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Assessing the Hindrances to Female Education in the Korie Chiefdom, Southern Sierra Leone, A Structural Equation Modeling Approach

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ABSTRACT

The plight of uneducated women in the Korie Chiefdom and Sierra Leone, in general, cannot be overlooked, as women of all ages are socially, physically, and emotionally treated inferiorly compared to their male counterparts Although education has been identified as a powerful weapon against poverty, in many low-income families, boys are favored to go to school while girls are culturally and domestically prepared for marriage. This research, therefore, applied structural equation modeling techniques to highlight the main hindrances to female education in the Korie Chiefdom, in the southern part of Sierra Leone. For this purpose, a cluster sampling methodology was employed to select 1200 respondents from the selected villages. Out of the three structural equation models used in the analysis, model 3 was found to be more appropriate and plausible as it satisfied all the fit measures, including the chi-square test. The empirical result revealed a positive and significant relationship between the dependent endogenous construct "educational attainment" and the independent latent variables “learning intensity”, " “intention”, “perceived behavioral control”, and “economic factors”. On the other hand, a negative but significant relationship was observed between the dependent endogenous construct “educational attainment” and the independent latent variables "social force/norms.”.

Keywords: Female Education Hindrances; Structural Equation; Korie Chiefdom; Sierra Leone; Educational achievement, Gender

INTRODUCTION

The struggle of most uneducated or illiterate women (including primary and secondary school dropouts) in the Korie Chiefdom and in Sierra Leone as a whole is evident in their daily activities to survive. This is enforced by the socially restrictive culture and traditions placed on the female gender. The Kpa-Mende women residing in this chiefdom are expected to adhere to the prevailing social norms, cultural values, and tribal laws. Thus, the word woman in the Kpa-Mende social setting, like in many other African social settings, is synonymous with “submission” and “loyalty” (also see [38]). Culture and tradition have placed enormous social restrictions on the female gender, in a way that in most social gatherings’ women are only to be seen and not heard.

Consequently, the socio-cultural, and traditional restrictions in the form of gender role discrimination placed on the female gender had gradually extended to the area of the girl child's education. Gendered norms are structurally embedded in many institutions thus determining whose voices are heard and listened to, and whose needs are prioritized [25].

Women’s unequal access to education and their level of educational attainment are both consequences of the gender disparities imposed by culture and tradition. Such inequality in education is considered a major violation of the rights of girls (including women) and a big hindrance to social and economic development. This is in line with the popular development slogan, “Human development if not engendered, is endangered” [47]. Educating the girl-child has been identified as a major way through which women can be set free from abuse, poverty, and oppression [42]

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

The United Nations Children's Fund [45], reported that despite the increase in girls' school enrollment rates in poor nations, they remain excluded from the educational system. In most African homes, the girl child was only born to be prepared for marriage. This means that, even if they succeed in going to school, the pressure of tradition and custom may force them to drop out of school and be married off to a spouse mostly chosen by their parents. Only male children are expected to go to school and pursue the dreams of their choice. References [48] and [35] measured that, because a girl will eventually get married and move to her husband's house with all her belongings, spending money on her education is a waste of resources.

Resultantly, parents of large and poor families often choose to educate only their boys when faced with problems of not having enough money to pay school fees and other school charges for all their children. In such families, the girls are even encouraged, to drop out of school and get married so that the bride price paid on their heads can be used to educate the boys. A possible reason is that after graduation, more financial help is expected from the boy child than the girl child 17]. Reference [33] discovered in their research findings that 74.1% of the subjects covered believe that parental discrimination is a key barrier to female education. Also in their research carried out in Kenya, [7] reported that parental discrimination and poverty are the key barriers to female education. Parents from high and middle socioeconomic status encouraged their children's (including girls) education more than those from low economic backgrounds [18].

Day in and day out, girls face barriers to education caused by poverty, culture, and traditional practices. Two-thirds of the illiterate adult population in the world are women; over 63 million girls around the world are out of school [43], and 47% of the out-of-school girls are never expected to enroll as compared to 35% of the boys [43].

As a result, in Sierra Leone today, most top positions in white-collar jobs are occupied by men. Some women want to lead, but this can only be achieved through better education. In their research work, [27] measured that although more women are joining the workforce, they are doing so at lower levels, and those who are lucky enough to have middle-level jobs find it challenging to progress in their careers. Quality education is the only thing that makes people easy to lead, but difficult to drive; easy to govern, but impossible to enslave [11.. Educating the girl child can aid in closing the gender wage gap, especially in regions where females are underrepresented compared to males in the job market. Women's salaries are improved by high-quality education. This implies that women with more education may make more money and are more likely to find and hold better employment. Therefore, eliminating the major barriers or hindrances to female education can indirectly help to close the gender pay gap for the present and future generations. A study carried out by [33] pointed out the necessity for policy interventions and cultural changes to reduce the gender pay gap and promote women's economic empowerment.

As a powerful weapon against poverty and slavery, acquiring quality education is the only tool required to end the social, physical, and emotional trauma that most women are facing in this part of the country. Education has been viewed as the most important factor in ensuring gender equity and inclusion. A society free of negative gender norms has direct benefits not only for the individuals concerned but for the nation as a whole [10]**.** **A**ccording to, [9], educating girls has a significant impact on achieving sustainable growth. Therefore, girls should have an equal entitlement to excellent learning opportunities. This is also supported by another research finding, ([44].

Finally and above all, education plays a vital role in enhancing women's equality and empowerment [46]. The 2008 Sierra Leone Demographic and Health Survey reveals that women are more empowered via education [34]

Therefore, the most effective way to achieve gender equality is to remove all the barriers or hindrances to the girl child's education. This can only be achieved by first identifying the major hindrances or barriers to female education.

This research, therefore, used structural equation modeling (SEM) techniques to identify the main hindrances to female education in the Korie Chiefdom, Moyamba district, southern part of Sierra Leone. Many factors (also called constructs or latent variables) were considered potential hindrances to female education. These potential hindrances were found to be immeasurable, which means that the researchers were unable to perform a direct

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

measurement of them. However, with the help of the theory of planned behavior (TPB), personal observation, and the researchers' knowledge of most of the customs and traditions of the study area, each latent variable (or potential hindrance) was adequately measured using the appropriate measurement variables (or indicators).

In conclusion, based on the research objective, the fitted structural equation models assessed the following research hypotheses:

Hypotheses:

H1: "Learning Intensity" has a significant effect on women's educational attainment.

H2:' "Economic Factor" has a significant effect on women's educational attainment.

H3: "Perceived behavioral control" has a significant effect on women's educational attainment

H4: Social Force/Norms has a significant effect on women's educational attainment.

H5 Intension has a significant effect on women's educational attainment.

MATERIALS: THEORETICAL REVIEW

Most Statistical modeling techniques, including regression-type modeling techniques, frequently used by researchers from various fields of study require that all the variables used in the analysis be observable and measured without systematic or random error [21]. However, the world is full of concepts that cannot be directly measured. In estimating the relationships among such immeasurable theoretical concepts, each observation of the real world must be accompanied by a certain degree of measurement error that can either be random or systematic in nature. In an attempt to quantify the theoretical ideas under study more accurately and to take measurement errors in the observed variables into account, this research used a second-generational modeling technique called structural equation modeling (SEM)

In an attempt to test the research hypotheses and find out how closely the proposed model reproduces the covariance matrix for the observed sample, dataset, this research work used the Covariance matrix approach to structural equation modeling, also called covariance-based Structural Equation Modeling (CB-SEM), in the empirical analysis.

The CB-SEM approach confirms or rejects given research hypotheses by assessing how closely a hypothesized theoretical model reproduces the covariance matrix for an observed sample dataset.

In using the CB-SEM approach, the two-step modeling procedure frequently used in SEM, which involves both measurement modeling and structural modeling [[22], was employed.

The measurement model is estimated during the first stage of the analysis using confirmatory factor analysis (CFA). The CFA helps to assess the adequacy of the measurement model to make sure that the hypothesized (or proposed) model provides a good fit to the data used for the analysis. The CFA is also used to measure the contribution of each indicator (or measured) variable to the associated latent variable.

In summary, Table l presents the most commonly used goodness-of-fit indices and their corresponding cutoff values used in the confirmatory factor analysis.

Table l: Goodness-of-Fit Indices and Their Corresponding Cut-off Values

Type of Goodness-of-fit index	**Acceptable cut-off value**
p value for the global χ^2 test	> .05

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

Normed Fit Index (NFI)	> .90
Nonnormed fit index (NNFI	> .90
Comparative Fit Index (CFI)	> .95
Adjusted Goodness-of-Fit Index (AGFI)	> .90
Goodness-of-Fit Index (GFI)	> .95
Root Mean Square Error of Approximation (RMSEA)	< .06
p value for RMSEA	> .05

The second step of the SEM is the estimation of the structural equation. Similar to regression, the structural equation is used to predict the value of the endogenous (or dependent) variables. However, in predicting the endogenous (or dependent) variable, the general equation for the structural equation model is formulated such that the endogenous latent variables are a function of the endogenous effect of themselves; the effects of the exogenous variables on the endogenous variables together with the error or stray causes Hence, the general equation for the structural equation model is given as:

$$\eta=\beta\eta+\Gamma\xi+\varsigma$$

Where:

$\eta = latent\ endogenous\ variable$

$\beta = the\ path\ from\ one\ endogenous\ latent\ variable\ to\ another\ endogenous\ la\ ent\ variable$

Γ = the path from exogenous to endogenous

ξ= the exogenous latent variablenn

$\varsigma =$ structural error

METHODOLOGY

A. Study Area

The research was conducted in the Korie Chiefdom, Moyamba District, in the southern part of SierraLeone. This part of the country is mainly occupied by the Mende ethnic group. As a significant ethnic group in the country, the Mendes account for about 30% of the total population of Sierra Leone. The Mendes were originally farmers and hunters.

B. Population Composition, Sample Size, and Sampling Method

1) Population: All women and teenage girls residing in the Korie Chiefdom were the target population for this research work.

2) Sample Size: In structural equation modeling, an appropriate sample size is required to minimize the likelihood of convergence problems and to obtain unbiased estimates. A large sample size is recommended by many researchers for SEM analysis [15].

However, [49] pointed out that, an SEM model with more indicators per factor requires a smaller sample as opposed to the generally larger sample required in SEM analysis.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

Whereas, ([6] and [19] recommended that when using the R package, Lavaan, the minimum sample size for binary or ordinal variables should be equal to or greater than values that range between 200 to 500 Reference [30], on the other hand, recommended the ratio of observed values to estimated parameter values (N: q) to be 20 to 1, or 20 observations (participants) for each estimated parameter in the model.

Therefore, this research used the ratio of observations to estimated parameters to determine the lower bound of an appropriate sample size. The ratio of observations to estimated parameters for this study was set to be 20 to 1 (i.e., 20 observations for each estimated parameter) [30]. From Table II, 21 manifest or observed variables were initially considered in the SEM analysis. As a result, the minimum sample size, or the lower bound for an adequate sample size for this research, was set to be, 420 (or 20 by 21). However, since the analysis was carried out in the R lavaan package with ordinal variables ([6] and [19], and fewer indicators were used to measure each construct in the SEM analysis [49], a sample size of 1200 was used to avoid the problem of convergence and unbiased SEM estimates.

3) Sampling Method: A Single-stage cluster sampling methodology was employed at the sampling stage of the research. Cluster sampling was considered an appropriate sampling method because the study area, (i.e., Korie Chiefdom) is a geographically dispersed region. The villages in the chiefdom were taken to be clusters. Fifteen clusters or villages (Mokabba, Kowama, Foinda, Mogbondo, Mobenni, Mambayema, Gbobu, Bailargo, Nyandehun, Taninahun, Gola, Moyambawo, Kotiya, Pelewahun, and Taiama) were randomly selected. All the women (including girls) in the selected clusters were included in the sample.

C. Variables used in the Model

The SEM modeling methodology is a composition of both observed (or measured) variables and unobserved latent variables, which can either be independent (exogenous) or dependent (endogenous) according to the research objective

Therefore, based on the research objective, the researchers used their knowledge of the sturdy area backed by the theory of planned behavior (TPB) to identify the latent variables (or constructs) used in exploring the factors that hinder female education in the study area.

The TPB is a behavioral theory that attempts to explain why people engage in and sustain certain behaviors. As a cognitive theory, the TPB links beliefs to behavior and suggests that an individual's decision to engage in certain behaviors can be based on his or her intention of doing so ([2]. A behavior should be performed more frequently if one has a stronger intention to engage in it [3]. Based on the TPB, it is possible to directly predict the achievement of behavioral goals (for example, achievement in the field of education). using perceived behavioral control and behavioral intentions. According to the TPB, intentions are said to be determined by three variables: personal attitudes (or attitudes), subjective norms (like social norms, also called social factors), and perceived behavioral control.

Also, given that a wide range of factors can affect an individual's behavior ([4] and the researcher's familiarity with the financial constraints faced by parents living in the study area, the “economic factor” construct was also taken into consideration as a potential predictor of the behavioral achievement construct, which is educational achievement.

Below is a detailed description of the constructs (or latent variables) used in the analysis.

1) Learning intensity: The learning intensity refers to the depth, degree, quality, or amount of learning acquired by women or schoolgirls This is vital for their educational achievement. The construct, learning intensity talks about a high level, quality, or degree of acquired learning. The learning intensity construct is mainly influenced by and was, therefore, measured using four observable factors (also called measurable variables): availability of learning materials (e.g., books), attendance of extra lessons, teacher discrimination, and frequency of class or school attendance.

2) Economic Factors: Students' emotional distress/depression and educational outcomes are impacted by their

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

perception of personal financial constraints and family financial difficulties [31]. For example, the effect of low household income has resulted in late payment of school fees; girls' involvement in petty trade to bring in income and girls performing most house jobs due to parents' financial inability to employ housemaids.

3) Perceived Behavioral Control: These talks about girls' self-control over distractions and hindrances to Education (e.g., self control over teenage pregnancy and early marriage)

4) Attitudes**:** This refers to the degree to which a schoolgirl can internally evaluate their commitment to and love for education. The evaluation can either be favorable (for a positive attitude) or unfavorable (for a negative attitude). It involves consideration and exhibition of the value one attaches to the outcomes or the benefits of education. For example, one can think of education as; **a waste of time, not beneficial, or not peaceful.**

5) Intention- These talks about an individual's preparedness to perform a specific behavior Examples; **Intention to minimize distractions from education, Intention to stop distractions from education; and Intention to go through university.** However, it has been shown that behavioral intentions do not always lead to actual behavior [36] . ‘

6) Education Attainment: The construct "educational attainment" refers to the highest level of education that a girl or woman has completed. The education attained by an individual is usually reflected in the number of years spent in school, the type of work or occupation, and the level or height of education reached, which is reflected in the type of certificate attained or awarded.

7) Social Factors*:* Social factors affect how we behave in social situations [39]. They are social aspects of life that influence the behavior and quality of life of an individual. This can include the influence of society, communities, cultures, group membership, and institutions such as family. The common social factors that mostly influence female education include religion, roles and availability of role models, social expectations, and family/peer pressure.

In summary, this research work used six exogenous latent variables (learning intensity, economic factors, perceived behavioral control, intention, social factor, and attitude), and one endogenous latent variable (educational attainment) in exploring the factors that hinder female education in the Korie Chiefdom Moyamba district, Sierra Leone

D. Type of Data

A well-known requirement for using SEM is that the data must have an interval scale. However, some researchers point out that Likert scale data can be analyzed parametrically because they are used as interval data [16]. Reference [14] & [13} also support this fact by stating that the 5-point Likert scale can be classified as an interval scale. Therefore, with the help of the theory of planned behavior (TPB) [20], a 7-point Likert scale was used for each variable measured in the questionnaire for this study

Hindrances to female education were assessed using 21 items that were each rated on a seven-point Likert scale. Higher scores indicate higher levels of hindrance to female education.

E. Data collection

Data were collected from all the women, including girls living in the selected villages (clusters), using structured questionnaires with instruments fully guided by personal observation and the theory of planned behavior (TPB). The TPB attempts to explain why people engage in and sustain certain behaviors. Hindrances to female education were assessed using 21 items that were each rated on a seven-point Likert scale. Higher scores, for example, indicate higher levels of hindrance to female education.

EMPIRICAL ANALYSIS

Considering the research objective and the latent nature of the variables involved in the empirical study, this research used the CB-SEM approach to structural equation modeling to uncover the primary causes of the high

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

illiteracy rate of women, including girls, in the Korie chiefdom, Moyamba district, southern part of Sierra Leone. A summary of the research constructs and their associated manifest (or measurable) variables is shown in Table II

Table II: Exogeneous (Exo. V), Endogenous (Endo. V) and Manifest Variables Used in Sem Analysis

Variable Name	**EXO V / ENDO V**	**Associated manifest variable**	**Measurement scale**
Economic Factor	EXO V	-Girls performing house jobs due to the family's inability to employ house help -Girls involvement in petty trades to bring in income -Ready availability of fees and other school charges	7-point Likert scale**)**
Learning Intensity	ENDO V	-Availability of learning Materials (e.g., Books) -Teacher Discrimination -Frequency of class/school attendance	7-point Likert scale**)**
Perceived Behavioral Control **over** distractions **to** Education	EXO V	- Complete Self-control to avoid distraction from learning -Knows how to refuse hindrances to learning (e.g., teenage pregnancy and early marriage)	7-point Likert scale**)**
Attitude towards Education	EXO V	-Education is a waste of time -Education is not Beneficial -Education is not peaceful	7-point Likert scale**)**
Education Attainment	ENDO **V**	-Number of years spent in school -Type of Work -Educational Level	7-point Likert scale**)**
Intention towards Education	EXO V	-Intention to minimize distractions from education -Intention to stop distractions from education -Intention to go through university	7-point Likert scale**)**
Social Factor/ norms		- Availability of female role model - Ethnic group/community opinion on female education (e.g., higher education is for men) -Religious influence on female education -Families' influence e.g., early marriage	7-point Likert scale**)**

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

A. Assessing Assumptions:

SEM makes certain distributional assumptions about the data. Much like other statistical methods, and these assumptions must be met for conclusions to be valid. The primary assumption, taken into account by the SEM methodology is that the sample data complies with a multivariate normal distribution, which implies that each variable that was measured is normally distributed and that the linear combination of the variables is similarly normally distributed [24], Therefore, the normality assessment of each measured variable comes first in the SEM analysis. However, since the research used a 7-point scale for each measured variable as a continuous scale, the normality assumption was not met. To fix this, the researchers made use of the lavaan "MLM" estimator as a fitting function in the analysis The maximum likelihood method used by the lavaan "MLM" estimator in the R statistical program generates a Satorra-Bentler scaled test statistic and a reliable or robust standard errors. Each of these futures can be used to amend, correct, or adjust for the violation of the multivariate normality assumption in structural equation modeling.

B. Factor Reliability

Table III presents the factor reliability for each latent variable used in the CB-SEM analysis. The Cronbach's alpha value indicates the internal consistency or reliability of each item. Mathematically, Cronbach's alpha is regarded as the average of all possible split-half correlations between items composing a latent construct. In providing an overall assessment of a measure's reliability, the coefficient of reliability ranges from 0 to 1. The higher the Cronbach's alpha coefficient, the more the items have shared covariance and the higher the possibility that the items measure the same underlying concept. The coefficient attains a value of 1 if all the items have high covariance and approaches the value of 1 as the number of items on the scale increases. On the other hand, an alpha value of 0 implies that the scale items are entirely independent of one another and therefore share no covariance. Although the standards for what makes a good coefficient mostly depend on the researcher's theoretical knowledge of the scale, a minimum coefficient between 0.65 and 0.8 has been recommended as an acceptable alpha coefficient by most methodologies. An alpha coefficient that is less than 0.5 is usually not acceptable.

From Table III, it can be seen that Cronbach's alpha values for most of the factors are each above 0.65, which is a clear indication of good reliability. For factors like educational attainment, Economic Factor (or reason), Social Factor (or norms) and learning intensity, Cronbach's alpha values are each greater than 0.7, which exhibits acceptable reliability for the factors.

Table III: Factor Reliability

Factor (LV)	cronbach's alpha value for each Factor
Intention	0.64
Attitude	0.62
Social Factor	0.79
PBehav Cont	0.68
Eco Reason	0.77
Edu Attain	0.78
Learn Intens)	0.74

Table IV presents a brief description of the models used in the SEM analysis.

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

Table IV: The Structural Equation Models

Model	Dependent Latent Variable	Independent Latent Variable	Measurement Variable
Model 1	Education Attainment	Economic Factor	- Girls performing House Jobs due to the family's inability to employ house help -Trade to bring in income -Ready availability of fees and other school charges
		Perceived Behavioral Control **over Distractions to** Learning	- Complete Self-control to avoid distraction from learning -Knows how to refuse hindrances to learning (e.g., teenage pregnancy and early marriage**)**
		Social Factor	-- Availability of female role model - Ethnic group/community opinion on female education (e.g., higher education is for men) -Religious influence on female education -Families' influence e.g., early marriage
Model 2		Economic Factor	-House Jobs -Trade to bring in income -Ready availability of fees and other school charges
		Perceived Behavioral Control **over** distractions from Learning	- Complete Self-control to avoid distraction from learning -Knows how to refuse hindrances to learning (e.g., teenage pregnancy and early marriage)
Model 3		Learning Intensity	-Availability of learning materials (e.g. Books) -Attendance of Extra Lesson -Teacher Discrimination -Frequency of class/school attendance
		Perceived Behavioral Control **over** distraction**s to** Learning	- Complete Self-control to avoid distraction from learning -Knows how to refuse hindrances to learning (e.g., teenage pregnancy and early marriage)
		Intention towards Education	Intention to minimize distractions from education -Intention to stop distractions from education -Intention to go through university

C. SEM fit Assessment Statistics

A structural equation model that is well-fitted is usually known to be the one that is consistent or in line with the sample data. The extent to which the covariance matrix produced by the structural equation model fits the

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

covariance matrix of the sample data indicates the model's goodness of fit. Therefore, in structural equation modeling, it is important to have a well-fitting measurement model before analyzing the structural model's causal paths

The model evaluation phase of the covariance-based Structural Equation Modeling (CB-SEM) begins with the null hypothesis that each structural equation model reproduces the inputted covariance matrix in a manner that is statistically significant. This indicates that, in contrast to conventional hypothesis testing, where the null hypothesis is to be rejected with a p-value less than a selected significant value (i.e., $p < 0.05$), it is anticipated to support the null hypothesis with an evidence of a p-value greater than the selected significant value (i,e., e.g., $p > 0.05$),

In assessing the model fit for the three models in the present CB-SEM analysis, we first looked at the Satorra-Bentler scaled chi-square statistic for each of the models. From Table V, the chi-square value for model 1 is 916.47 (df = 109.000) with a p-value of 0.001 (i.e., $p < 0.05$), which is not statistically significant at $p = 0.05$. This is because the p-value for model 1 is less than the chosen significance level of 0.05, which leads to the rejection of the null hypothesis of no difference between the model implied and actual covariance matrices. This implies that the covariance matrix reproduced by the specified model, (i.e., model 1) is not the same as the inputted covariance matrix.

Similarly, the chi-square value for model 2 is 813.967 (df = 84.000) with a p-value of 0.020(i.e., $p < 0.05$), which is also not statistically significant at $p = 0.05$. This implies that the covariance matrix reproduced by the specified model, (i.e., model 2) is not the same as the inputted covariance matrix.

Finally, the chi-square value for model 3 is 556. 864 (df = 41.000) with a p-value of 0.054, which is statistically significant at $p = .05$. This leads to the retention (failure to reject) of the null hypothesis that the covariance matrix reproduced by the specified model, (i.e., model 3) is statistically the same as the inputted covariance matrix.

So according to the chi-square tests of goodness of fit, only model 3 was a good-fitting model. However, due to the fact that the chi-square test is highly sensitive to sample size [28], this study also utilized other fit measures to further assess the adequacy of the specified models. Fit statistics, such as the Root Mean Square Error of Approximation (RMSEA), the Comparative Fit Index (CFI), and the standardized root mean square residual (srmr), were also used in assessing the fit of the models.

Based on the goodness-of-fit indices and their corresponding cut-off values presented in Table 1 (also see: 26] , &[12]) the values of the fit measures presented in Table V, showed that the three models considered in the SEM analysis were reasonably well fitted. Above all, model 3 was outstandingly well specified and plausible with all-around fitness, as it passed all the fit measures, including the Bentler-scaled chi-square test.

Finally, the AIC and BIC values for the two nested models, models 1 and 2, showed that model 2 with the least AIC and BIC values was more appropriate as compared to model 1.

Table V: Goodness of Fit Tests

Fit Measures	**Model 1**		**Mode1 2**		**Model 3**	
	Test value	p-value	Test value	p-value	Test value	p-value
chisq. Scaled (df)	916.47 (109.00)	0.001	813.967 (84.000)	0.020	556.864 (41.000)	0.054
rmsea. scaled (ci. low, ci. uppe)	0.042 (0.007,0.054)	0.322	0.047 (0.023, 0.066)	0.215	0.051 (0.033,0.061)	0.356
srmr	0.040		0.041		0.044	

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

aic	9362.947		8667.531			
bic	9381.818		8684.083			
nnfi	0.940		0.932		0.924	
nfi	0.920		0.940		0.910	

After the models have been fitted, the next step is to estimate the strength of the associations between the items and their corresponding factors, or latent variables. Under measurement equation modeling, this was accomplished using confirmatory factor analysis, or CFA.

D. Measurement Equation Modeling using CFA

The confirmatory factor analysis was employed in the measurement equation modeling to estimate the connections between each of the latent variables and their corresponding indicators, also known as the measurement variables. Three measurement models (models 1,2, and 3) were employed in the analysis

The unstandardized measurement equation output for model 1 is presented in Table VI. From the output, the p-values for all the selected measurement variables are each less than the chosen significance level of 0.05. This shows that each of the measurement variables was statistically significant in measuring their associated constructs.

Table VI: Unstandardized Measurement Equation Estimate for Model 1

Latent Variables:	Item	Estimate	Std. Err	z-value	P(>|z|)
Edu Attain =~	Edu Level	0.977	0.036	26.856	0.000
(Exogenous)	Work Type	0.485	0.038	12.734	0.000
	Sch years	1.529	0.044	34.920	0.000
PBehav Cont =~	Self cont	1.868	0.213	8.768	0.000
	refuse	1.726	0.102	17.000	0.000
Eco Reason =~	P marry	0.609	0.064	9.559	0.000
(Endogenous)	F. marry	0.327	0.075	4.377	0.000
	H Jobs	2.044	0.054	38.039	0.000
	Trade	1.833	0.061	29.852	0.000
	Fees	1.072	0.069	15.474	0.000
Intension =~	Int uni	1.749	0.062	28.317	0.000
(Exogenous)	Int Avoid	1.116	0.060	18.637	0.000
	Int Mini	1.087	0.068	15.935	0.000
	Int com	1.714	0.068	25.096	0.000
Social Force=~ (Exogenous)	**Religion**	0.502	0.091	5.523	**0.000**
	R Model	1.025	0.149	6.899	**0.000**
	CEdu Men	1.236	0.172	7.166	**0.000**

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

Regressions					
Dependent or Endogenous Variable	Independent or Exogenous Variable	Estimate (or coefficient)	Std. Err	z-value	P(>|z|)
Edu Attain ~	**Eco Reason**	0.367	0.037	9.988	**0.000**
	PBehav Cont	0.138	0.045	3.038	**0.002**
	Intension	0.020	0.028	0.703	0.482
	Social Force -	-0.099	0.040	-2.459	0.014

1) Path Diagrams for the Unstandardized Estimate in Model 1:

In structural equation modeling, it often becomes much easier to comprehend the hypothesized relationship if the SEM result is exhibited in a path diagram [23]. As a result, in the path diagrams shown in Figure 1, the measurement estimates given in Table VI are shown as path coefficients.

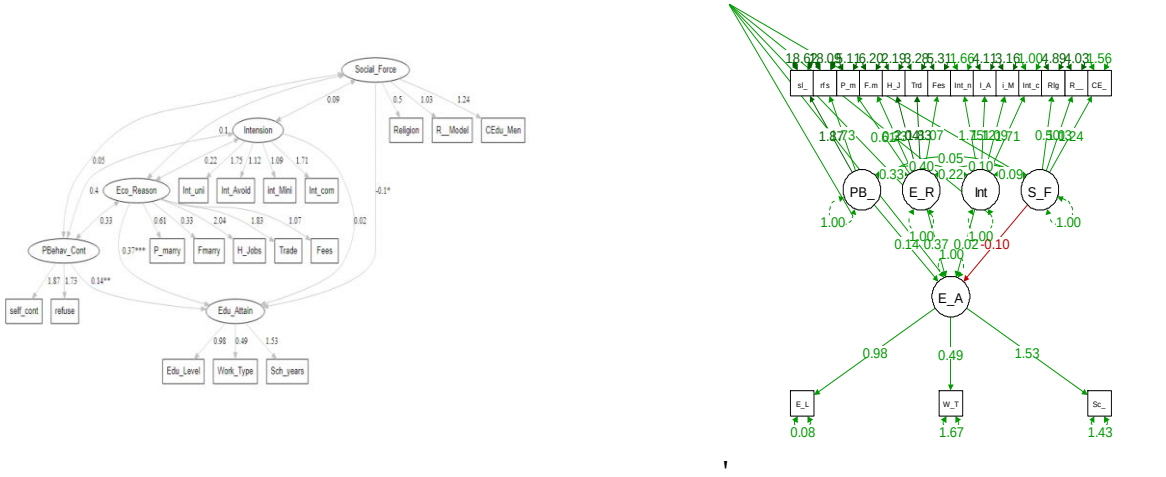

Fig 1: Path Diagrams for model 1

where: E_A= Edu_Attain=Educational Atainment; E_R= **Eco_Reason** =Economic Reason; PB= Perceived Behavioral Control**;** Int=intension; **Social_Force= Social_Force** /Norms

Similarly, from Table VII, the unstandardized measurement equation estimates for model 2 show that each of the selected measurement variables was statistically significant in measuring their associated constructs, as the p-value for each was less than the chosen significance level of 0.05.

Table VII: Unstandardized Measurement Equation Estimate for Model 2

Latent Variables:	Item	Estimate	Std. Err	z-value	P(>|z|)
Edu Attain =~	Edu Level	0.986	0.037	26.849	0.000
(Exogenous)	Work Type	0.488	0.038	12.739	0.0
	Sch years	1.540	0.045	34.392	
Eco Reason =~	P marry	0.607	0.064	9.501	0.0
(Endogenous)	F. marry	0.322	0.075	4.322	0.0
	H Jobs	2.052	0.054	38.028	0.0

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

	Trade	1.829	0.062	29.605	0.0
	Fees	1.066	0.069	15.354	0.0
Intension =~	Int uni	1.740	0.062	28.168	0.0
(Exogenous)	Int Avoid	1.093	0.060	18.209	0.000
	Int Mini	1.073	0.068	15.721	0.0
	Int com	]1.735	0.065	26.897	0.0
Social Force=~	Religion	**0.502**	**0.091**	**5.518**	**0.000**
	R Model	**1.032**	**0.149**	**6.939**	**0.0**
	CEdu Men	**1.228**	**0.171**	**7.196**	**0.0**
Regressions					
Dependent or Endogenous Variable	Independent or Exogenous Variable	Estimate (or coefficient)	Std. Err	z-value	P(>|z|)
Edu Attain ~	**Eco Reason**	**0.398**	**0.034**	**11.789**	**0.000**
	Intension	**0.067**	**0.024**	**2.810**	**0.005**
	Social Force	**-0.099**	**0.039**	**-2.524**	0.012

2) Path Diagrams for the Unstandardized Estimate in Model 2:

Also, the measurement equation estimates given in Table VII are depicted as path coefficients in the path diagrams shown in figure 2.

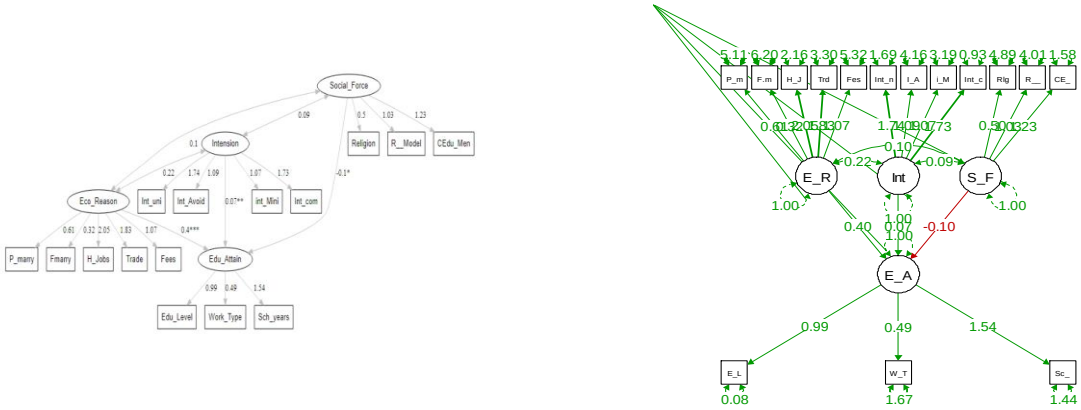

Fig 2: Path Diagrams for model 2

where: E_A= Edu_Attain=Educational Atainment; E_R= Eco_Reason =Economic Reason; S_F= Social_Force /Norms**;** Int=intension

Table VIII: Unstandardized Measurement Equation Estimates for Model 3

Latent Variables:	Item	Estimate	Std. Err	z-value	P(>|z|)
PBehav Cont=~	Self cont	1.977	0.219	9.031	0.0
(Exogenous)	refuse	1.630	0.118	13.810	0.0

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

Edu Attain =~ (Endogenous)	Edu Level Work Type Sch years	1.067 0.497 1.562	0.043 0 .041 0.053	24.701 12.188 29.513	0.0 0.0 0.0
Learn Intens=~ Exogenous)	Atendance Sch Mate T Atension T Disci	0.877 1.493 0.843 1.008	0.086 0.239 0.083 0.085	10.251 6.252 10.093 11.872	0.0 0.0 0.0
Intension =~ (Exogenous)	Int uni Int Avoid Int Mini Int com	1.738 1.112 1.085 1.726	0.062 0.060 0.068 0.067	28.215 18.684 25.921 15.888	0.0 0.0 0.0 0.0
Regressions:					
Dependent or Endogenous Variable	Independent or Exogenous Variable	Estimate (or coefficient)	Std. Err	z-value	P(>|z|)
Edu Attain ~	Learn Intens PBehav Cont Intension	0.141 0.171 0.019	0.049 0.046 0.029	2.855 3.750 0.671	0.0 0.0 0.5

3) Path Diagrams for the Unstandardized Estimate in Model 3:

Again, the measurement equation estimates given in Table VIII are depicted as path coefficients in the path diagrams shown in figure 3.

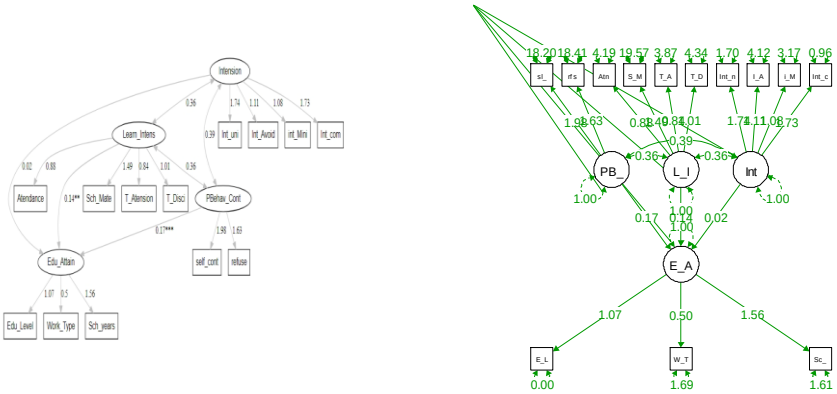

Fig 3: Path Diagrams for model 3
Where: E_A= Edu_Attain=Educational Atainment; L_I = Learn_Intens= Learning Intensity; PB= PBehav_Cont=Perceived Behavioral Control; int=intension

Apart from the unstandardized measurement estimates presented above, the researchers also felt it prudent to include standardized coefficient estimates for each of the models.

The output presented in Table IX for model 1 contains the standardized coefficients, also called the factor loadings, for each of the items loaded on the associated latent variables (LV), together with their corresponding

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

confidence intervals and p-values.

The hypothesis tested is that the coefficients are each equal to 0. From Table IX, each factor loading has a p-value that is less than the specified significance level of 0.05 and the lower confidence interval for each factor loading greater than 0.04. This indicates the adequacy of the magnitude of the relationships between the items and their corresponding factors. Therefore, the hypothesis that a coefficient is equal to 0 was rejected for each variable

Again, the reported standard errors are each robust which also means that they are corrected for any influences of non-normality

Table IX Standardized Measurement Equation Estimates for Model 1

LV	Item	Coefficient (Loadings on latent variable)	ci. lower	ci. upper	SE	Z	p. alue
1 Edu Attain	Edu Level	0.967	0.921	1.012	0.023	41.568	0
2 Edu Attain	Work Type	0.380	0.326	0.433	0.027	13.950	0
3 Edu Attain	Sch years	0.813	0.773	0.853	0.020	40.038	0
4 PBehav Cont	Self cont	0.397	0.326	0.468	0.036	10.964	0
5 PBehav Cont	refuse	0.376	0.269	0.483	0.054	6.914	0
6 Eco Reason	P marry	0.260	0.208	0.312	0.026	9.824	0
7 Eco Reason	F. marry	0.130	0.072	0.188	0.030	4.390	0
8 Eco Reason	H Jobs	0.810	0.771	0.849	0.020	40.675	0
9 Eco Reason	Trade	0.711	0.666	0.757	0.023	30.665	0
10Eco_Reason	Fees	0.422	0.369	0.475	0.027	15.682	0
11 Intension	Int uni	0.805	0.764	0.846	0.021	38.364	0
12 Intension	Int Avoid	0.482	0.482	0.531	0.025	19.281	0
13 Intension	Int Mini	0.522	0.463	0.580	0.030	17.573	0
14 Intension	Int com	0.863	0.820	0.907	0.022	38.496	0
Social Force	Religion	0.221	0.143	0.299	0.040	5.557	0
Social Force	R_ Model	0.455	0.328	0.582	0.065	7.005	0
Social Force	CEdu Men	0.703	0.521	0.885	0.093	7.567	0

The output presented in Table X for model 2 contains the standardized coefficients, also called the factor loadings for each of the items loaded on the associated latent variables (LV) together with their corresponding confidence intervals and p=values.

The factor loadings are statistically significant with a p-value for each less than the chosen significance level of 0.05 and a lower confidence interval for each factor loading greater than 0.04. This, again reveals the adequacy of the magnitude of the relationships between the items and their associated factors. As a result, the hypothesis that a coefficient is equal to 0 was again rejected for each variable

In addition, from Table X, the associated standard errors are each robust meaning that they are corrected for the influences of non-normalit

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

Table X Standardized Measurement Equation Estimates for Model 2

LV	Item	Coefficient (Loadings on latent variable)	ci. lower	ci. upper	SE	Z	p. value
1 Edu Attain	Edu Level	0.968	0.922	1.014	0.024	41.113	0.000
2 Edu Attain	Work Type	0.379	0.326	0.432	0.027	13.942	0.000
3 Edu Attain	Sch years	0.812	0.772	0.852	0.021	39.615	0.000
4 Eco Reason	P marry	0.259	0.207	0.311	0.027	9.761	0.000
5 Eco Reason	F. marry	0.128	0.070	0.186	0.030	4.334	0.000
6 Eco Reason	H Jobs	0.813	0.774	0.853	0.020	40.658	0.000
7 Eco Reason	Trade	0.710	0.664	0.755	0.023	30.407	0.000
8 Eco Reason	Fees	0.419	0.367	0.472	0.027	15.556	0.000
9 Intension	Int uni	0.801	0.756	0.846	0.023	35.089	0.000
10 Intension	Int Avoid	0.472	0.423	0.522	0.025	18.827	0.000
11 Intension	Int Mini	0.515	0.457	0.573	0.030	17.309	0.000
12 Intension	Int com	0.874	0.837	0.911	0.019	46.202	0.000
Social Force	Religion	0.221	0.143	0.299	0.040	5.552	0.000
Social Force	R Model	0.458	0.331	0.585	0.065	7.050	0.000
Social Force	CEdu Men	0.698	0.518	0.878	0.092	7.604	0.000

The output presented in Table XI for model 3 contains the standardized coefficients, also called the factor loadings for each of the items loaded on the associated latent variables (LV) together with their corresponding confidence intervals and p=values.

The factor loadings are statistically significant with a p-value for each less than the chosen significance level of 0.05 and a lower confidence interval for each factor loading greater than 0.04. This, again reveals the adequacy of the magnitude of the relationships between the items and their associated factors. As a result, the hypothesis that a coefficient is equal to 0 was rejected for each variable

Also from Table XI, the associated standard errors are each robust which also means that they are corrected for any influences of non-normality

Table XI Standardized Measurement Equation Estimates for Model 3

LV	Item	Coefficient (Loadings on latent variable)	ci. lower	ci. upper	SE	Z	p. value
1 PBehav Cont	Self cont	0.420	0.349	0.492	0.037	11.460	0
2 PBehav Cont	refuse	0.355	0.254	0.457	0.052	6.851	0
3 Edu Attain	Edu Level	1.000	0.940	1.060	0.031	32.752	0
4 Edu Attain	Work Type	0.369	0.315	0.422	0.027	13.561	0

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

5 Edu Attain	Sch years	0.786	0.739	0.834	0.024	32.594	0
6 Learn Intens	Atendance	0.394	0.319	0.469	0.038	10.349	0
7 Learn Intens	Sch Mate	0.320	0.276	0.364	0.023	14.172	0
8Learn Intens	Atension	0.394	0.320	0.468	0.038	10.430	0
9 Learn Intens	T Disci	0.435	0.366	0.505	0.035	12.276	0
10 Intension	Int uni	0.800	0.800	0.842	0.022	36.902	0
11 Intension	Int Avoid	0.480	0.432	0.529	0.025	19.321	0
12 Intension	Int Mini	0.521	0.462	0.579	0.030	17.497	0
13 Intension	Int com	0.870	0.828	0.911	0.021	40.901	0

E. Structural models

At this second and final stage of the SEM analysis, more attention is drawn to the magnitude of the relationships among the latent constructs. Attention is specifically drawn to the relationship between exogenous and endogenous variables. In this research work, three structural models, model 1, model 2, and model 3, were considered in the analysis.

The relationships between the independent latent variables and the associated dependent latent variables are shown by the regression coefficient presented for each of the structural equation models (model 1, model 2 and model 3).

The strength of the association between an independent variable and a dependent variable is shown by the magnitude of each regression coefficient. The direction of the relationship is identified by the sign of the regression coefficients.

The structural equation modeling methodology helps to assess the hypothetical relationship between the latent variables. This leads to testing the statistical hypothesis for the research. Considering the research objective i.e., to assess the factors that hinder female education in the Korie chiefdom, the researchers aimed to test the following research hypotheses:

Hypotheses

H1: “Learning Intensity” has a significant effect on women’s educational attainment.

H2:’ “Economic Factor” has a significant effect on women’s educational attainment.

H3: “Perceived behavioral control” has a significant effect on women’s educational attainment.

H4: Social Forces/Norms have a significant effect on women’s educational attainment.

H5 Intension has a significant effect on women’s educational attainment

1) Structural Model for Model 1

The hypotheses H1, H3, H4, and H5 were tested under the structural equation modeling in model 1. The result of the analysis for model 1 is presented in Table XII. The output contains standardized regression coefficients, Z values (Wald test), and the associated p-values for testing the null hypothesis that a coefficient is equal to zero (i.e., no relationship). The regression coefficients represent the relationships between each of the independent latent variables (Learn_Intens, PBehav_Cont, Intension and Social_Force) and the dependent latent variable (Edu_Attain). Each regression coefficient represents the magnitude of the relationship between an independent

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

variable and the dependent variable. The sign attached to the standardized regression coefficients shows the direction of the relationship.

From the output presented in Table XII for Model 1, the regression coefficient for the independent variable "learning intensity" (Learn_Intens), “Perceived behavioral control” (PBehav_Cont), and Social Force/Norms (Social_Force) are each statistically significant. The hypotheses for model 1 were tested at the 5% level of significance. The result presented in Table XII shows that hypotheses H1 H3 and, H4 were supported by model 1. This is because the relationships shown in H1 H3 and, H4 are each statistically significant (with p-values< 0.05). This implies that the exogenous construct (or independent variable), "learning intensity," “Perceived behavioral control”, and Social Force/Norms (social force) had a significant influence on the academic achievement of women in the study area. The influence of one of the exogenous constructs (or independent variable), Social Factor/Norms (Social_Force) is negative as indicated by a negative coefficient. This means that the higher the influence of social force or norms on female education, the lower the level of female educational attainment, and the lower the influence of social force or norms, the higher the level of female educational attainment. However, In the presence of all the other exogenous variables in the SEM model, model 1, the exogenous construct “intension” was found to be statistically insignificant with p-value greater than the chosen significant level of 0.05 (i.e., p>005). This shows that the hypothesis H5 was not supported by model 1.

Table XII Structural Equation Estimate for Model 1

LV	Item	Coefficient	ci. lower	ci. upper	SE	Z	p. value
1 Edu Attain	Learn Intens	0.336	0.276	0.396	0.031	10.911	0.000
2 Edu Attain	PBehav Cont	0.126	0.046	0.206	0.041	3.070	0.002
3 Edu Attain	Intension	0.018	-0.032	0.068	0.026	0.703	0.482
4 Edu Attain	Social Force	-0 .090	-0.162	-0.019	0.068	-2.469	0.014

2) Structural Model for Model 2:

The hypotheses H2 H5 and H4 were tested under the structural equation modeling in model 2. The regression coefficients presented in Table XIIl represent the relationships between independent latent variables (E co_Reason, Intension and Social_Force) and the dependent latent variable educational attainment (‘Edu_Attain’). Each regression coefficient presented in Table XIIl indicates the strength of the relationship between an independent variable and a dependent variable. From Table XIIl, the regression coefficients for the independent variables are each statistically significant. This showed that the hypotheses H2 H5 and H4 were supported by model 2. This also implied that the exogenous constructs (or independent variables), “Economic Reason” and “intention” had a significant positive influence on women’s educational attainment in the study area. However, just like for model1, the coefficient of the exogeneous (or independent) variable, Social Factor/Norms (Social_Force) is negative as indicated by a negative coefficient. This means that in the presence of the other independent variable (E co_Reason and Intension) in the model, the higher the influence of the social factors or norms on female education, the lower the level of female educational attainment, and the lower the influence of the social factors, the higher the level of female educational attainment.

Table XIII: Structural Equation Estimate for Model 2

LV	Item	Coefficient	ci. lower	ci. upper	SE	Z	p. value
2 Edu Attain	E co Reason	0.367	0.314	0.420	0.027	13.577	0.000
3 Edu Attain	Intension	0.062	0.019	0.105	0.022	2.815	0.005
4 Edu Attain	Social Force	-0.091	-0.162	-0.021	0.036	2.538	0.011

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

3) Structural Model for Model 3

The hypotheses H1 H3 and H5 were tested under the structural equation modeling in model 3. However, the result presented in Table XIV shows that only H1 and H3 were supported by model 3. This implies that the exogenous constructs (or independent variables), "learning intensity," and “perceived behavioral control” each have a significant influence on the academic achievement of women in the study area. The positive signs attached to the coefficient of the exogenous constructs (independent variables) show that the higher the positive influence of each of these factors on girls' education, the higher the level of female educational attainment.

Table XIV Structural Equation Estimate for Model 3

LV	Item	Coefficient	ci. lower	ci. upper	SE	Z	p. value
1 Edu Attain	Learn Intens	0.136	0.044	0.228	0.047	2.888	0.004
2 Edu Attain	PBeha Cont	0.165	0.080	0.250	0.043	3.817	0.000
3 Edu Attain	Intension	0.019	-0.036	0.073	0.028	0.670	0.503

RESULT AND DISCUSSION

The study aimed to identify the main hindrances to female education in the Korie Chiefdom, Moyamba District, in the southern part of Sierra Leone. To achieve this, three structural equation models (model 1, model 2, and model 3) were used in the analysis. The SEM methodology was employed in the analysis due to the latent nature of the dependent and independent variables.

The fit measures (rmsea, cfi, srmr, nnfi and nf) used to assess the goodness of fit of the specified SEM models showed that all the models were reasonably well fitted, as each model passed all the goodness of fit tests, except the criteria for the chi-square test, which was only satisfied by model 3. This shows that model 3 was outstandingly well specified and plausible with all-round fitness, as it fits the data much more perfectly.

In addition, the comparison of the two nested models, models 1 and 2, involved an assessment of their AIC and BIC values. Based on the AIC and BIC values, it became evident that model 2 was more suitable than model 1.

More importantly, the factor loadings were adequate for the items (or measurement variables) used in the analysis. This implies, that the latent variables were adequately measured by their associated indicators. At the final stage of the SEM analysis, the relationships between the latent dependent (or endogenous latent) variable and the independent (or exogenous latent) variables were explored using the three structural equation models. The results, of the analysis, showed that all the hypotheses postulated by the researchers were supported by the structural equation models.

The first hypothesis, H1, was supported by models 1 and 3. This hypothesis states that: “learning intensity” has a significant effect on women’s educational attainment. Hypothesis H1 was supported because the relationship between the dependent latent variable, “educational attainment," and the independent latent variable, “learning intensity," is positive and statistically significant (with $p< 0.05$). This implies that the exogenous construct (or independent variable), “learning intensity” (like availability of learning materials: e.g., textbooks; teacher discrimination; and frequency of class/school attendance), has a significant influence on women’s educational attainment. This result is supported by the research findings of [32] who showed that the sociocultural activities and gender roles that schoolgirls perform take up too much of their time, leaving them with no time to concentrate on learning and thus affecting their academic performance.

The second hypothesis, H2, was supported by model 2. This hypothesis states that economic factors have significant influence on women’s (or girl’s) educational attainment in the study area. Hypothesis H3 was supported because the relationship between the dependent latent variable, “educational attainment,” and the independent latent variable, economic factors, is positive and statistically significant (with $p< 0.05$). This implies

ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XI Issue IX September 2024

that the exogenous construct (or independent variable), economic factors (like house jobs, trade to bring in income, availability of fees, and other school charges), have a significant and positive influence on women's educational attainment in the study area. This result is supported by [37], who discovered in their research findings that girls are more affected by the fee problem than boys and that, unlike boys, girls are constantly asked to go back home because of the fee problem. Reference [37] also added that most girls come to school late as opposed to boys. A possible reason is that they are mostly involved in household chores at home. References [5] & [1] also presented evidence that "the substantial burden of girls' domestic work leads to their lower rates of school attendance. In addition, [41] also discovered in their research work that an increase in the number of study hours increases students' academic performance. So, if schoolgirls are spending most of their time doing housework like cooking and housecleaning, very little or no time will be left for them to spend on academic work like studying. Some, when forced by their parents to study, fall asleep with their books open in front of them due to exhaustion from domestic jobs.

The third Hypothesis H3 was supported by models 1 and 3. Hypothesis H3 was supported because; the relationship between the dependent latent variable, "educational attainment" and the independent latent variable, "perceived behavioral control" is positive and statistically significant (with $p < 0.05$). This implies that the exogenous construct (or independent variable), 'Perceived behavioral control' (like self-control), has a significant and positive influence on women's (or girl's) "educational attainment" in the study area. This is practically true because, the behaviors and attitudes of girls living in the study area are greatly influenced by the tradition and culture of their ethnic groups, most of which echoes that education is only suitable for boys and that girls' education is a waste of time and money as they will only end up in their husband's houses.

The fourth hypothesis, H4, was supported by the structural equation models, models 1 and 2 This hypothesis, states that "Social Force/Norm" has a significant effect on women's educational attainment in the study area. Hypothesis H4 was supported because the relationship between the dependent latent variable, "educational attainment," and the independent latent variable, "Social Force/Norms," is negative and statistically significant (with $p < 0.05$). This implies that the exogenous construct (or independent variable), social forces, or norms (like the availability of female role models, ethnic group/community opinion on female education, religious influence on female education, and families' influence) have a significant and negative influence on women's (or girl's) educational attainment in the study area.

Finally, the fifth hypothesis, H5, was only supported by the structural equation model, models 2. This hypothesis states that "intention" has a significant effect on women's educational attainment in the study area. Hypothesis H5 was supported because in the output presented for model 2, the relationship between the dependent latent variable, "educational attainment," and the independent latent variable, "intention," was positive and statistically significant (with $p < 0.05$). This implies that the exogenous construct (or independent variable), "intention" (like the intention to go to university, and to avoid teenage pregnancy), has a significant and positive influence on women's (or girls') educational attainment in the study area

CONCLUSION

This study was carried out to determine the main hindrances (or barriers) to female education. in the Korie Chiefdom, Moyamba District, southern part of Sierra Leone. The factors considered as possible hindrances to female education were constructs that cannot be directly measured. Therefore, a structural equation modeling technique that makes use of latent variables whose measurements purely depend on the observed variables was used in the analysis.

The data were fitted using three structural equation models. The fit measures showed that the models were well-fitted to the data. Also, the factor loadings for all the models considered in the SEM analysis were adequate. This implies that the magnitudes of the associations between the items and their corresponding factors were adequate. More importantly, all the hypotheses postulated by the researchers were supported by the structural equation models.

The result of the analysis showed that there is a positive and significant relationship between the dependent endogenous construct "educational attainment" and the independent latent variables "learning intensity,"

"behavioral intention (or intention)", "perceived behavioral control", and "economic factor". Also, a negative but significant relationship existed between the dependent endogenous construct "educational attainment" and the independent latent variables "Social Force/Norms". This implies that the higher the influence of social factors (like ethnic group/community opinion on female education, religious influence on female education, and families' influence), the lower the possibility of female educational attainment.

RECOMMENDATION

The research findings resulted in the following recommendations:

1. Parents of school girls should be strongly advised to allow their girls to give more time to their academic work and less time for other domestic activities like house jobs, as an increase in the number of study hours is directly related to an increase in academic performance [41]
2. Parents of school girls and school guidance and counselors should sensitize girls on the importance of education and the necessity to avoid hindrances like teenage pregnancy and early marriage.
3. Teachers, especially male teachers, should be trained to treat both male and female students equally and not to look low or ignore female students in class.
4. Members of the community should be sensitized on the importance of female education

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