

The Nexus Between Parental Involvement, Demographic Factors, and Undergraduates Academic Attainment: In-Depth Investigation

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ABSTRACT

Parents' involvement plays a pivotal role in assessing students' academic success. Education is a vital aspect of current society at present. Therefore, parents are concerned about their children's education. While the common knowledge is that parental involvement impacts undergraduates' education, studies focusing on undergraduates are lacking, particularly, in the Sri Lankan context. Hence, to fill this empirical gap, the objective of the study is to explore the impact of parental involvement on Sri Lankan undergraduates with a specific focus on the Western province. Data was collected from undergraduates through online questionnaires on four aspects of parental involvement, educational level, economic status, and family structure. The questionnaire was developed from a thorough analysis of the ample body of literature available in this field. Sri Lankan undergraduates from state and private universities in the Western province were selected as the responders through a simple random sampling technique. The sample includes 449 undergraduate students. Partial Least Squares-structural equation modelling was used to analyse the data using Smart PLS 4.0 software. Based on the study's outcomes parental involvement, education level, and economic status have a significant impact on the academic success of undergraduates, whereas family structure has no significant impact. Through analysis, it was found that there is less testament to demonstrate that there is a significant impact of parental involvement on undergraduates. Despite the result deviating from common expectations, distanced parent-child relationships in the modern era may have caused such behaviour. Aside from the contribution to the body of knowledge this study also assists educational institutions in proper policy implementation, parents, and teachers in better parenting and teaching, respectively. Further, this study can be enhanced with broader coverage of undergraduates and obtaining views from parents' side as well. Moreover, it is recommended to expand the scope of this study by including a more comprehensive sample of undergraduate students. Additionally, it would be beneficial to gather insights from the perspective of parents to obtain a well-rounded understanding of the topic.

Keywords: Academic Success, Demographic Factors, Higher Education, Parental Expectation, Parental Involvement

INTRODUCTION

Education is undoubtedly a critical aspect in determining a person's future. While the education may be transferred formally as well as informally, more recognition is given for the formal education. Even within formal education, there are ranging levels from nursery and primary education through secondary and tertiary education to terminal degrees such as PhD. Even though parents are getting less involved as their children become more independent from the family towards the latter part of the education spectrum, they play a pivotal role in shaping up the initial stages of the children's education. Although the role played by parents is highest during childhood education and lowest during the middle-aged education of their children, the impact of their role and related demographic factors on their children when they are young adults is still a grey area. It was found that some parents actively engage and help their young adult children in many forms such as by providing necessary financial and emotional support (Hadjicharalambous & Dimitriou, 2020). On the other hand, there is a cohort of parents who do not support their young adult children but discourage them from pursuing higher studies due to various reasons such as lack of education or financial resources. Apart from the involvement of parents, several demographic factors could be heavily affecting the education of the undergraduates.

Sri Lanka, as a developing country, has a popular belief that education will take one to prosperity. Hence society is more inclined to encourage children to learn to the highest level despite any obstacles they face. However, no specific study on the parents' and other demographics' role in the academic success of Sri Lankan undergraduates has happened earlier. Still, most of the undergraduates are completely independent from their parents. Thus, our belief was parental and other demographic factors influences would not be straightforward (Foster & Loven, 1992). Due to the resource limitations, this research studied only the undergraduates in state and private universities in the Western province of Sri Lanka. It will draw a better picture of Sri Lankan undergraduates than any other province, as the majority of universities are situated in the Western province and have students coming from every corner of the country.

One of the most significant aspects of a child's development is his or her parents. This is because parents get the power and ability to mold their children into self-motivation, and tolerance through their direct support and involvement in educational activities (Naite, 2021).

Conversely, parents who aren't involved in their children's education are just considered as being naively demotivating and discouraging them. As a result, their achievements are adversely impacted. Different parents have different approaches on involvement during their children's primary and secondary education. Some parents are actively engaged in their children's schools and support various initiatives. They even ensure their children get the opportunity to face worthwhile experiences such as visiting zoological gardens or playing musical instruments. Moreover, parents with high involvement constantly initiate constructive discussions with their children regarding the issues they face at school and elsewhere.

Academically accomplished parents constantly strive to raise their children to be more educated than they are. To make their children more educated they offer the necessary learning environment at home. The amenities and surroundings at home allow children to meet the coming problems of the next social, political, spiritual, and educational spheres of life. The common consensus of the scholarly community is that parental involvement positively impacts students' educational levels (Muhammad et al., 2020). Undergraduate students should reflect critically on their identities as people and as teachers, as well as how their worldviews and values will affect how successfully they can interact with contemporary families. According to Foster and Loven (1992) undergraduates need interaction with their parents and the involvement of their parents, but they also need to allow their personal opinions and values.

Additionally, the demographic factors such as the educational level of parents, income level, family background also effect for the academic success of the undergraduates. According to educational and economic studies, socio-demographic variables like parent's education, occupation, family income, family type, family size, living place and so on are determinants of the amount of the quality of education children receive in their lifetime. And also, this study mentioned if the socio-economic of parents are low those students have the tendency to get low GPA compared to those students who come from higher socio-economic levels (Jeynes, 2002). In Hanafi and Noor (2016) mentioned that parental education is vital for the students' academic achievement and also the study mentioned providing a better home environment also directly impacts for the undergraduates to achieve their academic goals.

Moreover, this phenomenon has not yet been investigated in Sri Lankan context according to available information. The gap addressed by this study is that there is a dearth of research into conceptions impact of parental involvement and demographic factors on undergraduates'

academic success. There is, then, ample justification for a carefully conducted study to extend the understanding of these conceptions.

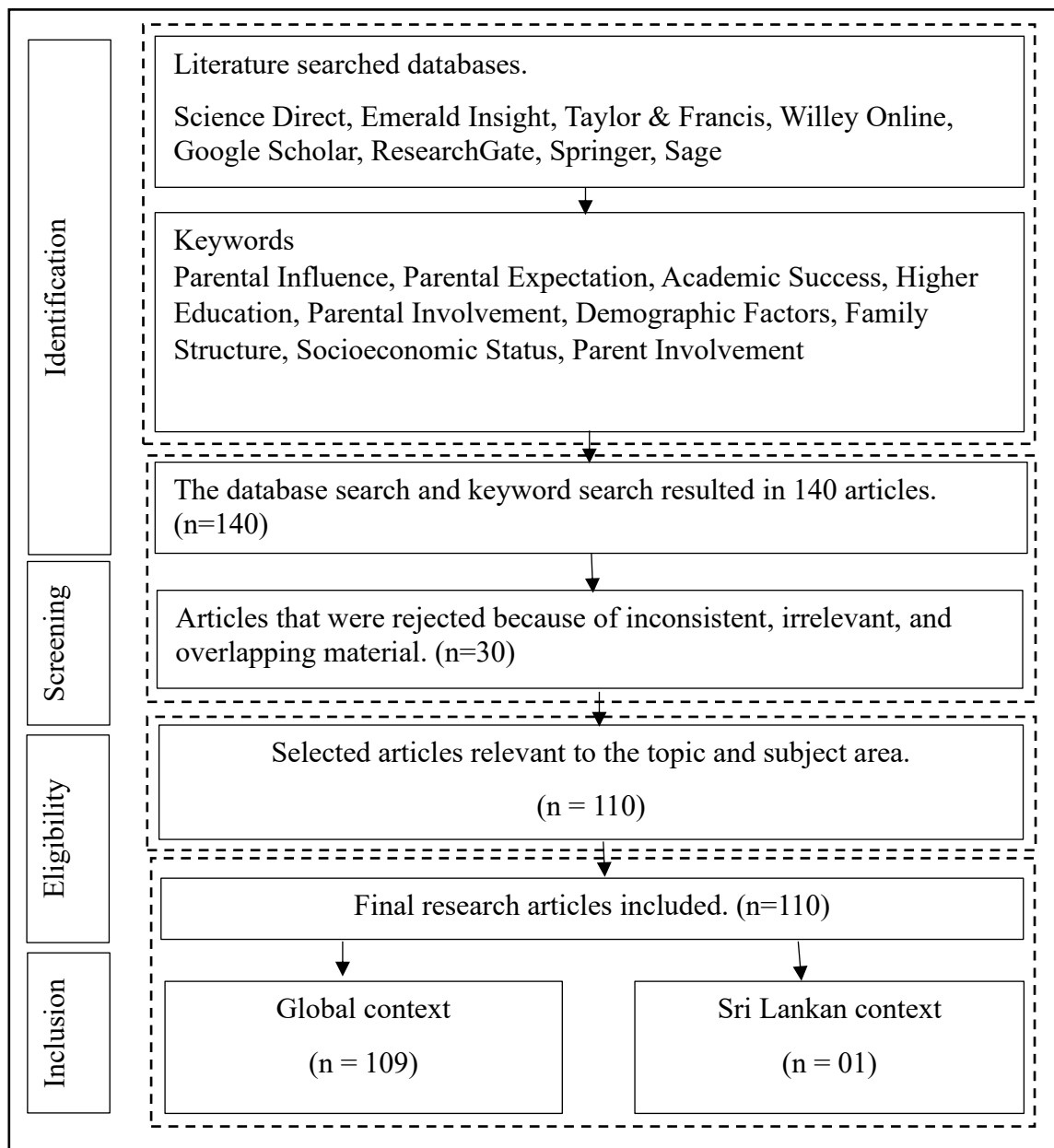
The purpose of the research is to bridge the literature gap, in doing so, to achieve the main objective, researchers further examined the impact of parental involvement and demographic factors towards the academic success of undergraduates. Hence this study was conducted in Sri Lanka with special reference to the Western province, from the top 10 Western province Universities, to determine the significance and the impact of parental involvement, parents' education level, economic status, and family structure on the academic success of undergraduates.

The significance of this study comes in many different aspects, firstly, parents will comprehend the extent to which the parent-child relationship is vital to children's academic success. It will enable parents to maintain proper relationships with their children in order to enhance their academic success and clarify the importance of parents' education effects on the education of their children. Secondly, teachers can conduct their academic work effectively, whilst encouraging the appropriate relationship between the students and their parents to make a positive impact towards academic success of them. Thirdly, educational policymakers, and public institutions may find this study useful in developing programs to enhance their abilities, knowledge, and attitudes when working with children. Moreover, the study will be useful for social scientists who are examining how education is changing and how other factors of parents' lives relate to their undergraduate academic success. Furthermore, the findings of the research will be significant to the policy-making institutions to implement appropriate educational policies considering the parental influences on children. Additionally, the findings might be helpful to the educational institutions, academic staff, government agencies to develop the programmes and also could use the result of this study to determine the ideal approach for each student that would enable them to have a better-quality learning experience.

Rest of the paper is arranged in the following manner. Next section discusses the already existing literature related to the parental involvement and demographic factor associated with academic success of their children. Section 3 is on the data collected for this study and the methodology utilized. Results are provided in the section 4, while discussion was carried out in section 5. Conclusion and recommendations from this study is provided in the final section.

LITERATURE REVIEW

The research presented here considers the impact of parental involvement and demographic factors on undergraduate students' academic success. It provides an extensive review of the literature, reveals how earlier and more current research has affected the approach and identifies any knowledge gaps. The article illustrates the study's findings and how they were used in various contexts. The foundation for this study was laid by identifying and analysing from research on the impact of parental involvement, parents' educational attainment, economic status, family structure, demographic characteristics, and academic achievement are identified and analysed in the literature review. Figure 01 depicts a systematic process of selecting research papers for a literature review. With that in order to identify the existing knowledge level, Google Scholar, Willey Online, Science Direct, ResearchGate, Emerald, Sage, Springer, Taylor and Francis databases were accessed to develop the literature, while parental involvement, parenting style, parent expectation, academic success, socio economic status, family structure, family size used as keywords when searching the research articles. 30 publications were removed after 140 papers were found using keywords and database searches. The 110 publications that were remaining accessible have been divided into two groups: Sri Lankan context and the global context.

Figure 1: Flow diagram for the literature review

Source: Authors' Composition

Parental Involvement on Undergraduate's Academic Performance

Regardless of a child's or student's obstacles, family factors play a crucial part in his or her success. A degree of parental participation is essential to a child's academic success. As a result, the findings of the research Duan et al. (2018) demonstrate that parental social and financial status significantly impact levels of involvement and participation. Parental participation frequently affects the children's academic achievements as well. The degree to which parents are actively involved in guiding and helping their children may not necessarily be correlated with their level of education. These parents are committed to being active in their children's

education, regardless of their academic backgrounds. Parents can encourage their children at home in numerous ways, such as by staying in touch with them, creating an atmosphere that encourages learning, evaluating their schoolwork, and more. In a survey of high school students, Zakaria et al. (2013) discovered that parents' availability, openness, acceptance, interaction, discussion, and parenting styles were all positive evidence of parental involvement in their children's academic achievement. According to previous studies by Veronica et al. (2018), academic performance and parental involvement in school are positively correlated. Improving the self-assurance of children while also helping them succeed professionally.

Prior studies have parents are important to participate in collaborative endeavours while taking into consideration the unique educational environment. The most important research Sebastian et al. (2017) in the area of family-school partnerships demonstrates the positive effects of this collaboration, which improve academic performance and achievement, among other things. Parental involvement in education has been shown by Korpershoek et al. (2020) that there is positive impact academic attainment, as demonstrated by numerous meta-analyses across various demographics and educational levels. Research studies consistently show a constant positive impact of parental involvement on children's academic success. However Garbacz et al. (2017) conducted a study on parental participation in education is conducted in Anglophone nations, using correlational and cross-sectional techniques. This highlights the importance of parental involvement in promoting academic success in children.

Moreover, Yang and Wang (2022) found that the parental contribution towards their children's development in personality, behaviour and studies has a powerful relationship with children's effort towards learning in several aspects such as behavioural, psychological, and social. Furthermore, past literature depicts that parental contribution on children's studies appears to be much higher with mastery goal orientation than performance goal orientation. Positive correlation between the students' academic success and their parents backing evidenced by the study conducted by Rassidy and Ishmael (2018), particularly in behavioural, psychological, and social learning angles.

H1: There is an impact of parental involvement on the academic success of undergraduates.

Education Level of Parents on the Academic Success of the Undergraduates

According to Ndimuh and Ngeh (2022) state that research studies demonstrate that families with higher education tend to have parents who are more understanding while remaining strict

in their parenting and that parental education and the academic success of children are strongly related. Other academics disagreed with the relationship between a child's academic success and their parents' educational attainment. Parental education has a direct correlation with parenting practices but not with children's academic success (Tsela et al., 2023). Although, this research indicated that the mother's and father's educational backgrounds varied in terms of how education impacts children's academic progress. The cognitive knowledge, skills, and values of parents' have a significant influence on their offspring. Children's academic success is positively impacted by parents who are involved in their homes. The development of child's literacy, which is necessary for academic success of child is highly influenced by their parents. (Harris & Goodall, 2008; Muraina & Kassim, 2011). Moreover, they mentioned in this study that parents who are educated have a greater capacity to provide solid guidance to their children because they have already been through the educational process and they aware of the highs and lows of the educational options. As a consequence, to encourage their children and provide them more guidance, they could share their educational experiences with them.

According to Feraco et al. (2023), parental educational participation, which includes actions like talking to kids about school, helping them with their homework, and taking part in extracurricular activities at school, has the potential to boost students' academic achievement. Research has unequivocally demonstrated a connection between student engagement with educational experiences in terms of cognitive and behavioral and social-affective engagement and academic success. Hadjicharalambous and Dimitriou (2020) have provided further information that demonstrates the relationship between parental support and encouragement and students' engagement in higher education. Furthermore, Yang & Wang, (2022), there is a strong correlation between parental support for student's personal development, academic success, behavioral support, and study assistance, as well as student participation in learning in terms of their psychological, socio-affective, and behavioral involvement. Even though past studies have revealed the information mentioned above, further research is still required to determine how parents' educational levels significantly affect undergraduate students' academic performance in Sri Lanka.

H2: There is an impact of the education level of parents on the academic success of the undergraduates.

Economic Status of Parents on Academic Success of Undergraduates.

The socioeconomic background of the family determines its social and economic standing in society's hierarchy. This becomes the most important aspect in determining a child's academic success. According to Little et al. (2014), secondary interpersonal or individual education is essential for preparing students for both individual and social interactions. After they overcome this obstacle, students can enrol in colleges. People who depart from their education at this point also need a solid foundation for beginning a trade or occupation. To determine a family's financial stability, some researchers have suggested using indicators such as parental educational attainment, parental employment, neighbourhood socioeconomic status, the presence of technological capabilities at home, and parental financial investment in their children's education. There is evidence that the environment affects children's academic achievement in the classroom. Based on the majority of previous studies Pinquart and Ebeling (2020); Wilder (2014) , there is a correlation between socioeconomic level and the degree of parental involvement in their children's academic life. Due to the realization that both their educational and economic backgrounds suggest that they have limited resources, students were identified as being at risk of not completing upper secondary school. Furthermore Roy and Giraldo (2018) contrast to other forms of home-based involvement that may be difficult to provide for parents who experience challenges, influenced by context and culture, providing social psychological support may be possible for all parents, regardless of socioeconomic resources. All parents may be able to provide a certain amount of support by checking to see if the assignment has been finished, despite that many parents find difficulty to help their children with their assignments.

However, the impact of family income on a child's education success is uncertain because it is relating to other family traits that influencing the schooling decision. As a result, one of the most critical determinants of disparities of student accomplishment is the parents' education level and the most incredible family income (Chevalier & Lanot, 2002). We still don't completely understand how Sri Lankan undergraduate students' socioeconomic situation affects their ability to succeed academically. Moreover based on the results of Dasanayake and Jayasinghe (2021) research, socioeconomic status determine by the parental income, occupation. Furthermore, this study contends the socioeconomic status of parents is important because it provides high levels of psychological support for the children by encouraging the growth of skills that required for academic performance.

H3: There is an impact of the economic status of parents on the academic success of undergraduates.

Family Structure of Parents on Academic Success of the Undergraduate

The study of the relationship between family structure and academic success has made use of a variety of frameworks. A significant amount of research that examined the relationship between family composition and academic success came up with contradictory results. Some conclusions while previous studies have revealed either no significant difference or even a positive influence, Azuma et al., (2018) research indicated a negative association between growing up in an environment with a single parent and a child's academic achievement. Additionally, the study Njoroge and Kirori (2018) examined how stepfamilies and stepparents affected children's academic achievement. Children in stepfamilies had a lower grade point average than those in intact families, while children in blended homes had academic achievement corresponding to that of children in intact families. Children in stepfamilies have worse academic accomplishments than children from intact families. The study's Ginther and Pollak (2002) conclusions suggest that stepfamilies and academic failure may be related to a lack of resources and support, whereas blended families and higher academic achievement may be related to the presence of additional caregivers and resources.

Parental involvement in a child's education and development is active, and they help them physically, emotionally, and socially. Furthermore, Strouse and Ganea (2021) grandparents and their grandchildren develop deep bonds with one another. A two-parent household frequently has more opportunities for work, income, and savings-related financial assets, which gives children a more secure environment. According to research, Cynthia and Martha (2021) when there is peace and harmony in the family, children are more inclined to leave their families at a younger age. The increasing prevalence of single-parent families significantly impacts social, economic, and political aspects of family life. Women dominate household roles in these families, making it difficult to find suitable childcare for children. This restricts income and prospects, even though many families receive assistance from extended family and friends. According to (Amato, 2000) research, children who lives with both parent families are more likely than their counterparts who don't have same living situation to succeed in school, in terms of both emotional and social development. Although research suggest that, having two parents at home is positively correlated with a child's improved academic achievement. This

relationship can be explained by the increased emotional and financial support that children receive when both parents are actively involved in their development.

Although some existing research shows that family size or structure does not have a consistent impact on children's academic performance. Therefore Dasanayake and Jayasinghe (2021) has imply that undergraduate student's academic success unaffected by student's family background. Moreover, phenomenon have been conducted by Hanafi and Noor (2016) that the family size has negative impact towards the academic achievement and also this study included smaller families offer more individualized attention and resources which may benefit a students' education, on other hand larger families have less resources to devote to each member.

H4: There is an impact of the family structure of parents on the academic success of the undergraduate.

DATA AND METHODOLOGY

Sampling and Data Collection

This study utilized quantitative research methodology to examine the impact of parental involvement and demographic factors on undergraduate academic success. Using a deductive approach, researchers used a survey strategy to gather data from a sample of undergraduates at both public and private universities. The researchers developed a self-administrative questionnaire to collect data from the undergraduates, examining the connection between parental educational level and academic achievement.

This research primarily focuses on students attending the top 10 universities in the Western Province in Sri Lanka as listed by the University Grant Commission. University of Colombo, University of Moratuwa, University of Kelaniya, University of Jayewardenepura, Open University of Sri Lanka, Sri Lanka Institute of Information Technology, General Sir John Kotelawala Defence University, ESoft Metro campus, and University of Visual and Performing Arts are among the ten institutions represented in the sample. Using a simple random sampling method, the sample consists of 449 undergraduates from universities in the Western Province. According to Krejcie and Morgan (1970) minimum sample size, should be 384 participants. Hence the sample size for this study is adequate ($449 > 384$), In general higher number of samples size ensure that the population is more accurately represented.

Data Analysis

The study used a cross-sectional questionnaire-based survey to collect quantitative data on the impact of parental involvement and demographic factors on the academic success of undergraduates in Sri Lanka's Western Province. The questionnaire included three sections, identifying students' demographic backgrounds, including age, gender, and GPA. The survey included 24 questions and statements for four independent variables and the dependent variable. Respondents scored these statements on a 5-point Likert scale, ranging from "Strongly agree" to "Strongly disagree." The study design was based on previous literature and expert opinions. The study collected quantitative data using procedures and methods similar to previous research. An online survey was conducted using Google Forms and distributed via email and WhatsApp. Likert Scale questions were used to enhance accuracy, reliability, and validity. All respondents were eligible for data collection.

The survey data was analysed through Structural Equation Modelling (PLS-SEM) with Smart PLS 4.0 software. The convergent validity of the PLS-SEM is evaluated using Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). The values are all within acceptable limits. AVE needs to be more than 0.5. Although the AVE in this study is less than 0.5 for various constructs, Fornell and Larcker state that the composite reliability is more than 0.60. The Heterotrait-Monotrait ratio (HTMT) is used to evaluate the discriminant validity. According to the literature, the HTMT number must be less than 0.90.

RESULTS

Structural Equation model results

This study's measurement approach comprises a total of 24 indicators and four latent variables. PLS-SEM was applied to analyse the gathered dataset and evaluate the study's hypotheses. When assessing the outer model to assess the validity and reliability of the constructs, convergence validity must be taken into consideration. The results indicate that the outer loading ought to be more than 0.7. If the outer loading value is less than 0.40, the item needs to be removed in order to reach the required minimum value because their values were too low (below 0.5). After the low values were eliminated, general loadings above the value were found to be reasonably suited and appropriate for the model. According to Hair et al. (2019) the model's applicability was examined and reported after the model's reliability, convergent validity, and discriminant validity were assessed using the chosen criteria of Cronbach's alpha value, AVE statistics, and HTMT ratio.

Table 1. Reliability of the variables

Variables	Cronbach's alpha	CR (rho_a)	CR (rho_c)
Parental Involvement	0.811	0.824	0.870
Education Level	0.782	0.782	0.850
Family Structure	0.824	0.832	0.876
Economic Status	0.819	0.828	0.872
Academic Success of Undergraduates	0.766	0.774	0.851

Source: Authors' compilation based on Smart PLS output note CR= Composite Reliability

Cronbach Alpha, a measure of internal consistency, examines whether every element in a construct accurately reflect that construct. This measures a construct's consistency, which demands a high degree of correlation between the components that comprise the construct. Cronbach's alpha should be greater than 0.7 to determine the study's reliability. The failure of any independent variable to attain this result indicates that it is unreliable and lacks internal consistency (Hair et al., 2014). According to Dijkstra and Henseler (2015) the composite reliability must be more than 0.60 and 0.70.

As shown in Table 1, the variable parental involvement accepted the criteria for reliability by having a Cronbach's alpha value of 0.811, which is greater than 0.7. The remaining independent variables may also be regarded as reliable for the study due to the alpha values of education level; family structure and economic status are greater than the value required by the criteria at 0.782, 0.824 and 0.819 respectively. The dependent variable of academic success of undergraduates has an alpha value 0.766 accepting the criteria.

Table 2. AVE values

Variables	Average variance extracted (AVE)
Parental Involvement	0.575
Education Level	0.531
Family Structure	0.588
Economic Status	0.578
Academic Success of Undergraduates	0.589

Source: Authors' compilation based on Smart PLS output.

The AVE is calculated by averaging the squared loadings of all indicators linked to a project. To demonstrate statistical convergent validity, the Average Variance Extracted (AVE) must be more than 0.50 (Fawad, 2023). As a result of the Smart PLS outcomes, the AVE scores for each variable were PI (0.575), EL (0.531), FS (0.588), ES (0.578) and ASU (0.589). Hence, all the variables have accepted convergent validity as shown in Table 2.

Discriminant Validity

Using discriminant validity, it is found that the study's constructs are distinct (Hamid et al., 2017). It proves that there are few correlations between the study's constructs and that they are unique from one another. Fornell-Larcker Criterion, Cross Loadings, and Heterotrait-Monotrait (HTMT) ratio are three alternate techniques utilized in SMART-PLS to establish discriminant validity (Hair et al., 2018). According to the Fornell and Larcker Criterion Fornell and Larcker (1981) discriminant validity is shown when the square roots of the AVE for a particular construct are greater than the correlation between that construct and all other constructs (Fawad, 2023). The below Table 3 shows the Fornell-Laker criterion outcomes.

Table 3: Fornell-Laker criterion outcomes of latent variables

	PI	EL	FS	ES	ASU
PI	0.758	0.559	0.450	0.359	0.495
EL		0.729		0.643	0.538
FS		0.739	0.767	0.732	0.457
ES				0.760	0.539
ASU					0.768

Source: Authors' compilation based on Smart PLS output.

Cross loadings predict that a particular component should be more loaded on its own parent construct than on any other constructs in the study. If an item loads effectively onto a different construct as opposed to its own parent construct, discriminant validity may be compromised (Fawad, 2023).

Table 4: Cross Loading outcomes

	PI	EL	FS	ES	ASU
PI1	0.819	0.353	0.241	0.212	0.393
PI2	0.846	0.384	0.254	0.215	0.453

PI3	0.798	0.423	0.352	0.208	0.300
PI4	0.625	0.445	0.348	0.382	0.344
PI5	0.678	0.537	0.550	0.363	0.353
EL1	0.530	0.745	0.553	0.406	0.352
EL2	0.595	0.685	0.361	0.312	0.468
EL3	0.276	0.739	0.614	0.481	0.282
EL4	0.267	0.730	0.522	0.545	0.428
EL5	0.308	0.743	0.700	0.616	0.367
FS1	0.415	0.555	0.715	0.536	0.373
FS2	0.366	0.609	0.810	0.543	0.321
FS3	0.387	0.549	0.786	0.530	0.366
FS4	0.329	0.589	0.823	0.606	0.397
FS5	0.193	0.530	0.690	0.602	0.270
ES1	0.264	0.437	0.591	0.799	0.372
ES2	0.304	0.402	0.415	0.735	0.430
ES3	0.286	0.594	0.595	0.761	0.506
ES4	0.192	0.526	0.635	0.791	0.376
ES5	0.319	0.453	0.553	0.709	0.312
ASU1	0.381	0.473	0.388	0.403	0.773
ASU2	0.432	0.414	0.347	0.435	0.810
ASU3	0.334	0.296	0.274	0.371	0.670
ASU4	0.369	0.454	0.387	0.443	0.809

Source: Authors' compilation based on Smart PLS output.

Henseler et al. (2015) claim that the study implies a threshold value of 0.90 if the route model includes elements that are conceptually quite similar; in other words, a score on the HTMT greater than 0.90 indicates a lack of discriminant validity. HTMT must be less than 1 in order to differentiate between two components with clearly (Henseler et al., 2016).

Table 5: HTMT Ratio of Latent Variables

	PI	EL	FS	ES	ASU
PI		0.691	0.556	0.449	0.619
EL				0.798	0.666
FS		0.938		0.895	0.566

ES	0.662
ASU	

Source: Authors' compilation based on Smart PLS output.

The above table demonstrates that the discriminant validity was established according to the Heterotrait-Monotrait ratio, parental involvement and education level with a value of 0.691 which is less than 0.90, parental involvement and family structure with a value of 0.556 which is less than 0.09, parental involvement and economic status with a value of 0.449 which is less than 0.09, education level and economic status with a value of 0.798 which is less than 0.90, family structure and education level with a value of 0.938 which is greater than 0.90, family structure and education level with a value of 0.895 which is less than 0.90.

Structural Model Results

The coefficient of determination (R²), which demonstrates that the dependent variable's entire variation was caused by an independent or exogenous variable, was used to assess the suggested model's predictive ability (Hair et al., 2013). According to Hair et al. (2014), a model with an R-squared of 0.10 to 0.50 must be rejected if all of the explanatory variables are statistically insignificant, but it is acceptable if some or most of the explanatory factors are significant.

Despite the current study's R squared score of 0.411, the model is acceptable because the explanatory variables are significant except Family structure variable.

This research demonstrated that the parental involvement considered in this study lead to a 41.1% variance in academic success of undergraduates, as shown in Table 6, by explaining 0.411 differences in academic success of undergraduates.

Table 6: R Square Values

	R-square	R-square adjusted
ASU	0.411	0.406

Source: Authors' compilation based on Smart PLS output.

The Variance Inflation Factor (VIF) was used to analyse the inner reflective model, and a result was considered acceptable if it was less than 3 (Hair et al., 2019). Table 7 illustrates that the VIF was less than 3 for each construct, demonstrating that there were no collinearity issues with the model.

Table 7: VIF Inner Model

	VIF
Parental Involvement -> Academic Success of Undergraduates	1.463
Education Level -> Academic Success of Undergraduates	2.696
Family Structure -> Academic Success of Undergraduates	2.943
Economic Status -> Academic Success of Undergraduates	2.267

Source: Authors' compilations based on Smart PLS output.

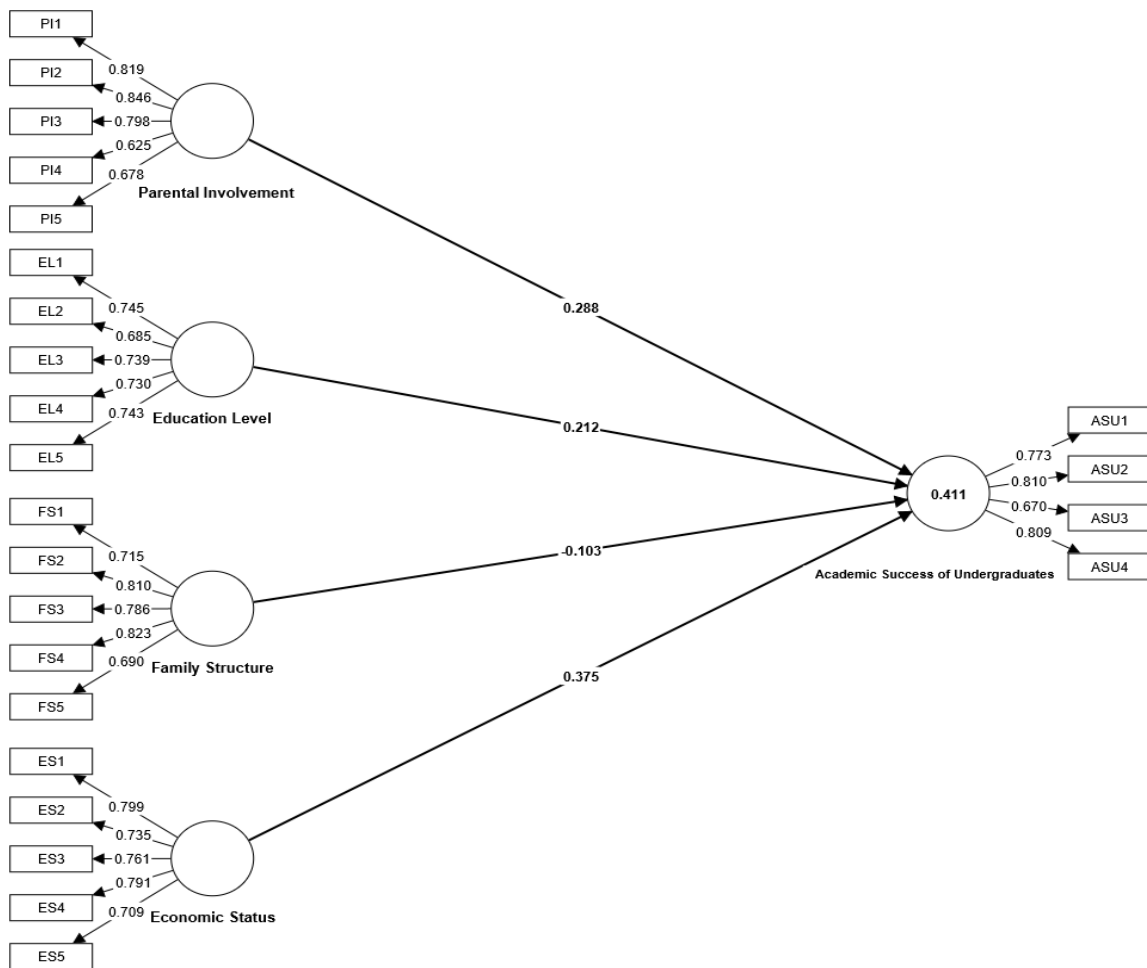
The survey's structural model was evaluated by the authors using bootstrapping, a nonparametric technique, to ascertain the importance of the association between the latent variables. Using bootstrapping, the beta value, t-statistic, and p-value of the association between the independent variables and undergraduate undergraduates' academic success were determined under the significant level of (0.05). When the t-statistics value is greater than 1.96 and the p-value is less than 0.05, the independent variable has significant impact on the dependent variable (Kock, 2016). Figure 1 illustrates the structural model of the analysis procedure produced by the Smart PLS software.

Parental involvement has a significant impact on Academic success of undergraduates, according to H1. The T-statistics of 5.585, the p-value of 0.000 and the β value of 0.288 indicate that parental involvement has a significant positive impact on academic success of undergraduates. Therefore, accepting H1. According to H2, Education level has a significant impact on Academic success of undergraduates. The T-statistics of 2.917, the p-value of 0.004 and the β value of 0.212 indicate that Education level has a significant positive impact on academic success of undergraduates. Therefore, accepting H2. Family structure has an insignificant impact on Academic success of undergraduates, according to H3. The T-statistics of 1.350, the p-value of 0.177 and the β value of -0.103 indicate that family structure has an insignificant negative impact on academic success of undergraduates. Therefore, rejecting H3. Economic status has a significant impact on Academic success of undergraduates, according to H4. The T-statistics of 5.717, the p-value of 0.000 and the β value of 0.375 indicate that economic status has a significant positive impact on academic success of undergraduates. Therefore, H4 can be accepted. Therefore, among those four independent variables, PI, EL and ES have a significant impact on Academic success of undergraduates, whereas FS has an insignificant negative impact on academic success of undergraduates.

Table 8: Structural Estimates

Hypothesis	Standard Beta	T statistics	P- value	F square	Decision
H1: PI	0.288	5.585	0.000	0.097	supported
H2: EL	0.212	2.917	0.004	0.028	supported
H3: FS	-0.103	1.350	0.177	0.006	Not supported
H4: ES	0.375	5.717	0.000	0.105	supported

The path coefficients, occasionally referred to as the relationship strength, describe how the dependent variable reacts to a unit change in an explanatory variable when all other variables in the model are held constant (Bollen, 1989). A unit increase in parental involvement results in an increase of 0.288 in academic success of undergraduates. As represented in the above table, indicating a positive relationship. An increase of 0.212 in academic success of undergraduates per unit of education level indicates a positive relationship. A unit increase in economic status results in an increase of 0.375 in academic success of undergraduates indicating a positive relationship.

Figure 2: Graphical Output of Structural Equation Model

Source: Authors compilation based on Smart PLS output.

DISCUSSION

This study aims to analyse how does parental involvement and the demographic factors impact on to the undergraduate's academic success in Western Province of Sri Lanka. In order to determine how those independent variables affect the academic success of undergraduates, the four dimensions of the independent variables' parental involvement, educational level, family structure, and economic status were used to evaluate the study's objective. The findings of the study, which analysed four variables linked to undergraduates' academic success, determined that parental involvement, education level, and economic status all significantly impact undergraduates' academic success, however family structure does not. Based on the results of various researchers Đurisić and Bunijevac (2017); Laura and Saracosti (2019); Naite (2021); Topor et al. (2010) have illustrated the positive impact of parental involvement and their educational level on students' academic success. Therefore, based on the findings of first and

second hypotheses, parental involvement and education level have a positive impact on children academic success. According to the findings of the third hypothesis, Family structure has an insignificant negative impact on the academic success of undergraduates. This study comparable to Bjrklund and Sundstrom (2006); Tobishima (2018) earlier researchers, which found that there is a negatively insignificant impact on academic success of students. The result of the fourth hypothesis indicates that Economic Status has a significant positively impact on the academic success of undergraduates including income level, parents' occupation, unemployed parents, retired parents. The findings of the research done by Budke (2007); Gobena (2018); Qiushan et al. (2018) which examined the economic status positively significant impact on academic success of undergraduates.

CONCLUSION & RECOMMENDATION

The primary goal of this study was to identify the impact of parental involvement and demographic factors on the academic success of undergraduates in the Western province of Sri Lanka. Furthermore, this study adds to the existing body of knowledge on Academic success. The dependent variable in the study was the Academic success of undergraduates, and the four independent variables were drawn from the existing literature. Parental involvement, education level, family structure, and economic status are independent variables in this study.

This research study provides a significant contribution to measuring the impact of parental involvement and demographic factors on the academic success of undergraduates. Based on the results obtained through Smart PLS 4.0 software, there is a moderate impact of independent variables on academic success of undergraduates. However, based on the results, researchers can conclude that parental involvement, parents' education level, and economic status variables were important to the academic success of the undergraduates except for the Family structure variable. Due to parental involvement, parents' education level and economic status variables are significantly positively associated with the academic success of undergraduates. However, the Family structure has a negligible negative effect on the academic success of undergraduates. Therefore, based on the results outcomes the authors can conclude, that the academic success of undergraduates is unaffected by a student's family structure.

It must be noted that, this study was limited to single province, future researchers can conduct their analysis across a wider spectrum with more representative sample. In depth interviews with many associated parties such as students, parents, and lecturers could be conducted in the future to gain a better knowledge about the variables impact to the student's academic

achievement. There were few additional limitations in this study. In order to get a holistic view on this issue the research must look at both quantitative aspects as well as qualitative aspects, which is lacking in this study therefore it is a limitation. The authors had to adjust to the precise time period due to that reason limiting depth of analysis as well as the investigating the specific factors. Nonetheless, it is clearly visible that this study has provided valuable findings to the research community despite the limitations stated above. By expanding the current study, further insights could be certainly discovered. Finally, enhancing parental involvement and understanding demographic factors among undergraduates is pivotal in fostering the academic success, thereby it significantly impacting the educational environment and contributing to broader economic development.

REFERENCES

- Amato, P. R. (2000). The Consequences of Divorce for Adults and Children. *Journal of Marriage and Family*, 62(4), 1269-1287. <https://doi.org/10.1111/j.1741-3737.2000.01269.x>.
- Bjorklund, A., & Sundstrom, M. (2006). Parental Separation and Children's Educational Attainment: A Siblings Analysis on Swedish Register Data. 73. <https://doi.org/10.1111/j.1468-0335.2006.00529.x>.
- Bollen, K. A. (1989). Structural Equations with Latent Variables. *Scientific Research*. <https://doi.org/10.1002/9781118619179>.
- Budke, M. J. (2007). The effects of parental involvement on student achievement. [https://scholar.google.com/scholar?q=Budke+M.J.+\(2007\)&hl=en&as_sdt=0&as_vis=1&oi=scholart](https://scholar.google.com/scholar?q=Budke+M.J.+(2007)&hl=en&as_sdt=0&as_vis=1&oi=scholart)
- Chevalier, A., & Lanot, G. (2002). The Relative Effect of Family Characteristics and Financial Situation on Educational Achievement. *Education Economics*, 10(2). <http://doi.org/10.1080/09645290210126904>.
- Cynthia, B., & Martha, S. (2021). Covid-19 Shocks to Education Supply: how 200,000 U.S. Households Dealt with the Sudden Shift to Distance Learning. *Review of Economics of the Household*, 19(1), 63-90. <http://doi.org/10.1007/s11150-020-09540-9>.
- Dasanayake, T. N., & Jayasinghe, J. A. G. P. (2021). Factors Affecting Academic Performance of Undergraduates; Case Study in a State University of Sri Lanka. *Journal of SACFIRE*, 1(2021), 1-12. <https://fbsf.wyb.ac.lk/wp->

content/uploads/2022/11/FACTORS-AFFECTING-ACADEMIC-PERFORMANCE-OF-UNDERGRADUATESCASE-STUDY-IN-A-STATE-UNIVERSITY-OF-SRI-LANKA.pdf

- Dijkstra, T., & Henseler, J. (2015). Consistent Partial Least Squares Path Modeling. *MIS Quarterly*, 39. <http://doi.org/10.25300/MISQ/2015/39.2.02>.
- Duan, W., Guan, Y., & Bu, H. (2018). The Effect of Parental Involvement and Socioeconomic Status on Junior School Students' Academic Achievement and School Behavior in China [Original Research]. 9, 1-8. <https://doi.org/10.3389/fpsyg.2018.00952>. .
- Durisic, M., & Bunijevac, M. (2017). Parental Involvement as a Important Factor for Successful Education. *Center for Educational Policy Studies Journal*, 7(3), 137-153. <https://doi.org/10.26529/cepsj.291>.
- Fawad, K., H. (2023). Introduction to Data Analysis using SMART-PLS. <https://researchwithfawad.com/index.php/lp-courses/basic-and-advance-data-analysis-using-smart-pls/how-to-start-data-analysis-using-smart-pls/>
- Feraco, T., Resnati, D., Fregonese, D., Spoto, A., & Meneghetti, C. (2023). An Integrated Model of School Students' Academic Achievement and Life Satisfaction. Linking Soft Skills, Extracurricular Activities, Self-Regulated Learning, Motivation, and Emotions. *European Journal of Psychology of Education*, 38(1), 109-130. <http://doi.org/10.1007/s10212-022-00601-4>.
- Fornell, C., & Larcker, D., F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.1177/002224378101800104>.
- Foster, J., & Loven, R. (1992). The Need and Directions for Parent Involvement in the 90's: Undergraduate Perspectives and Expectations. *Action in Teacher Education*, 14(3), 13-18. <http://dx.doi.org/10.1080/01626620.1992.10463127>.
- Garbacz, A., Herman, C., Thompson, M., & Reinke, M. (2017). Family Engagement in Education and Intervention: Implementation and Evaluation to Maximize Family, School, and Student Outcomes. *J Sch Psychol*, 62, 1-10. <https://doi.org/10.1016/j.jsp.2017.04.002>.
- Ginther, D., & Pollak, R. (2002). Does Family Structure Affect Children's Educational Outcomes? *Demography*, 41. <https://doi.org/10.1353/dem.2004.0031>. .
- Gobena, G., A. . (2018). Family socio-economic status effect on students' academic achievement at college of education and behavioral sciences, Haramaya University, Eastern Ethiopia. *Journal of Teacher Education* 7(3), 207-222.

<https://www.semanticscholar.org/paper/Family-Socio-Economic-Status-Effect-on-Students'-at-Gobena/b931bff360d3dc281e76ae5fea3eb8a9b1c83753>

- Hadjicharalambous, D., & Dimitriou, L. (2020). The Relationship Between Parents' Demographic Factors and Parenting Styles: Effects on Children's Psychological Adjustment. *Psychology Research*, 10(4), 125-139. <http://doi.org/10.17265/2159-5542/2020.04.001>
- Hair, J., F., Ringle, C., M., & Sarstedt, M. (2013). Partial Least Squares Structural Equation Modeling: Rigorous Applications, Better Results and Higher Acceptance. *Long Range Planning*, 46, 1-12. <https://doi.org/10.1016/j.lrp.2013.01.001>.
- Hair, J., F., Risher, J., J., Sarstedt, M., & Ringle, C., M. (2019). When to use and How to Report the Results of PLS-SEM. *European Business Review*, 31(1), 2-24. <http://doi.org/10.1108/EBR-11-2018-0203>.
- Hair, J., F., Risher, J., Sarstedt, M., & Ringle, C. (2018). When to Use and How to Report the Results of PLS-SEM. *European Business Review*, 31, 1-25. <http://doi.org/10.1108/EBR-11-2018-0203>.
- Hair, J., F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V., G. (2014). Partial Least Squares Structural Equation Modeling (PLS-SEM). *European Business Review*, 26(2), 106-121. <http://doi.org/10.1108/EBR-10-2013-0128>.
- Hamid, M., Sami, W., & Sidek, M. (2017). Discriminant Validity Assessment: Use of Fornell & Larcker criterion versus HTMT Criterion. *Journal of Physics: Conference Series*, 890, 1-6. <http://doi.org/10.1088/1742-6596/890/1/012163>.
- Hanafî, Z., & Noor, F. (2016). Relationships between Demographic Factors and Emerging Adults Academic Achievement. *International Journal of Academic Research in Business and Social Sciences*, 6. <http://doi.org/10.6007/IJARBSS/v6-i6/2198>.
- Harris, A., & Goodall, J. (2008). Do Parents Know They Matter? Engaging All Parents in Learning. *Educational Research - EDUC RES*, 50, 1-15. <http://dx.doi.org/10.1080/00131880802309424>.
- Henseler, J., Ringle, C., M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(2015), 115-135. <https://doi.org/10.1007/s11747-014-0403-8>.
- Jeynes, H. W. (2002). Examining the Effects of Parental Absence on the Academic Achievement of Adolescents: The Challenge of Controlling for Family Income. *Journal of Family and Economic Issues*, 23(2), 189-210. <https://doi.org/10.1023/A:1015790701554>.

- Kock, N. (2016). Hypothesis testing with confidence intervals and P values in PLS-SEM. . *International Journal of e-Collaboration.*, 12(3), 1-6. https://cits.tamtu.edu/kock/pubs/journals/2016/Kock_2016_IJeC_ConfIntervalsPathModel.pdf
- Korpershoek, H., Canrinus, T., Fokkens, M., & de Boer, H. (2020). The Relationships between School Belonging and Students' Motivational, Social-Emotional, Behavioural, and Academic Outcomes in Secondary Education: a Meta-Analytic Review. *Research Papers in Education*, 35(6), 641-680. <https://doi.org/10.1080/02671522.2019.1615116>.
- Krejcie, V., & Morgan, W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607-610. <https://doi.org/10.1177/001316447003000308>.
- Laura, L., & Saracosti, M. (2019). Effect of Parental Involvement on Children's Academic Achievement in Chile. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01464>.
- Little, W., Vyain, S., Scaramuzzo, G., Cody-Rydzewski, S., Griffiths, H., Strayer, E., & Keirns, N. (2014). *Introduction to sociology—1st Canadian edition*. [https://scholar.google.com/scholar?q=Vyain,+S.+et+al.+\(2014\).&hl=en&as_sdt=0&as_vis=1&oi=scholar](https://scholar.google.com/scholar?q=Vyain,+S.+et+al.+(2014).&hl=en&as_sdt=0&as_vis=1&oi=scholar)
- Muhammad, I., Hussain, S., & Ahmad, N. (2020). Relationship between Parents' Education and their children's Academic Achievement. *Journal of Arts & Social Sciences* 7, 82-92. [https://doi.org/10.46662/jass-vol7-iss2-2020\(82-92\)](https://doi.org/10.46662/jass-vol7-iss2-2020(82-92)).
- Muraina, K., O. , & Kassim, A. (2011). Parents' Education, Occupation and Real Mother's Age as Predictors of Students' Achievement in Mathematics in Some Selected Secondary Schools in Ogun State, Nigeria. *Academic Leadership: The Online Journal*, 9(1). <http://doi.org/10.58809/ZTIC6332>.
- Naitte, I. (2021). Impact of Parental Involvement on Children's Academic Performance at Crescent International School, Bangkok, Thailand. *IOP Conference Series: Earth and Environmental Science*, 690(1), 1-10. <https://dx.doi.org/10.1088/1755-1315/690/1/012064>.
- Ndimuh, N., & Ngeh, T. (2022). *The Impact of Parental Level of Education on Scholarisation in the Mbororo Communities in the North West and West Regions of Cameroon*. Global Journal of Arts and Social Sciences. <https://www.pubtexto.com/journals/global-journal-of-arts-and-social-sciences/fulltext/the-impact-of-parental-level-of-education-on-scholarisation-in-the-mbororo-communities-in-the-north-west-and-west-regions-of-camer>

- Njoroge, M., & Kirori, G. (2018). Blended Family Dynamics and Academic Performance Outcome of the Child in Kenya: Case of Kabete Sub-County in Kiambu County. *Journal of Culture, Society Development* 41, 1-18. <https://iiste.org/Journals/index.php/JCSD/article/view/42821>
- Pinquart, M., & Ebeling, M. (2020). Parental Educational Expectations and Academic Achievement in Children and Adolescents—a Meta-Analysis. *Educational Psychology Review*, 32, 463-480. <https://link.springer.com/article/10.1007/s10648-019-09506-z>
- Qiushan, C., Yurou, K., Wenyang, G., & Lei, M. (2018). Effects of Socioeconomic Status, Parent–Child Relationship, and Learning Motivation on Reading Ability. *ORIGINAL RESEARCH article*, 9. <https://doi.org/10.3389/fpsyg.2018.01297>.
- Rassidy, O., & Ishmael, A. (2018). Women’s Leadership Experiences: A Study of Ivorian Women Primary School Principals. *Journal of Educational Issues*, 4. <https://doi.org/10.5296/jei.v4i1.13042>.
- Roy, M., & Giraldo, R. (2018). The Role of Parental Involvement and Social/Emotional Skills in Academic Achievement: Global Perspectives. *School Community Journal* 28, 29-46. <https://www.semanticscholar.org/paper/The-Role-of-Parental-Involvement-and-Skills-in-Roy-Giraldo%20%80%90Garc%C3%ADa/007e43be9a5c7cc22c4d6dbb53ccdf22c5c7c55c>
- Sebastian, J., Moon, J., M., & Cunningham, M. (2017). The relationship of school-based parental involvement with student achievement: a comparison of principal and parent survey reports from PISA 2012. *Educational Studies*, 43(2), 123-146. <http://doi.org/10.1080/03055698.2016.1248900>.
- Strouse, A., & Ganea, A. (2021). The Effect of Object Similarity and Alignment of Examples on Children’s Learning and Transfer from Picture Books. *Journal of Experimental Child Psychology*, 203. <https://doi.org/10.1016/j.jecp.2020.105041>.
- Tobishima, S. (2018). Family Structure and Children's Academic Achievement in Japan: A Quantile Regression Approach. *Educational Studies in Japan*, 12, 107-119. <https://files.eric.ed.gov/fulltext/EJ1182865.pdf>
- Topor, D. R., Keane, S. P., Shelton, T. L., & Calkins, S. D. (2010). Parent Involvement and Student Academic Performance: a Multiple Mediation Analysis. *J Prev Interv Community*, 38(3), 183-197. <http://doi.org/10.1080/10852352.2010.486297>.

- Tsela, D., Tsela, D., & López, G. (2023). Relations between Parenting Style and Parenting Practices and Children & School Achievement. *MDPI*, *12*(1), 5. <https://doi.org/10.3390/socsci12010005>.
- Veronica, T., G , Beatriz, G., F, & José, R., G. (2018). Home-Based Family Involvement and Academic Achievement: a Case Study in Primary Education. *Educational Studies*, *44*(3), 361-375. 10.1080/03055698.2017.1373636.
- Wilder, S. (2014). Effects of Parental Involvement on Academic Achievement: a Meta-Synthesis. *Educational Review*, *66*(3), 377-397. <https://doi.org/10.1080/00131911.2013.780009>.
- Yang, S., & Wang, W. (2022). The Role of Academic Resilience, Motivational Intensity and Their Relationship in EFL Learners' Academic Achievement. *Sec. Educational Psychology*, *12*. <https://doi.org/10.3389/fpsyg.2021.823537>.
- Zakaria, R., Lai, M., & Confessore, J. (2013). A study of Time Use and Academic Achievement Among Secondary-School Students in the State of Kelantan, Malaysia. *International Journal of Adolescence and Youth*, *21*(4), 433-448. <http://dx.doi.org/10.1080/02673843.2013.862733>.