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Research Article

Family and community inputs as predictors of students' overall, cognitive, affective and psychomotor learning outcomes in secondary schools

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There are contradictory results regarding how students' learning outcomes can be predicted by various family and community inputs among previous studies, creating an evidence gap. Furthermore, previous studies have mostly concentrated on the cognitive aspect of students' learning outcomes, ignoring the affective and psychomotor dimensions, creating key knowledge gaps. Bridging these gaps, this predictive correlational study was conducted to understand how cultural capital, parental involvement (family inputs), support for schools, security network and school reforms (community inputs) jointly and partially predict students' overall, cognitive, affective and psychomotor learning outcomes in the context of Calabar Education Zone, Nigeria. A random sample of principals ($n = 78$) and students ($n = 915$) recruited through a multistage approach, participated in the study. Data were collected through the physical administration of three sets of questionnaires designed by the researchers. The psychometric properties of the questionnaires (such as validity, dimensionality, reliability and goodness of fit) were all analysed and found acceptable based on pilot data. Data analysis was performed using SPSS version 27 and AMOS version 26 software. Results from the main study proved, among others, that family inputs (family social capital and parental involvement) jointly and individually had a significant contribution to students' overall, cognitive, affective and psychomotor learning outcomes. Similarly, community inputs (support for school, security network and school reforms) have significant composite and partial contributions to students' overall, cognitive, affective and psychomotor learning outcomes in public secondary schools. This result implies that parents and host community leaders must strengthen their partnerships with secondary schools and contribute their quota to institutions' curricular and co-curricular activities.

Keywords: Academic achievement; Cultural capital; Parental involvement; School reform; School support; Security network

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1. Introduction

There is a growing concern among researchers about the learning outcomes of students at different levels of education (Darko & Vasilakos, 2020; Nikiema, 2019; Srijamdee & Pholphirul, 2020).

Students learning outcomes represent how well a school has achieved the pre-determined goals of the education system. Studies have indicated that the intensity of teaching and learning in schools is accentuated by the quality of cognitive, affective, and psychomotor skills acquired by the students (Baharom et al., 2015; Price, 2013). Thus, appropriate student outcomes assessment should focus on the three learning domains. This will help provide an effective measurement of the quality of the education production process and the intervention programmes that can be outlined for improvement.

Literature abounds with studies linking students' learning outcomes in secondary schools to different factors. For instance, it has been reported in various studies that students' characteristics such as age, innate ability, health, motivation, and social capital affect learning outcomes (Heydera et al., 2020; Ito & McPherson, 2018; Thoren et al., 2016). Similarly, researchers have also associated students' learning outcomes in secondary schools with school-related factors such as administrative expenses (Ekeatte et al., 2019; Nicoletti & Rabe, 2018; Odigwe & Owan, 2022), curriculum offering (Owan, Emanghe, et al., 2022; Yu & Mocan, 2019), school facilities (Nabi et al., 2019; Onyebuenyi et al., 2022), student-teacher ratio (Wang & Calvano, 2022), instructional time utilisation (Cattaneo et al., 2017; Rivkin & Schiman, 2015), and learning environment (Byers et al., 2018).

Similarly, students' success has also been attributed to factors within the domain of administrators, such as attitude towards accountability (Lapuz & Pecajas, 2022; Wang et al., 2019), leadership style (Makgato & Mudzanani, 2019; Owan et al., 2020; Winingsih & Sulistiono, 2020), and qualification (Gümüş et al., 2021; Khanal et al., 2020). Other scholars have indicated that students' achievement is related to teachers' subject mastery (Istiqomah et al., 2019; Lawyer, 2019), salaries (García & Han, 2022; Yontz & Wilson, 2021), and social capital (Daly et al., 2020; Owan, Ekpenyong, et al., 2022). Parental involvement, socioeconomic background, community participation, security situation, radius per child, and enrolment per school have also been documented as impacting students' learning outcomes (e.g., Li & Qiu, 2018; Ntitika, 2014; Peteros et al., 2022).

Nevertheless, other studies have attempted to investigate students' academic success in relation to their family characteristics and community-related factors (e.g., Hussein et al., 2018; Nato, 2016). However, little attention was paid by researchers to the inputs that enter the education production process from families and host communities. Besides, most previous studies on learning outcomes have mostly used measures that only assessed the cognitive dimension of learning outcomes, ignoring the affective and psychomotor dimensions. Under Bloom's taxonomy, learning objectives should be structured to modify learners' cognitive, affective and psychomotor attributes (Bloom, 1994; Bloom et al., 1956; Krathwohl, 2002). Therefore, a complete assessment of students' learning outcomes must focus on three domains to give a better picture of how educational goals are attained (Bassey et al., 2019; Ekpenyong et al., 2022; Owan, Ekpenyong et al., 2022). To bridge the gap in the literature on students' learning outcomes, the cognitive, affective and psychomotor dimensions were all considered in the present study. Furthermore, studying inputs from families and host communities in the education production process is crucial as it provides insight into the factors that impact student learning outcomes. Again, previous studies on learning outcomes have primarily focused on cognitive measures, neglecting the affective and psychomotor dimensions of learning. This narrow focus on the cognitive domain fails to capture the full scope of student learning and development. By examining the inputs from families and host communities and considering all the dimensions of learning outcomes, a more comprehensive understanding of student achievement can be gained by stakeholders. This knowledge can inform the development of more effective education policies and practices, ultimately leading to improved student outcomes. Thus, the present study specifically examined the strength of two family inputs (cultural capital and parental involvement) and three community inputs (security network, support for school and school reforms) in predicting students' overall, cognitive, affective and

psychomotor learning outcomes in secondary schools. Students' overall 'learning outcomes' is used in this study to depict a conglomerate of students' achievement measures in schools.

Families and host communities play a critical role in shaping students' educational experiences. By understanding these groups' inputs, researchers can gain insight into how to better support and engage these groups in the education process. Examining all dimensions of learning outcomes will provide a more accurate picture of student achievement. For example, cognitive measures such as test scores are important but do not capture important aspects of student development such as emotional well-being or physical coordination. Researchers will gain a more holistic understanding of student learning and development by including affective and psychomotor outcomes' measurements. The findings from this study can be used to develop more effective education policies and programs. For example, if the study finds that parental involvement is positively associated with student achievement, policymakers can develop initiatives to increase parental engagement in schools. Similarly, if the study finds that certain community factors are associated with poor student outcomes, policymakers can develop programs to address those factors and improve students' learning achievements. The study can also provide valuable information for educators by providing them with insights that can support student learning and development. It can also help educators know how to create a better learning environment by understanding the input from families and host communities. Overall, studying inputs from families and host communities, and examining all dimensions of learning outcomes are crucial for understanding student achievement and developing effective educational policies and practices that support student success.

1.1. Studies on Family Inputs

Family inputs in the education process are the factors that explain how families contribute to the education of their wards. They are factors that shape families' abilities to influence their children's teaching and learning process in school (Li & Qiu, 2018). Family inputs include parents' socioeconomic status, cultural capital, family structure, family size, parental guidance, and parental involvement in school activities (Ntitika, 2014). Researchers have argued that families with higher socioeconomic have high advantages in providing better educational opportunities for their wards (Li & Qiu, 2018).

It is also argued that students who belong to families with a higher number of children are more likely to have lower levels of achievement and secondary graduation than children who belong to smaller families (Olagundoye & Adebile, 2019). These studies argue that students in smaller families receive better parental guidance than those from large families. Parental guidance and involvement are also reported factors that shape students learning and achievement in schools (Darko-Asumadu & Sika-Bright, 2021; Đurišić & Bunijevac, 2017). Consequently, many empirical studies have associated parental involvement with students' academic achievement. For instance, a study found that low parental involvement related positively to underachievement among students even though only the cognitive outcomes of the students were measured (Ibeawuchi & Ekechukwu, 2017). Similarly, another research revealed that students from homes where parents are highly involved in their education and have high expectations for their success in school, had high academic performance (Mutodi & Ngirande, 2014). Thus, there seems to be clear evidence that parental involvement affects educational production. However, further research is needed because all the cited studies only linked parental involvement to students' cognitive achievement, ignoring the other crucial aspects earlier discussed.

Another family characteristic featured in the literature on students' academic achievement is cultural capital. Cultural capital refers to the knowledge, educational attainment, and skills parents possess, including their behaviours, beliefs, and practices that can shape how their children think and act in the home or school. Cultural capital, which can be passed from one generation to another, presents itself in three dimensions – "as embodied (dispositions and practices), institutionalised (educational qualifications), and objectified (cultural goods)" (Willekens &

Lievens, 2014, p.98). Consequently, different scholars have, over the years, assessed the links between cultural capital and students' learning and academic achievement (Aswathi, 2019; Breinholt & Jæger, 2020; Maunah, 2020; Tan, 2020).

In a qualitative study, Fan (2014) indicated that cultural capital had the highest effect on children's educational attainment. Other studies have also established that a family's cultural capital (i.e., parents' educational attainment) affects students' academic performance (Caprara, 2016; Huang & Liang, 2016). Students from homes with rich cultural capital have adequate access to resources, such as study books, Internet facilities, study rooms, libraries, computers, pictures, paintings and dictionaries (Schlee et al., 2009; Tramonte & Willms, 2010). This gives them absolute and comparative advantages to perform better than those from families with weak cultural capital. More explicitly, a study in Pakistan documented that the exogenous factors (mother's education, parent's interest in the academic activities of their children, and reading activities of both parents) were strong in predicting the variance in the academic performance of the students in the surveyed schools (Riaz, 2010). However, the emphasis in the cited studies was on students' cognitive domain of learning.

1.2. Studies on Community Inputs

Community inputs in the education production process are those community-based factors that shape the teaching and learning process in schools within the community. These inputs include radius per child, enrolment per school, support for schools, security network and school reforms (Alam, 2015). It has been argued that learning is not only a product of classroom practices but can also occur through the family, community and peers (Nat, 2012). Therefore, community characteristics can account for more variance in the production of quality education (Alam, 2015). The reason is that communities can mobilise its members for increased enrolment and maintain effective security network for school safety (Reddy & Devi, 2015). Communities also support schools with finance, provision of instructional resources, paying teachers' salaries, and maintaining school facilities to strengthen teaching and learning (Hussein et al., 2018; Owan, 2019; Owan et al., 2021; Owan, Asuquo et al., 2022). In addition, communities also ensure that schools implement educational reforms that corresponds with the dynamics of society (Haruthaithanasan, 2018).

Due to the importance of community inputs, previous studies have linked community security measures to students' educational achievement. For example, Ibrahim and Mukhtar (2017) discovered that teaching and learning activities were disrupted in some rural communities due to kidnappings in Nigerian schools. However, with strong community support, issues of kidnapping in schools will rarely occur (Arop & Owan, 2018; Owan, 2019). The disruption of academic activities could affect students' learning since a negative relationship has been established between an insecure community/school environment and students' academic performance (Milam et al., 2010; Ojukwu, 2017; Zareen, 2020). In contrast, Tanner-Smith and Fisher (2016) found no relationship between physical security measures provided in schools, students' academic performance and school attendance. Understandably, contextual differences might account for variations in the results of different studies; however, the disagreement in the literature creates an evidence gap, necessitating further research.

The association between community support for schools and learning outcomes have been the subject of several empirical studies. For instance, Hussein et al. (2018) found that community support for schools (in terms of school finance, motivating teachers, paying teachers' salaries, maintaining school infrastructure, and providing school fees) was a strong determinant of student achievement. Similarly, another study found a long-term effect of community support for school projects on students' achievement in literacy (Trinick, 2015). Also, community support (such as promoting policies, mobilising community members for increased school attendance, and regulating school social events) also strongly affected students' academic achievement in Kenya

(Osman et al., 2013). Despite the general agreement in the results of cited studies, their central focus was on the cognitive aspect of learning, ignoring the affective and psychomotor dimensions.

Regarding school reforms, studies (e.g., Ammar et al., 2021; Haruthaithanasan, 2018) have found different implications on the quality of educational attainment among students. For instance, it was discovered in Lancaster City that community initiatives in reforming school programmes enhanced students' academic achievement (Ammar et al., 2021). However, other studies have provided counter-findings that community educational reforms were not beneficial in improving students' academic success (Haruthaithanasan, 2018; Uzomah & Okereke, 2010). Two major gaps (evidence and knowledge gaps) were spotted in the literature on school reforms as a community-related factor in students' academic achievement. The knowledge gap is due to previous studies focusing only on the cognitive domain whilst assessing students' achievements. Some scholars have faulted the reliability of the cognitive-based evaluation system due to the tendency to produce misleading results (Bassey et al., 2019). Thus, school reforms' role in students' educational attainment across the other neglected aspects is yet to be discovered. Secondly, the disagreement in the results of previous studies on school reforms and students' academic achievement creates an evidence gap. Thus, further studies are necessary to clarify the ongoing arguments in the literature for a better understanding of the links between school reforms and students' achievement.

1.3. The Present Study

The present study was conceived to bridge two major gaps (knowledge and evidence gaps) identified in the literature across all the aspects of this study. The current research bridged the knowledge gap by considering the other two domains (affective and psychomotor) often ignored by previous studies. Thus, the study assessed the extent to which family inputs (cultural capital and parental involvement) and community inputs (support for school, security network and school reforms) predict students' overall, cognitive, affective and psychomotor learning outcomes. The evidence gap, resulting from disagreements in the results of different scholars, was bridged with the new evidence found in this study. Secondly, due to the absence of a well-validated instrument, a good number of the empirical studies cited used tools with poor psychometric properties for data collection. Using poorly validated instruments for data collection raises questions about the validity and reliability of the results obtained. The present study followed acceptable practices to develop and refine two instruments with good psychometric properties for data collection.

Therefore, based on the review of related literature and the gaps identified, the conceptual model of this study was developed (See Figure 1). As shown in Figure 1, the lines with arrowheads in the model indicate predictive links, whereas non-arrow lines indicate dimensions. As shown in the model, the core predictors of this study are family and community input. However, the study focused on two specific family inputs (cultural capital and parental involvement) and three specific community inputs (security network, support for schools and school reforms). The main criterion variable is learning outcomes, with three dimensions— cognitive, affective and psychomotor outcomes. The model (Figure 1) shows our hypotheses that cultural capital and parental involvement predict students' overall, cognitive, affective and psychomotor outcomes. Similarly, security networks, support for schools and school reforms predict students' overall learning outcomes broadly and in the three dimensions.

Figure 1
Conceptual framework of this study
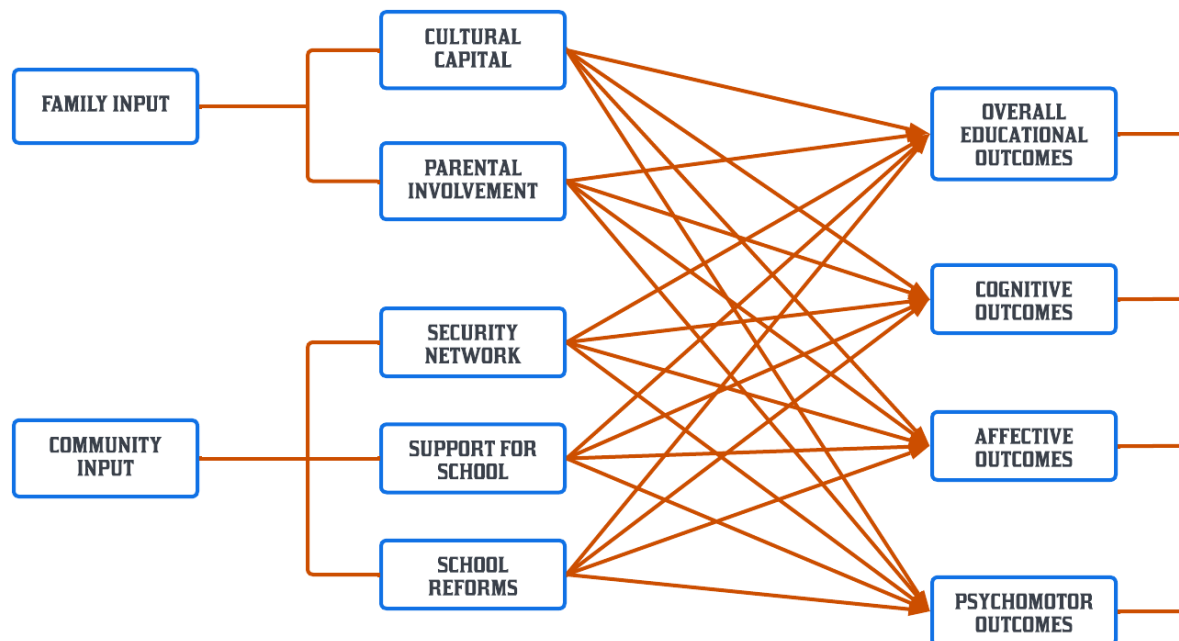
2. Method

2.1. Research Design and Participants

A quantitative research method with a predictive correlational research design (which allows the determination of relationships among variables) was used in this study. A multistage sampling procedure was adopted by the researchers in recruiting participants for the study. A total of 1,872 participants were recruited for this study through this procedure. We followed the multistage random sampling procedure to select the study's respondents. In the first stage, we used cluster sampling to group the schools in Calabar Education Zone into seven clusters. Each cluster represented a local education authority (LEA), such as Akamkpa, Akpabuyo, Bakassi, Biase, Calabar-Municipality, Calabar-South and Odukpani (See Figure 2). In the second stage, 30 percent of the schools were selected from each LEA using the simple random sampling technique. In stage 3, all 78 school administrators (principals = 26; deputy principals = 52) were purposively selected from the 26 chosen schools in stage 2. However, in stage 4 (the last stage), 15% of students in the 26 schools earlier selected in stage 2 were randomly enumerated using a simple random sampling technique. Thus, 78 school administrators and 915 senior secondary class II students were listed from 26 selected public secondary schools in the Calabar Education Zone of Cross River State, Nigeria. The sampling procedure for this study is summarised in Figure 2 for clarity (the total in the last box should be 915 students).

For school leaders, the inclusion criteria for this study are that a respondent must be a school principal or deputy principal in secondary schools located in Akamkpa, Akpabuyo, Bakassi, Biase, Calabar-Municipality, Calabar-South and Odukpani local government areas (LGAs). Therefore, secondary school teachers in the identified LGAs are excluded. Similarly, primary or tertiary school administrators in the LGAs mentioned above are excluded. The eligibility criteria for students are that the respondent must be in senior secondary class two (SSII) and attending a Public secondary school in any of Akamkpa, Akpabuyo, Bakassi, Biase, Calabar-Municipality, Calabar-South and Odukpani local government areas. Therefore, students in other classes attending public secondary schools in the listed LGAs are excluded.

Figure 2
Sampling procedures and stages of the study
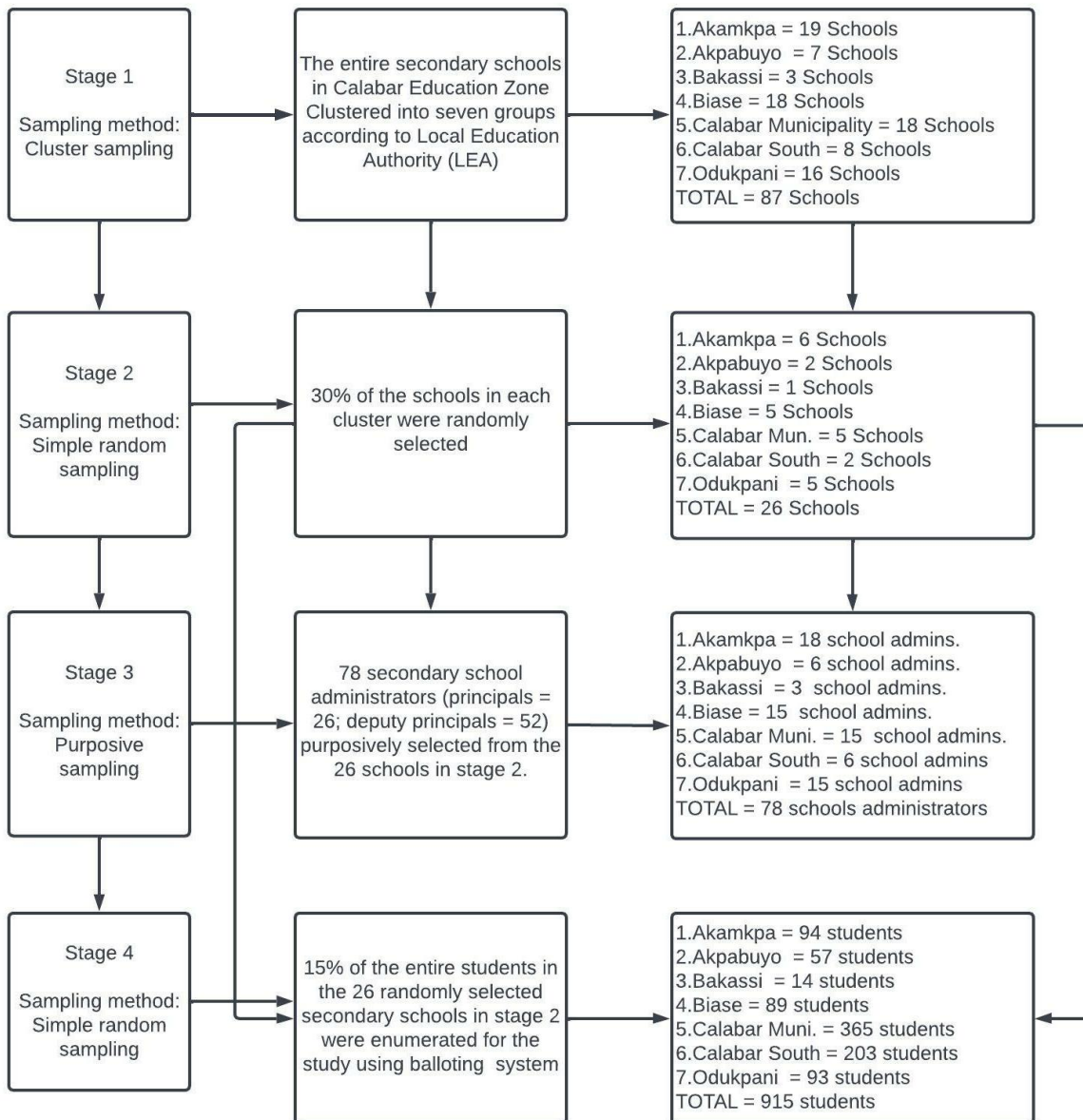
2.2. Measures and Instruments

This study considered three primary measures: family inputs, community input and learning outcomes. The study has five predictors: cultural capital and parental involvement (from family inputs), security network, support for schools and school reforms (community inputs). This study has one criterion variable—learning outcomes with three dimensions (cognitive, affective, and psychomotor) divulged through exploratory factor analysis. There was no control, moderating or mediating variables in this study.

The researchers used three instruments for data collection—the "Family Inputs Questionnaire (FIQ)", the "Community Inputs Questionnaire (CIQ)" and "Educational Outcomes Questionnaire (EOQ)." These instruments were designed using information from an extensive review of related literature. There was a need to develop and validate the tools due to the unavailability of a previously developed instrument to measure the variables of this study, especially in the study's context. The EOQ was designed to measure students' affective and psychomotor outcomes (See Ekpenyong et al., 2022; Owan et al., 2022), while students' cognitive outcome was measured using

average scores from their sessional results. The FIQ (four points scale) had 13 items, CIQ (four points scale) had 18 items, and the EOQ (six points scale) had 30 items.

2.3. Validity and Reliability of the Instruments

Ten experts (four psychometrists and six economists of education) validated the research instruments to produce the Content Validity Index (CVI). This was necessary to determine whether the items were relevant and clear for the measured domains. For each question, relevance and clarity were rated on a scale ranging from one to four, with a higher score indicating more relevance and clarity of the item. Based on the average proportion of experts' ratings (Hadi et al., 2020; Lawshe, 1975), the Item-level Content Validity Index (I-CVI) realised for FIQ ranged from .80 to .99 for both relevance and clarity, whereas the Scale-level Content Validity Index based on average (S-CVI/AVE) was 0.99 (for relevance) and 0.97 (for clarity). For CIQ, I-CVIs/AVE ranged from .80 to .99 (for relevance) and .90 to .99 (for clarity), while the S-CVIs/AVE was .98 (for both clarity and relevance). For EOQ, I-CVIs ranged from .90 to .99 (for relevance) and .84 to .99 (for clarity), while the S-CVIs/AVE was .99 (for relevance) and .98 (for clarity).

However, based on the proportion of universal agreement (Zamanzadeh et al., 2015), S-CVIR/UA for FIQ was .93 (for relevance) and .79 (for clarity), while S-CVIR/UA for CIQ was .83 (for relevance) and .78 (for clarity). For the EOQ, S-CVIR/UA was .94 (for relevance) and .89 (for clarity). When nine to ten experts are used (as in this study), at least an I-CVI or S-CVI/AVE value of .78 or higher is required to retain an item, whereas values between .60 to .77 require revisions (Davis, 1992; Yusoff, 2019). Therefore, all items were maintained since their I-CVIs, S-CVIs/AVE, and S-CVIR/UA was within the range of .80 and .99.

Furthermore, the research instruments were further subjected to Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) for construct validity. A pilot study was conducted to determine the dimensionality and factorial structure of the instruments used for data collection. We randomly selected 110 school leaders, 233 teachers, and 412 students from non-participating schools in the study area for the pilot study. Principal Axis Factoring (PAF), based on promax rotation, was conducted to determine the number of underlying factors/dimensions. The analysis extracted factors with Eigenvalues greater than 1, while those with loadings below .30 were suppressed. The researchers used the SPSS version 27 program for data analysis. The result of the EFA and CFA are presented in the results section, along with Cronbach alpha reliability estimates.

2.4. Ethical Considerations

To avoid potential bias in our research, we used a complete validity and regulatory approach to collect our data. Ethical clearance did not apply to this study as per national guidelines and regulations. The Nigerian Code for Health Research Ethics (NCHRE) exempts survey research from receiving ethical clearance since it poses no major risk to participants filling out a questionnaire (Federal Ministry of Health, 2007). Since all participants signed a document verifying that they were aware of the study and ready to participate, we were able to get written informed consent from them. Respondents were assured of their privacy by telling them that the information they provided would be de-identified and anonymised, following safe harbour guidelines. The coded information was kept on computers accessible only to the researchers and protected with a security system (strong password, antivirus software, and a firewall) to prevent unauthorised access to the collected data. We informed participants that their responses would be aggregated and published in a peer-reviewed journal.

2.5. Data Collection and Analysis

The researchers physically administered copies of the instruments to the targeted respondents through the support of six research assistants recruited for data collection. The instruments were administered to 78 administrators and 915 SS2 students. All the participants of this study took part voluntarily and were free to quit the exercise at any point. Principals responded to CIQ, while students responded to the FIQ and the EOQ. We recovered completed copies of the questionnaire

from all the school administrators ($n = 78$). However, we could not recover 45 copies of the questionnaire from the students. The unrecovered copies accounted for approximately 5% of the administered documents. The respondents filled all recovered copies correctly; thus, there was no missing data. The collected data were coded and prepared using a spreadsheet package, whereas multiple hierarchical linear regression analysis was used for data analysis.

3. Results

3.1. Exploratory Factor Analysis (EFA)

The researchers performed the exploratory factor analysis of the FIQ based on the data collected from 233 teachers in the pilot sample. The result revealed a KMO value of .92, indicating that the selection of 412 students to respond to items was large enough for factor analysis to be performed on the data. At 78 degrees of freedom, Bartlett's sphericity test yielded a significant Chi-square value of 3712.36. This indicates no duplication in the data and that the observed correlation matrix is distinct from the identity matrix, allowing for a dimension reduction approach such as PAF (Owan et al., 2021). The PAF revealed a two-factor structure in the instrument, with 65.35% of the variance explained. These two factors were the only ones that had Eigenvalues greater than 1. All the items loaded highly (from .73 to .89) and uniquely onto these two factors (see Table 1).

Table 1
Exploratory Factor Analysis of the structure of the Family Input Questionnaire

Factor/ Items	$\bar{X}$	SD	λ EFA	λ CFA
Parental involvement (Variance explained: 33.72%; Cronbach Alpha reliability: .94)				
FI11 – My mother guides me in most of my homework	3.38	1.65	.89	.89
FI14 – My Parents do not correct my notebooks	3.34	1.67	.86	.86
FI12 – My Parents take a deep interest in the progress of my school	3.45	1.65	.86	.87
FI15 – My parents have a set timetable for my study at home	3.41	1.66	.85	.85
FI16 – My parents always ask my teachers to take special care of my studies	3.37	1.68	.83	.83
FI13 – My parents always ask me about the lessons taught every day	3.36	1.72	.81	.82
Cultural capital (Variance explained: 31.62%; Cronbach Alpha reliability: .91)				
FI8 – My mother has First degree	3.49	1.70	.81	.81
FI5 – My father is highly educated	3.46	1.68	.79	.80
FI7 – My parents have enough books at home for me to read	3.43	1.69	.78	.78
FI10 - There is a study room in my house where I study	3.54	1.68	.78	.78
FI4 - There are internet facilities that help me to learn at home	3.54	1.67	.75	.75
FI9 - I have adequate instructional materials to help me at home	3.49	1.74	.73	.73
FI6 - My parents use Standard English Language to communicate with us at home	3.50	1.72	.73	.73
Instrument Total				
Kaiser-Meyer-Olkin (KMO) = .92				
Bartlett's Test of Sphericity at 78 df = 3712.36, $p < .05$				
Cronbach Alpha = .84				
Corr. Det. Matrix = .000				

Note. Extraction Method: Principal Axis Factoring; Rotation Method: Promax with Kaiser Normalization; Rotation converged in 3 iterations.

For the CIQ, the KMO value of .81, as well as Bartlett's test of sphericity index of 1948.91 at 153 degrees of freedom ($p < .05$), all indicated that the sample of 110 principals who participated in the pilot study was large enough for the data obtained to be subjected to factor analysis. The PAF revealed a 3-factor solution which accounted for 74.36% of the total variance explained by the factors. The Scree plot revealed three factors with Eigenvalues greater than 1. The pattern and factor matrices were all examined for the loadings of the respective factors unto their targeted construct. An examination of the item-by-item correlation matrix revealed a problematic item (with label CI10) which was consequently eliminated from the analysis by the researchers. Others loaded uniquely above .50 to their factors except (see Table 2).

The PAF results of the EOQ revealed a statistical significance in Bartlett's test of sphericity, $\chi^2(105)$ = 3693.38, $p < .05$; for the sample adequacy, a KMO value of .94 was obtained. These results showed that the PAF was a realistic option based on the data collected from the pilot sample of 412 students. Two factors were found, which accounted for 54.21 per cent of the variation in the results. There were also two components with Eigenvalues larger than 1 in the scree plot. The full results of the EFA for the EOQ, including sample items, can be found in two previously published works from the same project (Ekpenyong et al., 2022, p.13; Owan et al., 2022, p.9).

Table 2

Exploratory Factor Analysis of the structure of the Community Input Questionnaire

Factor/Items	$\bar{X}$	SD	λ EFA	λ CFA
Support for school (Variance explained = 25.9%; Cronbach Alpha reliability = .95)				
CI9 – Community members build some classrooms in my school	2.44	1.11	.90	.90
CI5 – I receive donations from community members each time I organise fundraising programmes for the school	2.40	1.09	.89	.89
CI7 – Additional teachers are sometimes provided by the Parent-Teacher Association of my school	2.40	1.09	.89	.89
CI8 – Community members do not care about the administration of the school	2.45	1.11	.87	.88
CI6 – School facilities are sometimes vandalised by community members	2.40	1.11	.85	.85
CI4 - Community members sometimes donate their land for school farming purposes	2.43	1.11	.83	.83
Security network (Variance explained = 25.11%; Cronbach Alpha reliability = .94)				
CI13 – The host community always send youths to act as a security cover for the school	2.49	1.14	.92	.92
CI15 – Victims of school security are sometimes handed over to appropriate security operatives	2.53	1.15	.86	.87
CI12 – There are informants in the neighbourhood that inform the school security of any potential danger	2.65	1.12	.85	.85
CI11 – My school is well-fenced through the host community support	2.56	1.14	.85	.85
CI16 – There are CCTV cameras at strategic positions in my school through donations from the community	2.68	1.15	.84	.84
CI14 – There are no communication links between the school security and external security agents in the community	2.65	1.17	.83	.83
School reforms (Variance explained: 23.35%; Cronbach Alpha reliability: .94)				
CI20 – The 9-3-4 system has been fully implemented in my school	2.41	1.08	.88	.88
CI21 - E-learning practices are fully implemented in the school	2.25	1.07	.88	.88
CI19 - There are virtual laboratories for the simulation of experiments in the school	2.43	1.07	.85	.86
CI22 - Changes in the school curriculum do not fully address current realities in the society	2.41	1.09	.85	.84
CI17 - My school does not have an electronic database	2.38	1.12	.84	.84
CI18 - There are e-library facilities in the school	2.29	1.11	.80	.79
Instrument Total				
Kaiser-Meyer-Olkin (KMO) = .81				
Bartlett's Test of Sphericity at 153 df = 1948.91, $p < .05$				
Cronbach Alpha = .82				
Corr. Det. Matrix = .00000				

Note. Extraction Method: Principal Axis Factoring; Rotation Method: Promax with Kaiser Normalization; Rotation converged in 4 iterations.

3.2. Confirmatory Factor Analysis (CFA)

The CFA was carried out using the Maximum Likelihood (ML) estimation approach. AMOS version 26 was used to do the statistical analysis. The researchers performed the CFA on the three instruments used in this research to see how well they could measure the latent factors they were designed to measure. Figures 3 and 4 show that the CFA loadings per construct were almost

identical to those of the EFA. The CFA figure for the EOQ can be found in two studies from the same project (Ekpenyong et al., 2022; Owan et al., 2022).

Figure 3
Latent-Trait CFA Model of the Family Input Questionnaire (FIQ)
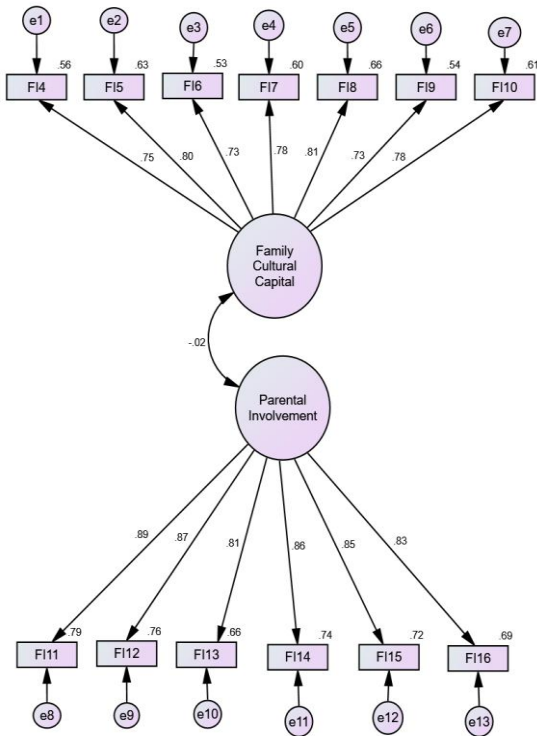
Figure 4
Standardised Latent-Trait CFA Model of the Community Input Questionnaire (CIQ)
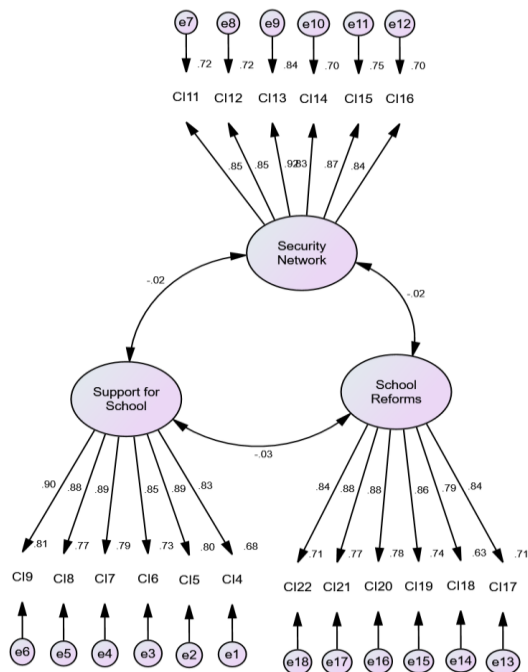
The fit of the CFA models was evaluated using several fit indices such as the Chi-Square, GFI ("Goodness of Fit Index"), NFI ("Normed Fit Index"), RFI ("Relative Fit Index"), IFI ("Incremental Fit Index"), TLI ("Tucker-Lewis Index"), CFI ("Comparative Index"), and RMSEA ("Root Mean Square Error of Approximation"). Several fit indices were used because Kline (2016) advised using

at least four to evaluate a CFA model. Table 3 shows that the three models did not meet the minimum requirements for the chi-square criterion. This failure is understandable since the Chi-square goodness of fit has a weakness of overlooking an inappropriate model while rejecting a good model in a large sample (Gatignon, 2010). The sample of respondents that participated in the pilot study is large and may account for the results obtained. However, the models performed well under the GFI, NFI, RFI, IFI, TLI and CFI criteria since values of .90 or higher were obtained. Although .95 or above is desirable, values above .90 are also acceptable indices (Hair et al., 2017; Hooper et al., 2008). The RMSEA values of the three models in Table 3 are less than the cutoff criterion of .08, suggesting that the models are acceptable (Jöreskog & Sörbom, 1993).

Table 3

Summary of fit statistic showing the indicators of the overall CFA model fit of Instruments used for data collection in the main study

Model	Chi-Square (χ^2)	GFI	NFI	RFI	IFI	TLI	CFI	RMSEA
Cutoff	$\chi^2 > .05$	>.90	>.90	>90	>.90	>.90	>.90	< .08
CIQ	349.62, df = 132, p = .000	.96	.93	.91	.96	.97	.94	.07
FIQ	131.43, df = 64, p = .000	.95	.97	.96	.98	.98	.98	.05
EOQ	167.80, df = 89, p = .000	.95	.96	.95	.98	.97	.98	.05

3.3. Composite and Relative Contributions of Family Inputs to Learning outcomes

Table 4 shows that the first family input (Cultural capital) adds 8% to students' overall learning outcomes in secondary schools in model 1. The addition of parental involvement (as the second variable) to model 2 increased the contribution of family input to students' overall learning outcomes from 8%to 19%, an 11% increase. This implies that family inputs, such as cultural capital and parental involvement, contribute 8 and 11% relatively to students' overall learning outcomes. Table 4 also indicates that family inputs explain 19% of the total variance in students' overall learning outcomes, with the remaining 81% due to variables not included in model 2.

Regarding cognitive outcomes, the result in Table 4 indicates in model 1 that 8% of the total variance in learning outcomes is accounted for by the first family input (cultural capital). In model 2, the introduction of family involvement (the second variable) saw a change in the contribution of family inputs from 8 to 18%, indicative of a 10% change. This suggests that cultural capital and parental involvement contribute 8% and 10% to students' cognitive outcomes. In a composite sense, family input contributes to students' cognitive outcomes by 18%, with the remaining 82% of the unexplained proportion of the variance attributable to other predictors not included in model 2.

For affective outcomes, Table 4 shows that the first family input (cultural capital) is responsible for 12 per cent of the total variance in learning outcomes in model 1. The inclusion of parental involvement increased the contribution of family input from 12 per cent to 23 per cent in Model 2, resulting in an 11 per cent improvement in affective outcomes from the model. This implies that family inputs, such as cultural capital and parental involvement, account for 12 and 11 per cent of the overall variation in students' affective outcomes. Furthermore, Table 4 shows that family input accounts for 23 per cent of the variation students' affective outcomes, with the remaining 77 per cent attributable to other factors outside model 2. Based on the information in Table 4, cultural capital, followed by parental involvement, made significant contributions to students' affective outcomes in public secondary schools.

Furthermore, Table 4 indicates that the first family input (cultural capital) accounts for 12% of the overall variation in model 1 for students' psychomotor outcomes. The addition of parental involvement increased the variance explained by family input from 12 to 23% in Model 2, an 11% in students' psychomotor outcomes from model 1. Moreover, family inputs like cultural capital and parental involvement account for 12 and 11% of the total variance in students' psychomotor learning outcomes. Table 4 also indicates that family input generally accounted for 23% of the

variance in students' psychomotor outcomes, with the other 77% attributed to non-model 2 predictor variables.

Table 4

Composite contributions of family inputs to students' overall, cognitive, affective and psychomotor outcomes

Criterion variables	Model	R	R^2	Adj. R^2	SE	ΔR^2	ΔF	df_1	df_2	$p\Delta F$
Overall learning	1	.29[a]	.08	.08	196.62	.08	79.66	1	868	.000
outcomes	2	.43[b]	.19	.18	185.53	.10	107.80	1	867	.000
Cognitive learning	1	.29[a]	.08	.08	188.71	.08	77.97	1	868	.000
outcomes	2	.43[b]	.18	.18	178.17	.10	106.73	1	867	.000
Affective learning	1	.34[a]	.12	.12	5.11	.12	116.85	1	868	.000
outcomes	2	.48[b]	.23	.23	4.78	.11	126.24	1	867	.000
Psychomotor outcomes	1	.34[a]	.12	.12	3.01	.12	114.76	1	868	.000
	2	.48[b]	.23	.23	2.82	.11	123.54	1	867	.000

Note. a Predictors: (Constant), Cultural capital; b Predictors: (Constant), Cultural capital, Parental involvement

3.4. Composite and Relative Contributions of Community Inputs to Educational Outcomes

Table 5 indicates that support for school (the first community input) contributed 55% to the overall variation in students' overall learning outcomes in the first model. With the addition of the second variable (security network) in model 2, the contribution of community inputs rose to 56%, indicating a change of 1% to the coefficient of determination from model 1. When the third community input (school reforms) was added to model 2, the result revealed that the contribution of community inputs to students' overall learning outcomes increased to 58%, with an R^2 change of 2%. The relative contributions shows that that support for schools contributed 55%, security networks contributed 1%, and school reforms provided 2% to the variation in students' overall educational outcomes. Collectively, community inputs are responsible for 58 % of the total variance in students' overall learning outcomes in secondary schools, with the remaining 42% of the unexplained variation attributable to factors outside of model 3.

In terms of students' cognitive outcomes, Table 5 shows that support for school (the first community input) contributed 55% to the first model. The inclusion of the second variable (security network) in model 2 increased the contribution of community inputs to 56%, suggesting a 1% change in the coefficient of determination. When the third community input (school reforms) was added to model 2, the contribution of community inputs to students' cognitive outcomes rose to 57%, with an R^2 change of 1%. In terms of proportional contribution, support for school contributed 55%, security network contributed 1%, and school reforms contributed 1% to the total variance in students' cognitive outcomes. Cumulatively, community inputs explained 57% of the overall variance in students' cognitive outcomes, with the remaining 43% of the unexplained variation due to other variables.

Regarding affective outcomes, support for school in model 1 provided 57% of the overall variation in model 1 (see Table 5). The contribution of community inputs rose to 58 per cent when security network was included in model 2, implying a 1% change in the coefficient of determination in students' affective outcomes. When school reforms was added in model 3, the overall contribution of community inputs to students' affective outcomes increased to 61%, an R^2 change of 3%. Relatively, this means that support for school, security network and school reforms contributed 55, 1, and 3%, respectively to the variation in students' affective outcomes. Furthermore, the composite contribution of community inputs to students' affective outcomes is 61%, with the remaining 39% of the unexplained variance attributable to factors other than those in model 3.

Regarding psychomotor outcomes, Table 5 indicates for model 1 that support for school is responsible for 56% of the total variance in educational outcomes. When security network was added in model 2, the contribution of community inputs increased to 57%, a 1% change in the coefficient of determination. The contribution of community inputs to psychomotor outcomes rose to 60% when a third community input (school reforms) was added to the model, with an R^2 change of 3%. Relatively, the results implies that support for school, security networks and school reforms contributed 56, 1 and 3% to the total variance in students' psychomotor outcomes. Cumulatively, the three community inputs jointly explained 60% of the variation in students' psychomotor outcomes, with the remaining 40% of the unexplained variance due to variables other than those in model 3.

Table 5
Composite contributions of community inputs to students' overall cognitive, affective and psychomotor outcomes

Criterion variables	Model	R	R^2	Adj. R^2	SE	ΔR^2	ΔF	df_1	df_2	$p\Delta F$
Overall learning	1	.74[a]	.55	.55	138.30	.55	1047.42	1	868	.000
outcomes	2	.75[b]	.56	.56	136.40	.01	25.32	1	867	.000
	3	.76[c]	.58	.58	133.77	.02	35.41	1	866	.000
Cognitive learning	1	.74[a]	.55	.54	132.93	.55	1038.48	1	868	.000
outcomes	2	.75[b]	.56	.56	131.11	.01	25.24	1	867	.000
	3	.76[c]	.57	.57	128.66	.02	34.41	1	866	.000
Affective learning outcomes	1	.76[a]	.57	.57	3.57	.57	1151.71	1	868	.000
	2	.76[b]	.58	.58	3.52	.01	25.89	1	867	.000
	3	.78[c]	.61	.61	3.41	.03	58.50	1	866	.000
Psychomotor learning	1	.75[a]	.56	.56	2.12	.56	1107.96	1	868	.000
outcomes	2	.76[b]	.57	.57	2.09	.01	25.07	1	867	.000
	3	.77[c]	.60	.60	2.03	.03	52.74	1	866	.000

Note. a Predictors: (Constant), Support for school; b Predictors: (Constant), Support for school, Security network; c Predictors: (Constant), Support for school, Security network, and School reforms

3.5. Test of Hypotheses

3.5.1. Hypothesis 1

The first hypothesis states that family inputs do not have significant relative and composite contributions to students' overall, cognitive, affective and psychomotor outcomes in public secondary schools. Model 1 in Table 6 shows a significant contribution of cultural capital to the overall educational outcomes in public secondary schools, $F_{[1, 868]} = 79.66$, $p < .05$. In model 2, a significant composite contribution of cultural capital and parental involvement to students' overall learning outcomes was reported, $F_{[2, 867]} = 98.63$, $p < .05$.

For the cognitive dimension, Model 1 in Table 6 shows a significant contribution of cultural capital to students' learning outcomes, $F_{[1, 868]} = 77.97$, $p < .05$. Model 2 also established a significant composite contribution of cultural capital and parental involvement to students' cognitive outcomes, $F_{[2, 867]} = 97.10$, $p < .05$. Therefore, family inputs have a significant relative and composite contributions to students' cognitive outcomes in public secondary schools.

Regarding the affective dimension, model 1 (see Table 6) shows that cultural capital has a significant contribution to students' learning outcomes, $F_{[1, 868]} = 116.85$, $p < .05$. In model 2, reveals there is a significant composite contribution of cultural capital and parental involvement to students' affective outcomes, $F_{[2, 867]} = 129.97$, $p < .05$. Therefore, the null hypothesis was not supported for the affective dimension of students' learning outcomes.

Table 6

ANOVA output of multiple hierarchical linear regression results of the composite contributions of family inputs to educational outcomes in public secondary schools

Criterion variable	Model	Source	SS	df	MS	F	p
Overall learning outcomes	1	Regression	3079480	1	3079480	79.66	.000[b]
		Residual	33555319	868	38658.20		
		Total	36634799	869			
	2	Regression	6790257	2	3395128	98.63	.000[c]
		Residual	29844542	867	34422.77		
		Total	36634799	869			
Cognitive learning outcomes	1	Regression	2776684	1	2776684	77.97	.000[b]
		Residual	30910868	868	35611.6		
		Total	33687552	869			
	2	Regression	6164932	2	3082466	97.10	.000[c]
		Residual	27522621	867	31744.66		
		Total	33687552	869			
Affective learning outcomes	1	Regression	3050.67	1	3050.67	116.85	.000[b]
		Residual	22662.24	868	26.11		
		Total	25712.91	869			
	2	Regression	5931.05	2	2965.53	129.97	.000[c]
		Residual	19781.86	867	22.82		
		Total	25712.91	869			
Psychomotor learning outcomes	1	Regression	1038.43	1	1038.43	114.76	.000[b]
		Residual	7854.32	868	9.05		
		Total	8892.74	869			
	2	Regression	2018.02	2	1009.01	127.25	.000[c]
		Residual	6874.73	867	7.93		
		Total	8892.74	869			

Note. b Predictors: (Constant), Family cultural capital; c Predictors: (Constant), Family cultural capital, Parental involvement

For the psychomotor dimension, model 1 in Table 6 revealed that cultural capital has a significant contribution to students' learning outcomes in public secondary schools, $F_{[1, 868]}$ =114.76, p <.05. model 2 shows a significant composite contribution of cultural capital and parental involvement to students' psychomotor outcomes in public secondary schools, $F_{[2, 867]}$ =127.25, p <.05. Thus, the null hypothesis was not supported for the psychomotor dimension of students' learning outcomes.

Table 7 shows that only parental involvement is the input that significantly contributes to students' overall, cognitive, affective and psychomotor outcomes in public secondary schools in a relative sense. On the contrary, cultural capital made significant contributions in models where it was the sole predictor but turned non-significant amid parental involvement. In model 2, cultural capital did not significantly predict students' overall, cognitive, affective and psychomotor outcomes. Based on the overall results, the null hypothesis was discarded in favour of the alternative hypothesis. Therefore, family inputs have significant relative and composite contributions to students' overall, cognitive, affective and psychomotor outcomes in public secondary schools.

Table 7

Relative contributions of specific family inputs to students' overall cognitive, affective and psychomotor learning outcomes

Criterion variable	Model	Predictors	B	t	SE	p
Overall learning outcomes	1	Family cultural capital	.29	8.93	1.41	.000
	2	Family cultural capital	.03	0.72	1.73	.470
		Parental involvement	.41	10.38	1.23	.000
Cognitive learning outcomes	1	Family cultural capital	.29	8.83	1.36	.000
	2	Family cultural capital	.03	0.67	1.66	.510
		Parental involvement	.41	10.33	1.18	.000
Affective learning outcomes	1	Family cultural capital	.34	10.81	0.04	.000
	2	Family cultural capital	.07	1.80	0.04	.070
		Parental involvement	.43	11.24	0.03	.000
Psychomotor learning outcomes	1	Family cultural capital	.34	10.71	0.02	.000
	2	Family cultural capital	.07	1.79	0.03	.080
		Parental involvement	.43	11.12	0.02	.000

3.5.2. Hypothesis 2

The second hypothesis states that community inputs do not have significant relative and composite contributions to students' overall, cognitive, affective and psychomotor outcomes in public secondary schools. The test of the hypothesis in Table 8 shows that the first community input (support for school) has a significant contribution to students' overall educational outcomes in public secondary schools, $F_{[1, 868]} = 1047.42$, $p < .05$. In model 2, the result shows that the joint contribution of support for school and security networks to students' overall learning outcomes is significant, $F_{[2, 867]} = 551.04$, $p < .05$. In model 3, the result of the analysis reveals that the composite contribution of support for the school, security network and school reforms to students' overall learning outcomes is significant, $F_{[3, 866]} = 393.75$, $p < .05$. This suggests that community inputs contribute significantly to students' overall learning outcomes in public secondary schools.

In terms of cognitive outcomes, Table 8 shows that support for school (the first community input) has a significant contribution to educational outcomes in public secondary schools, $F_{[1, 868]} = 1038.48$, $p < .05$. In model 2, it was also verified that support for school and security network have a significant composite contribution to educational outcomes in terms of cognitive outcomes, $F_{[2, 867]} = 546.04$, $p < .05$. In model 3, the result of the analysis reveals a significant composite contribution of community input variables (such as support for schools, security network and school reforms) to educational outcomes in terms of cognitive outcomes, $F_{[3, 866]} = 389.75$, $p < .05$. This suggests that community inputs contribute significantly to students' overall learning outcomes in public secondary schools.

Regarding the third dimension (affective outcomes), the result in Table 8, in model 1, proved that there exists a significant contribution of support for school (the first community input) to educational outcomes in public secondary schools, $F_{[1, 868]} = 1151.71$, $p < .05$. The result in model 2, shows that there is a significant composite contribution of community inputs (support for school and security network) to educational outcomes in terms of affective outcomes in public secondary schools, $F_{[2, 867]} = 605.32$, $p < .05$. In model 3, the result for affective outcomes shows that community inputs (support for school, security network and school reforms) have a significant composite contribution to educational outcomes in public secondary schools, $F_{[3, 866]} = 449.81$, $p < .05$.

Table 8

ANOVA output of multiple hierarchical linear regression results of the composite contributions of community inputs to educational outcomes in public secondary schools

Criterion variable	Model	Source	SS	df	MS	F	p
Overall learning outcome	1	Regression	20033213	1	20033213.20	1047.42	.000[b]
		Residual	16601585	868	19126.25		
		Total	36634799	869			
	2	Regression	20504298	2	10252149.04	551.04	.000[c]
		Residual	16130500	867	18604.96		
		Total	36634799	869			
	3	Regression	21137986	3	7045995.41	393.75	.000[d]
		Residual	15496812	866	17894.70		
		Total	36634799	869			
Cognitive learning outcomes	1	Regression	18349945	1	18349945.43	1038.48	.000[b]
		Residual	15337607	868	17670.05		
		Total	33687552	869			
	2	Regression	18783800	2	9391900.24	546.36	.000[c]
		Residual	14903752	867	17190.03		
		Total	33687552	869			
	3	Regression	19353385	3	6451128.41	389.75	.000[d]
		Residual	14334167	866	16552.16		
		Total	33687552	869			
Affective learning outcomes	1	Regression	14662.42	1	14662.42	1151.71	.000[b]
		Residual	11050.49	868	12.73		
		Total	25712.91	869			
	2	Regression	14982.86	2	7491.43	605.32	.000[c]
		Residual	10730.04	867	12.38		
		Total	25712.91	869			
	3	Regression	15661.8	3	5220.60	449.81	.000[d]
		Residual	10051.11	866	11.61		
		Total	25712.91	869			
Psychomotor learning outcomes	1	Regression	4986.33	1	4986.33	1107.96	.000[b]
		Residual	3906.411	868	4.50		
		Total	8892.741	869			
	2	Regression	5096.097	2	2548.05	581.87	.000[c]
		Residual	3796.644	867	4.38		
		Total	8892.741	869			
	3	Regression	5314.039	3	1771.35	428.64	.000[d]
		Residual	3578.703	866	4.13		
		Total	8892.741	869			

Note. b Predictors: (Constant), Support for school; c Predictors: (Constant), Support for school, Security network; d Predictors: (Constant), Support for school, security network, and School reforms

Table 8 proves that community input, such as support for schools, has a significant contribution to students' psychomotor learning outcomes in model 1, $F_{[1, 868]}$ = 1107.96, p < .05. In model 2, the contribution of school inputs (support for school and security network) to students' psychomotor outcomes, was statistically significant, $F_{[2, 867]}$ = 581.87, p < .05. In model 3, school inputs (such as support for schools, security network and school reforms contributed substantially to students' psychomotor outcomes in public secondary schools, $F_{[3, 866]}$ = 428.64, p < .05.

Table 9 reveals that community inputs such as support for schools, security network, and school reforms significantly contribute to students' overall, cognitive, affective and psychomotor outcomes in public secondary schools. Table 9 also showed that support for school and school reforms (as community inputs) all made significant positive contributions. In contrast, security networks significantly but negatively impacted students' overall, cognitive, affective and

Table 9
Relative contributions of specific community inputs to students' overall cognitive, affective and psychomotor outcomes

Criterion variable	Model	Predictors	β	t	SE	p
Overall educational outcomes	1	Support for school	.74	32.36	1.07	.000
	2	Support for school	.86	26.37	1.53	.000
		Security network	−.16	−5.03	1.18	.000
	3	Support for school	.83	25.63	1.52	.000
		Security network	−.24	−6.94	1.24	.000
		School reforms	.16	5.95	1.60	.000
Cognitive outcomes	1	Support for school	.74	32.23	1.03	.000
	2	Support for school	.86	26.27	1.47	.000
		Security network	−.16	−5.02	1.13	.000
	3	Support for school	.83	25.53	1.46	.000
		Security network	−.24	−6.89	1.19	.000
		School reforms	.16	5.87	1.54	.000
Affective outcomes	1	Support for school	.76	33.94	0.03	.000
	2	Support for school	.87	27.53	0.04	.000
		Security network	−.16	−5.09	0.03	.000
	3	Support for school	.83	26.88	0.04	.000
		Security network	−.25	−7.66	0.03	.000
		School reforms	.20	7.65	0.04	.000
Psychomotor outcomes	1	Support for school	.75	33.29	0.02	.000
	2	Support for school	.86	27.00	0.02	.000
		Security network	−.16	−5.01	0.02	.000
	3	Support for school	.83	26.32	0.02	.000
		Security network	−.25	−7.43	0.02	.000
		School reforms	.20	7.26	0.02	.000

psychomotor learning outcomes. The null hypothesis was disregarded based on the significant composite and relative contributions of community inputs to educational outcomes, while the alternative hypothesis was supported.

4. Discussion

This study was designed to examine the composite and relative contributions of family and community inputs to students' overall, cognitive, affective and psychomotor learning outcomes in public secondary schools. Through the first objective, this study indicates that family inputs (family social capital and parental involvement) jointly predict students' overall, cognitive, affective and psychomotor learning outcomes in public secondary schools to a significant extent. This result implies that students from families where parents are highly educated and actively involved in their education tend to achieve better in schools across the three learning domains. This result is not a surprise because the family is responsible for providing the basic needs of students, which can, in turn, arouse their motivation to learn. Therefore, it is likely that students with more engaged and supportive families have better access to resources and opportunities that can enhance their learning, such as a stimulating home environment, academic support, and access to extracurricular activities. Additionally, parents who are actively involved in their children's education can better monitor their children's progress and provide support when needed. It is also important to note that the study finds a significant impact of family inputs on cognitive, affective, and psychomotor outcomes. This implies that the support from family and parents not only helps students acquire knowledge and skills but also helps them develop physical skills, positive attitudes and behaviours towards learning. The result of this study agrees with previous research that parental guidance and involvement are also reported as factors that shape students learning and achievement in schools (Darko-Asumadu & Sika-Bright, 2021; Đurišić & Bunijevac, 2017).

Similarly, another research revealed that students from homes where parents are highly involved in their education and have high expectations for their success in school had high academic performance (Mutodi & Ngirande, 2014).

Relatively, this study's first objective revealed that cultural capital and parental involvement significantly contributed to overall, cognitive, affective, and psychomotor learning outcomes. The result implies that both family inputs can contribute substantially to students' learning outcomes even if they are isolated. While cultural capital and parental involvement are important, they may affect students' learning outcomes differently and need to be considered separately. Overall, this study highlights the importance of both cultural capital and parental involvement in shaping students' educational outcomes and suggests that educators and policymakers should focus on ways to support and enhance both of these factors to improve students' learning outcomes in schools. However, parental involvement weakened the contribution of cultural capital in predicting students' educational outcomes in schools. This corroborates the earlier evidence Fan (2014) presented that cultural capital had the highest effect on children's educational attainment. This result could be explained because students may be motivated to study in schools because of their parents' status, educational achievement, and occupation on their own without the influence of their parents. In contrast, when parents take a full part in children's education, the motivation they had already formed tends to disappear as their parents begin to tailor their education towards their desires. This result agrees with the finding of Li and Qiu (2018) that the different opportunities and capacities that families have in participating in education shape the educational attainment of students. Thus, the relationship between family background and educational achievement has become a critical indicator in evaluating educational outcomes among learners.

The result of the second objective of this study showed that community inputs (support for school, security network and school reforms) have significant composite contributions to students' overall, cognitive, affective and psychomotor learning outcomes in public secondary schools. The result implies that secondary schools receiving diverse support from host communities are more likely to produce successful students than those receiving little or no support. Conversely, low community participation in the education production process can reduce the quality of educational outcomes in schools. The finding highlights the importance of community inputs in shaping students' educational outcomes. Educators and policymakers should focus on supporting and enhancing school community engagement to improve student learning outcomes. This can be done through community outreach programs, collaboration with local organisations and businesses, and creating opportunities for parents, community members, and other stakeholders to get involved in school decision-making. Additionally, providing a safe learning environment and implementing school reform measures tailored towards meeting the community's needs can also go a long way in improving the quality of education and students' learning outcomes. This result supports the position of Alam (2015) that the quality of education offered in school is influenced by community factors. Another study revealed that communities mobilise members for increased enrolment, maintain an effective security network for the safety of schools, and ensure that students work short distances to schools for effective learning (Reddy & Devi, 2015). In the same direction, Haruthaithanasan (2018) stressed that education reform policies have implications for school outcomes and student achievement.

This study's second objective proved that community inputs such as support for schools, security networks and school reform are significant partial predictors of students' overall, cognitive, affective and psychomotor learning outcomes. This result implies that individual improvement in the three community inputs is associated with higher educational outcomes, assuming other things remain equal. This finding agrees with the results of Reddy and Devi (2015) that communities, through their participation in school activities and their mobilisation and sensitisation roles, play a crucial function in enhancing the enrolment level of their schools. Furthermore, the result strengthens the finding of Alam (2015) that supporting schools is one of the ways communities ensure that quality education is delivered to the children. Nevertheless, the

current study showed that community support for schools was the strongest predictor of students' educational outcomes. The result aligns with a previous study that community support (such as promoting policies, mobilising community members for increased school attendance, and regulating school social events) strongly affected students' academic achievement (Osman et al., 2013).

5. Limitations and Implications for Further Research

The current study used a robust statistical method to establish connections between two family and three community inputs as predictors of three under-researched criterion variables. However, relying only on quantitative methods to generalise results to a broader population can also be seen as one limitation of the study. The quantitative technique allows for generalisations based on large sample sizes but does not comprehensively explain the relationships between the predictors and criterion variables. Future research may consider mixed methods approach that combines the strengths of both quantitative and qualitative methods to address this limitation. Additionally, the study's scope does not include control or moderating factors such as family background, family income level, type of community and occupation, which could hinder the level of support families and communities provide to individual children. It is understood that no single study can address the issues surrounding a research problem at once. Despite the researchers' efforts, it is impossible to account for all potential control factors influencing the relationship between the two variables. Therefore, future research should consider using multigroup analysis to investigate the impact of moderating factors on the connection between the predictors and criterion variables across the three domains.

6. Conclusion

This study was designed to understand the extent to which some family and community inputs predict the overall, cognitive, affective and psychomotor learning outcomes among secondary school students. The results proved that family inputs (such as cultural capital and parental involvement) and community inputs (such as support for schools, security networks and school reforms) are important in deciding how much students learn and achieve across the three domains. From a practical perspective, this conclusion has important implications for educators and school administrators. The result of this study has implications for secondary school managers and teachers to maintain a healthy school-community relationship with parents and members of the host communities. The conclusion suggests that schools should actively involve families and the community in the education production process. They should also focus on creating opportunities for parents to be involved in their children's education, such as through parent-teacher associations and volunteering programs. Additionally, providing a safe and secure learning environment and implementing school reform measures tailored at meeting the community's needs can also improve the quality of education and students' learning outcomes. The conclusion also implies that parents and host community leaders must strengthen their partnerships with secondary schools and contribute their quota to institutions' curricular and co-curricular activities. From a theoretical perspective, the results of this study contribute to the existing literature on the predictors of students' learning outcomes. They suggest that family and community inputs are important factors that should be considered when studying students' learning outcomes. Overall, this study has provided valuable insights into the factors contributing to students' learning outcomes and has important implications for educators, policymakers, and researchers. It highlights the need to involve families and communities in education and the importance of creating safe and secure learning environments.

Ethical Approval: All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

Informed Consent: Informed consent was obtained from all individual participants included in the study.

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