum subjects appropriate to their respective levels. In terms of demographics, 56.3% of the teachers were male, while 43.8% were female, indicating a slightly higher representation of male teachers among those who reported experience teaching learners with special needs. Regarding teaching experience, the majority of respondents fell within the 1–5 years (33.3%) and 6–10 years (41.7%) categories, suggesting that many of the teachers who had interacted with learners with special needs were in the early to mid-stages of their professional careers.

Knowledge Levels of Basic School Teachers in EBPs

The provided **Table 2** presents the means (M) and standard deviations (SD) for basic school teachers' knowledge in evidence-based practices related to inclusive education. The analysis was performed on 26-

items. The criterion mean for individual item interpretation is set at 2.50. The 2.50 criterion was arrived at by computing the average midpoint from the scale values. This, 1+2+3+4=10/4=2.50. **Table 2** presents the results.

Table 2 summarises the teachers' knowledge of various inclusive education practices. Each practice is listed along with its mean and standard deviation. A decision of whether the mean score for each practice is above or below is determined by the criterion mean of 2.50.

Specifically, respondents reported a high level of knowledge in the application of exercise-based strategies within inclusive practice (M = 3.42, SD = 0.74). This suggests that physical activity–related interventions are among the most familiar and commonly applied approaches in inclusive classrooms. Closely following this, respondents demonstrated strong knowledge of reinforcement strategies (M = 3.34, SD = 0.79), highlighting confidence in the use of reward-based techniques to encourage desirable behaviours. In a similar vein, participants indicated substantial understanding of self-management strategies (M = 3.27, SD = 0.68), reflecting awareness of approaches that foster learner independence and self-regulatory skills. Alongside this, knowledge of social skills training was also rated relatively high (M = 3.26, SD = 0.72), underscoring familiarity with interventions aimed at improving interpersonal competence among learners with diverse needs. ving slightly downward in the ranking, respondents demonstrated moderate knowledge of task analysis (M = 3.23, SD = 0.77), indicating an understanding of how complex tasks can be systematically broken down to support learner success.

Table 2. Illuminating the Tapestry of Teachers' Expertise in Evidence-Based Practices

Statements	Mean	SD
I know the application of Exercise in my inclusive practice	3.42	.74
I know the application of Reinforcement in my inclusive practice	3.34	.79
I know the application of Self-management in my inclusive practice	3.27	.68
I know the application of Social skills training in my inclusive practice	3.26	.72
I know the application of Task analysis in my inclusive practice	3.23	.77
I know the application of Technology-aided instruction and intervention in my inclusive practice	3.21	.82
I know the application of Visual support in my inclusive practice	3.21	.80
I know the application of Structured play group in my inclusive practice	3.20	.79
I know the application of Modelling in my inclusive practice	3.20	.82
I know the application of social narratives in my inclusive practice	3.19	.73
I know the application of cognitive behavioural intervention in my inclusive practice	3.17	.71
I know the application of peer-mediated instruction and intervention in my inclusive practice	3.14	.81
I know the application of antecedent-based intervention in my inclusive practice	3.13	.79
I know the application of differential reinforcement of alternative, incompatible, or other behaviour in my inclusive practice	3.13	.78
I know the application of video modelling in my inclusive practice	3.09	.80
I know the application of picture exchange communication system in my inclusive practice	3.08	.82
I know the application of functional behaviour assessment in my inclusive practice	3.07	.79
I know the application of extinction in my inclusive practice	3.05	.77
I know the application of discrete trial teaching in my inclusive practice	3.05	.87
I know the application of scripting in my inclusive practice	3.03	.86
I know the application of prompting in my inclusive practice	3.02	.82
I know the application of time delay in my inclusive practice	3.01	.87
I know the application of functional communication training in my inclusive practice	2.99	.80
I know the application of response interruption/redirection in my inclusive practice	2.97	.79
I know the application of naturalistic intervention in my inclusive practice	2.96	.87
I know the application of pivotal response training in my inclusive practice	2.88	.86
Mean of Means	3.13	.80

Similarly, participants reported moderate familiarity with technology-aided instruction and intervention (M = 3.21, SD = 0.82), suggesting growing but not yet advanced competence in leveraging digital and assistive technologies for inclusive teaching. Along the same lines, knowledge of visual supports (M = 3.21, SD = 0.80) was rated at a comparable level, reflecting awareness of visual tools that structure learning and enhance comprehension. Additionally, participants reported moderate understanding of structured play groups (M = 3.20, SD = 0.79), highlighting recognition of play-based strategies as vehicles for social and cognitive development.

Furthermore, respondents indicated similar levels of knowledge regarding modelling techniques (M = 3.20, SD = 0.82) and social narratives (M = 3.19, SD = 0.73), suggesting that demonstration and story-based approaches are reasonably well understood, though not yet mastered. In parallel, knowledge of cognitive behavioural interventions was also moderate (M = 3.17, SD = 0.71), pointing to basic familiarity with strategies targeting thoughts and behaviours. As the results progress toward more specialized practices, a gradual decline in mean scores becomes evident. For instance, participants reported moderate knowledge of peer-mediated instruction and intervention (M = 3.14, SD = 0.81), as well as antecedent-based interventions (M = 3.13, SD = 0.79). Likewise, understanding of differential reinforcement of alternative, incompatible, or other behaviour was rated at a similar level (M = 3.13, SD = 0.78), indicating awareness but potentially limited depth of application.

Transitioning to more technical intervention strategies, respondents demonstrated slightly lower knowledge of video modelling (M = 3.09, SD = 0.80) and the Picture Exchange Communication System (PECS) (M = 3.08, SD = 0.82). This suggests that while these evidence-based practices are known, they may be less frequently used or require additional training for effective implementation. Continuing this downward trend, participants reported modest understanding of functional behaviour assessment (M = 3.07, SD = 0.79) and extinction procedures (M = 3.05, SD = 0.77), indicating partial familiarity with behaviour-analytic approaches. Similarly, knowledge of discrete trial teaching (M = 3.05, SD = 0.87) and scripting techniques (M = 3.03, SD = 0.86) remained moderate but comparatively lower, reflecting limited exposure to highly structured instructional methods.

Moreover, respondents indicated modest levels of knowledge regarding prompting strategies (M = 3.02, SD = 0.82) and time delay techniques (M = 3.01, SD = 0.87), suggesting basic awareness without extensive proficiency. In a similar manner, understanding of functional communication training was slightly below the overall mean (M = 2.99, SD = 0.80), pointing to emerging rather than consolidated knowledge. Finally, the lowest mean scores were observed for response interruption and redirection (M = 2.97, SD = 0.79), naturalistic interventions (M = 2.96, SD = 0.87), and pivotal response training (M = 2.88, SD = 0.86). These findings indicate that participants are least familiar with more complex, integrative, and individualized intervention approaches, which often require advanced training and sustained practice. Taken together, the mean of means (M = 3.13, SD = 0.80) reflects a high level of knowledge across inclusive instructional and behavioural strategies. This suggests that while participants possess a solid foundational understanding of inclusive practices.

Basic School Teachers' Use of EBP in Teaching

The aim was to ascertain whether teachers use EBPs in their inclusive learning environments. The analysis was based on 26 items, and the data highlight the distribution of teachers' usage of EBPs. The same items were employed for the use of EBPs because knowing or understanding any of the strategies is different their application in the classroom. The results were expressed in terms of frequency and percentage through the process of visual binning. Visual binning was used purposely to convert the continuous data into discrete categorical groups of low, moderate, and high in EBPs use. **Table 3** presents the results. From **Table 3**, among the 480 surveyed teachers, it is revealed that there is a relatively even distribution between those who reported low usage of evidence-based practices and those who reported high usage of evidence-based practices.

Table 3. Teachers' Use of EBP in Teaching Learners

Knowledge Levels	Frequency	Percent
Low Usage of Evidence-Based Practices	241	50.2
High Usage of Evidence-Based Practices	239	49.8
Total	480	100.0

Out of the total sample of 480, 241 teachers, representing approximately 50.2% of the respondents, indicated that they employ EBPs to a lesser extent in their instructional methods for students. Conversely, the remaining 239 teachers, constituting about 49.8% of the respondents, reported a high usage of EBPs in their teaching practices for students. This distribution sheds light on the variation in approaches taken by basic school teachers in integrating evidence-based strategies when working with students with diverse needs. The fact that the proportions are almost evenly split between low and high usage suggests a diversity of practices and potentially different levels of familiarity or training in EBPs among the surveyed teachers.

In this regard, it is important to note that these findings could have significant implications for education policymakers and school administrators. Identifying the factors that contribute to higher usage of EBPs can help in designing targeted professional development programs, resources, and support for teachers who may benefit from further training in evidence-based approaches. Similarly, understanding the reasons behind lower usage can help address potential barriers and gaps in knowledge, ultimately fostering an inclusive and effective learning environment for students.

Differences in Knowledge and Use of EBPs based on Gender of Teachers

An independent samples t-test was conducted to examine potential differences between male and female basic school teachers in terms of their knowledge of evidence-based practices and their reported use of EBPs. Descriptive statistics and t-test results are presented in **Tables 4 a**nd **5**, respectively. **Table 4** presents the descriptive statistics for the two constructs. For the knowledge of evidence-based practices construct, male teachers (N = 270) had a mean score of 80.60 (SD = 9.84), while female teachers (N = 210) had a slightly higher mean score of 82.25 (SD = 9.62). For the use of evidence-based practices construct, male teachers (N = 270) had a mean score of 75.44 (SD = 11.49), and female teachers (N = 210) had a mean score of 76.86 (SD = 10.82).

Table 5 presents the results of Levene's Test for Equality of Variances, which assesses the assumption of equal variances between the two groups. The Levene's test results show that for both constructs, the p-values are greater than .05, indicating that the assumption of equal variances was met. The independent samples t-test results reveal that for the knowledge of EBPs construct, the t (478) = -1.85, p>.065, 2-tailed) and the 95% confidence interval of the difference in means ranged from -3.42 to 0.11. Similarly, for the use of the EBPs construct, the [t (478) = -1.38, p>.170, two-tailed], and the 95% confidence interval of the difference in means ranged from -3.44 to 0.61.

Table 4. Descriptive Statistics

Constructs	Sex	N	Mean	SD
Knowledge of Evidence-Based Practices	Male	270	80.60	9.84
	Female	210	82.25	9.62
Use of Evidence-Based Practices	Male	270	75.44	11.49
	Female	210	76.86	10.82

Table 5. Test of Difference

Constructs		Levene's Test for Equality of Variances		t-test for Equality of Means			95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Lower	Upper
Knowledge of EBPs	Equal variances assumed	.588	.444	-1.85	478	.065	-3.42	.11
	Equal variances not assumed			-1.85	453.9	.065	-3.41	.10
Use of EBPs	Equal variances assumed	.181	.671	-1.38	478	.170	-3.44	.61
	Equal variances not assumed			-1.39	460.9	.166	-3.43	.59

In both cases, since the p-values are above the conventional alpha level of .05, there was no statistically significant difference between male and female teachers' knowledge of EBPs and their reported use of EBPs.

DISCUSSION

The study sought to establish teachers' knowledge and use of evidence-based practices**.** The study results offer valuable insights into the level of knowledge and utilisation of evidence-based practices among basic school teachers, with a focus on their application in inclusive education settings. In terms of teachers' level of knowledge in EBPs, the mean scores for all different EBPs are reported to be above the criterion mean of 2.50, indicating that the teachers generally have a strong understanding of these practices. The relatively low standard deviations, which imply consistency in their understanding, support this. This aligns with the findings of Alatifi et al. (2023), Paynter and Keen (2015), and Paynter et al. (2017), who also observed that educators possess substantial knowledge of EBPs and tend to use them.

Regarding teachers' use of evidence-based practices (EBPs), the findings indicate that approximately half of the teachers report limited use. This pattern suggests considerable variability in instructional practice rather than a uniform level of EBP implementation. One plausible explanation for this result is differences in teachers' access to formal training, ongoing professional development, and practical exposure to EBPs. Teachers who have received targeted training or mentorship in EBPs may feel more confident and thus report higher levels of use, whereas those with limited training may rely on partial or informal implementation.

In addition, contextual constraints such as workload demands, classroom complexity, availability of resources, and institutional support may influence the extent to which teachers are able to apply EBPs consistently. Even when teachers possess foundational knowledge, time limitations and competing instructional priorities may restrict full implementation. As such, the observed variation in EBP use may reflect not resistance or lack of commitment, but rather structural and practical challenges within inclusive educational settings.

The present findings are largely consistent with Stahmer et al. (2019), who noted that teachers tend to adopt EBPs to varying degrees depending on their level of understanding, training experiences, and perceived feasibility within their classrooms. Similarly, the current study aligns with Alatifi et al. (2023), who emphasised that teachers' knowledge of the empirical effectiveness and research foundations of EBPs is a critical determinant of their successful use. These convergences reinforce the idea that EBP implementation exists along a continuum rather than as a binary practice.

However, some differences also emerge when comparing the current findings with prior research. While Paynter and Keen (2015) reported a strong positive association between teachers' knowledge and EBP utilisation regardless of organisational culture and attitudes, the present study suggests a more nuanced relationship. Specifically, despite moderate levels of reported knowledge, a substantial proportion of teachers still indicated limited use of EBPs. This discrepancy may point to contextual factors (e.g., limited coaching, insufficient materials, or lack of administrative support) that weaken the translation of knowledge into consistent practice.

Furthermore, the findings indirectly suggest that some teachers may be integrating EBPs alongside non-evidence-based or unsupported practices. This hybrid approach may stem from attempts to adapt interventions to local classroom realities or from incomplete understanding of EBP fidelity requirements. While such adaptation may reflect teacher creativity and responsiveness, it also raises concerns about the integrity and effectiveness of implementation, particularly in inclusive settings where fidelity is often crucial for learner outcomes. This aligns with the findings of Barry et al. (2022) regarding educators' proficiency in traditional teaching approaches, which may not always align with evidence-based strategies. This highlights a potential area for improvement in teacher training and professional development. In addition, the study results suggest that there is variability in teachers' knowledge and utilisation of EBPs. This could be influenced by various factors, such as training, professional development opportunities, and individual preferences. Understanding this variability is essential for designing targeted interventions and providing support for teachers to enhance their utilisation of EBPs.

The study found no difference between male and female teachers regarding their knowledge and use of EBPs. In practical terms, the findings imply that there is no evidence to suggest that gender plays a significant role in influencing teachers' knowledge of EBPs or their reported use of EBPs. While the present study did not find a statistically significant gender difference in teachers' knowledge and use of evidence-based practices (EBPs), this finding should be interpreted with caution. Importantly, the absence of statistical significance does not imply the absence of meaningful differences in practice, nor does it definitively rule out the influence of other contextual and individual factors. Variables such as professional training, years of teaching experience, access to professional development opportunities, school culture, and personal pedagogical preferences may play a substantial role in shaping teachers' knowledge and application of EBPs and could potentially mask gender-related effects within the current sample.

In this respect, the findings of the present study differ from those reported by Alhossein (2021), whose research found a significant gender difference in both knowledge and utilization of EBPs. Specifically, Alhossein found that female teachers demonstrated higher levels of knowledge and reported greater use of EBPs than their male counterparts. The divergence between the two studies may be attributable to contextual differences, including variations in teacher preparation programs, cultural expectations regarding gender roles in teaching, institutional support structures, and access to specialized training in EBPs across educational systems.

Nevertheless, there is also an important point of convergence between the two studies. Both the present study and Alhossein (2021) highlight that teachers' engagement with EBPs is not determined by gender alone but is embedded within broader systemic and professional contexts. This suggests that gender effects, where present, may be indirect or mediated by factors such as training quality, policy emphasis on inclusive practices, and ongoing professional learning opportunities. Consequently, the lack of a significant gender difference in the current study should not be interpreted as conclusive evidence against gender-related influences but rather as an indication that such influences may be context-dependent and intertwined with other explanatory variables.

CONCLUSION

This study concludes that teachers' knowledge and use of evidence-based practices (EBPs) in inclusive settings are neither uniform nor definitive, but instead vary meaningfully across teacher cohorts. While overall levels of knowledge suggest a high understanding of EBPs, the observed low use of EBPs, and differences in depth of understanding indicate that knowledge alone does not automatically translate into consistent or extensive implementation. Importantly, the absence of statistically significant differences in some areas should not be interpreted as conclusive evidence of uniformity, as such results do not preclude the influence of other explanatory factors. The findings further suggest that variation in exposure to training, professional experience, and contextual support structures may account for disparities in EBP knowledge and utilisation. Consistent with existing literature, the study reinforces the notion that teachers' engagement with EBPs exists along a continuum, shaped by access to sustained and contextually relevant professional development. At the same time, differences between the present findings and prior studies conducted in other contexts highlight that gender, training opportunities, and institutional conditions may interact differently across educational systems, underscoring the importance of contextual sensitivity in interpreting EBP research. In addition, the study offers new insight by demonstrating that a substantial proportion of teachers employ EBPs alongside unsupported or partially implemented practices. This hybrid pattern of use suggests that teachers may be adapting interventions to meet classroom demands or compensating for gaps in formal training. While such adaptation reflects professional agency, it also raises concerns about fidelity and effectiveness, reinforcing the need for continuous instructional support and coaching.

RECOMMENDATIONS FOR POLICY AND PRACTICE

Given the diverse knowledge levels identified among teachers in the study, it is imperative for policymakers and educational institutions to design and implement nuanced professional development initiatives. These programs should be tailored to build upon teachers' existing knowledge, emphasizing advanced strategies and the latest research in inclusive education. By doing so, educators can engage in continuous improvement, aligning their practices with evolving educational paradigms.

Heads of basic schools in the study area are encouraged to play a pivotal role in fostering a collaborative culture. Specifically, they should promote peer collaboration and actively encourage mentoring relationships within schools. Experienced teachers with high expertise in evidence-based practices can serve as mentors to their colleagues, creating a dynamic culture of continuous learning and the exchange of best practices.

The study underscores the importance of establishing robust mechanisms for monitoring and assessing inclusive education practices. This involves engaging in regular evaluations, classroom observations, and feedback loops to ensure the consistent application of EBPs. Educational institutions should invest in structures that support ongoing assessments, providing valuable insights for refining teaching methodologies.

To empower teachers in implementing EBPs effectively, there is a need for the strategic allocation of resources. Policymakers and school administrators should prioritize providing teachers with access to specialized training materials, assistive technology, and support staff to accommodate diverse student needs. This resource allocation is fundamental to creating an inclusive educational environment that aligns with the principles of evidence-based teaching.

SUGGESTIONS FOR FUTURE RESEARCH

Building on the findings of this study, future research should adopt multivariate and mixed-methods approaches to examine how factors such as professional training, years of teaching experience, institutional

support, and personal pedagogical beliefs interact to influence teachers' knowledge and use of evidence-based practices (EBPs). Such designs would allow researchers to move beyond bivariate analyses and provide a more comprehensive understanding of the mechanisms underlying EBP implementation.

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Ethical statement: Per the level of the respondents as grown-ups, no stringent ethical documents were procured because no ethical dilemmas were anticipated. However, this study was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki (World Medical Association, 2013), which emphasizes respect for persons, beneficence, and justice in all research involving human participants. Participation was entirely voluntary, and all respondents were informed about the purpose, procedures, potential benefits, and risks of the study. Informed consent was obtained before data collection, and participants were assured of confidentiality and anonymity. Data were securely stored, and identifiers were removed to protect privacy. No undue influence, coercion, or harm was associated with participation. The researchers further ensured that participants had the right to withdraw at any stage without penalty, in line with the principles of autonomy and informed choice. Since the participants were adults, no vulnerable populations were involved. The study, therefore, upheld the highest ethical standards in educational and psychological research.

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