The Socio-cultural Determinants of Child Labour in Tanzania

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Author's contribution

The sole author designed, analyzed, interpreted and prepared the manuscript.

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ABSTRACT

The purpose of the study was to examine the socio-cultural determinants of child labour in small scale gold mining in Tanzania. Specifically, the study examined polygamy, early marriage and family conflict among the respondents which influence child labour practices in small scale gold mining (SSGM) in Geita region. Furthermore, the study used the case of Nyang'hwale district which is one of the districts in Geita region where SSGM activities are rampant compared to the rest of the districts. The study used a cross-sectional survey researches design. The primary data were collected by using questionnaires from 209 individuals who were randomly sampled from Nyang'hwale district in Geita region. Moreover, the study applied a newly developed method of measuring the age risk of children working under 18 years known as Eta Value. The researcher analyzed the data using the Structural Equation Modeling Partial Least Square (SEM PLS) with a combination of analytic techniques - statistics and artificial intelligence software. The study found that the child labour determinants under socio-cultural factors were polygamy, early marriage and family conflict. Moreover, the researcher found that micro-sociology focuses on the individual's micro aspects – polygamy, early marriage and family conflicts which are socio-cultural oriented. The study concludes that the fundamental sociocultural determinants are polygamy, early marriage and family conflict. Therefore the study recommends that the polygamy, early marriage and family conflict are significant sociocultural factors that contribute to the child labour practices in Geita.

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1. INTRODUCTION

Children are among the vulnerable groups despite the laws that protect their development. For the sake of this study, a child refers to anyone aged between 5-17 years old because this age group was rampantly available in the study area. Meanwhile, child labour is a social problem which affects the development of the child mentally and physiologically. Sociologists widely apply child labour to study the children's engagement in activities that eventually lead them into child labour in small scale gold mining. The socio-cultural factors such as polygamy, early marriage and family conflict have both direct and indirect (hidden) effects on child labour practices particularly in small scale gold mining. It is a common or traditional way of studies assessing the direct impact of socio-cultural factors such as the family conflict that directly influence the child to join into labour practices. The hidden effect of the individual is likely overlooked. Most of the studies are limited on the direct effect of the socio-cultural factors. Therefore, this study aimed to examine the hidden or indirect effect of the child labour practices in Tanzania. Specifically, the study examined the indirect effects which are polygamy, early marriage and family conflict. There are large differences in magnitude of child labour in small scale gold mining across regions in Tanzania [1,2,3]. The Geita and the Manyara regions stand out as having the highest percentage of child labour with 56.4 per cent and 53 per cent respectively. At the other end of the spectrum lie the Mbeya and Njombe regions having 7 per cent of children involved in child labour activities accelerated by small scale mining while the Dar es Salaam region the child labour incidence is just 1 per cent. The Katavi region has the lowest level of school attendance (50 per cent), while the Dar es Salaam region has the highest (94 per cent).

The study critically reviewed the empirical literature involving global, regional (Africa), and country (Tanzania) studies. This approach helped to get a broad knowledge of the understanding of the research problem from the global to the country level, from general to specific. Child labour is a problem not only in the small scale gold mining sector but is a global social problem which harm children rights and endanger the life of the children at large. The ILO and UNICEF [4] report shows 160 million children, of whom 63 million girls and 97 million boys are in child labour or 1 in 10 children worldwide. History reveals that children's participation in child labour in developed countries, such as Europe, Britain and North American nations like the United States of America, has existed for years [5].

2. MATERIALS AND METHODS

Socio-cultural factor as determinants of child labour, Rosana, Chauvel and Law [6] conducted a research to investigate socio-cultural meaning of child labour in Aceh Province in Indonesia. The study used primary data from interviews and some secondary data sources. The study indicated that child labour in the mining industry was illegal in Aceh and the Indonesian Government had ratified the international conventions regarding child labour. Moreover, the study concluded that working Acehnese children means being dependent and being able to spend money, without having to beg from others including parents. The study recommended for increased parental and community awareness of the importance of education; cooperation from the schools is needed to avoid children from dropping out. The weakness of this study is that it only considered the socio-cultural meaning of child labour. It failed to embrace the structural micro-macro or in this case the socio-cultural determinants of child labour especially in terms of polygamy, early marriage and family conflicts making a gap for this study to proceed.

Naz et al. [7] studies on social and cultural determinants of Child Labour in Pakistan utilizing quantitative research design along-with qualitative discussion and a survey of the various mechanical workshops in Batkhela city which was conducted in September 2013. They used a sample of 4355 children working in different capacities and interview schedules were used to gather information. The findings revealed that socio-cultural factors and poverty have much to do with child labour promotion in small scale gold mining sector. They concluded that there were various social, cultural determinants in the area and recommended propagation of education as the basic right of a child to reduce the hold of such aspects of child labour. The weakness of this study is that it concentrated on various social, cultural factors including joint family system, divorce, familial conflicts, agriculture-

based-economy and large family size but forgot pertinent socio-cultural determinants of child labour like early marriage and polygamy. This leaves a gap on the micro-macro literature on socio-cultural determinants of child labour.

According to Francis and Jellason [8] socio-cultural factor is another factor which drives children into labour market. In their study they argue that different cultures of many societies make children start work at very young age which are related to traditions and cultural factors. They assumed that children need to learn skills that can be good for their future assuming that many families in Africa want their children to help in contributing towards family income. The weakness of this study is that it fails to point exactly the young age referred too. Moreover, the study did not measure the socio-cultural factors of polygamy, early marriage and family conflict. The study only highlighted the cultural aspect in terms of socializing children through working.

Baregu [9] conducted a situation analysis on child labour in Tanzania and Zanzibar undertaking a review of international and national legislation bearing on the issue. A report was prepared to help the United States Department of Labour (USDOL) staff understand the situation of child labour in Tanzania and to provide an overview of the particulars of child labour in Tanzania, and of the extent, scope and characteristics of the effort by governmental and non-governmental agencies in Tanzania to reduce or eliminate child labour. The analysis found that in 2006 there were more than 2.4 million children engaged in child labour in Tanzania, of which nearly 600,000 were working in hazardous conditions. Furthermore, Baregu [6] concluded that child labour was caused by poverty, lack of social protection measures, a weak education system, the failure of rural diversification programs, and culture. They observed that there was significant reduction in the incidence of child labour in small scale mining in Mainland Tanzania and Zanzibar as a result of various interventions undertaken by government, civil society organizations, and donor community. They suggested that there were still areas that needed awareness raising and other child labour intervention such as direct action linking children to education alternatives. The weakness of this analysis is that it did not determine the socio-cultural factors such as polygamy, early marriage and family conflict as the macro determinants of child labour. The

analysis hardly mentioned culture factor but in broad sense, it is not easy to capture the real meaning. On the other hand, the finding does not broaden the source of income of the parents/ guardians other than unemployment status. Therefore, the researcher was motivated to study more because the literatures on socio-cultural determinants of child labour in small scale gold mining left gaps to be filled.

Based on that fact, this study aimed to determine the hidden socio-cultural factors that influence child labour practices in Tanzania. The child labour determinants in Tanzania are still unpredictable and growing unevenly across regions. This phenomenon necessitates a researcher to go further beyond the determination of socio-cultural based determinants of the child labour phenomena; hence, examine the polygamy, early marriage and family conflict determinants of child labour [10]. This study involved the observable variable which is unobservable factors measured through the observable factors as suggested by several studies that influence child labour practices and persistence [7,8]. The study took a study sample from the Nyang'hwale district in Geita region which is characterized by the many small scale gold mining activities as well as the biggest gold producer in Tanzania – The Geita Gold Mining in the Lake Victoria gold zone (URT, 2019a; 2019b; 2019c). The Geita region has the highest percentage of child labour across all regions of Tanzania by having 56.4 percent of all child labourers in Tanzania. This is contributed by the presence of small scale gold mining particularly in Nyang'hwale district which is one of the districts in Geita region [11,12]. Due to this fact, it is reasonable that the child labour practices in Geita region is rampant due to the socio-cultural factors that influence children to engage in such worst forms of labour. Consequently, the polygamy, early marriage and family conflict variables leads to uneven and unpredictable persistence of Child labour in the region.

Therefore, this study considered the socio-cultural variables which are psychological (hidden) /latent demographic factors which are defined as the subjective well-being of the individual's demographic characteristics which were overlooked by the previous studies. Specifically, the study considers the three important demographic factors as suggested by Bundala [13] Le Tan and Trang [14] and French, [15] which are age, gender, and education.

Thus, the study examined the socio-cultural factors which influence the individual children to engage in child labour practices in the small scale gold mining that is the age, gender and education level. In fact, this study on socio-cultural factors is a vital project as it provides a model of culture at the micro-level (family level) of the prototype of children.

3. METHODOLOGY

3.1 Selection of Case Study Region and Data Collection

Data used in this study were obtained from 209 both children (105) and parents/ guardian (104) involved in small scale gold mining in Nyang'hwale district in Geita region. A cross sectional survey approach was used to collect quantitative information [16,17,18,19,20]. For sampling, the simple random sampling method was used Tabachnick and Fidell [21] suggest a sample size of $N > 104 + m$ for multivariate data analysis (where N is the sample size that is the number children and parents in small scale gold mining in unknown target population (Nyang'hwale district of Geita region) and m is the number of independent variables).

3.2 Population of the Study

According to Kothari [22] the term population means an entire group of individuals, events or objects that have common observable characteristics. It refers to all elements that meet certain criteria for inclusion in a given universe. The study used case study based approach and targeted population was children and parents /guardian who were engaged in small scale gold mining in Nyang'hwale district. The Tanzania population census (2022), show that Nyang'hwale district council has a total population of 225,803. Of the complete population estimates, the age groups 5-17 years which constitute the study group have 67,250 children out of which the sample was taken.

3.3 The Study Area

The study took place in Nyang'hwale district in Geita region where until to date small-scale gold mining activities takes place. Nyang'hwale district is one of the five districts of Geita region of Tanzania. Its administrative centre is the village Kharumwa. It is bordered to the

north by Sengerema district, to the east by Misungwi district and Shinyanga rural district, to the south by Kahama rural district, and to the west by Geita district. It lies in the following coordinates: Latitude: -3° 3' 3.222". Longitude: 32° 35' 46.1076". Latitude: S 3° 3.0537'. Longitude: E 32° 35.7685'. Latitude: -3.050895°.

This study covered Nyang'hwale district council only based on two key reasons. First, its geographic location and easier accessibility and second the presence of many small-scale gold mining sites in many wards. Thus, the study took place in the wards of Nyijundu at the village of Kasubuya where small scale gold mines takes place; Busolwa ward at Ifungadi village and hill where the mining takes place; Kafita ward at Lushimba village and Mwingiro ward at Nyamikonze village where small scale gold mining takes place involving child labourers.

The child labour statistics across regions in Tanzania [11] report that the Geita region has the highest level of child labour with 56.4 per cent country-wise, including Nyang'hwale district, which is the most affected district by having many small-scale gold mining activities compared to other districts of the region. It is a very unique district since it has many small scale gold mines compared to the rest of the districts in Geita region and Tanzania in General whereby out of fifteen wards eight carries small scale gold mining activities.

3.4 General Model Specification

The study used the following general model specification to determine the general objective of the study. That is, to develop the structural micro-macro model of child labour determinants.

$$CLI(\eta) = \omega_0 + \omega_1 SCF + \varepsilon$$

Where, ω_0, is the constant linear value at $\omega_1 = 1$, SCF is the Socio-cultural factors score, and ε is the error terms, and $\omega_1, .. \omega_n$, are the coefficient of the linear model.

4. RESULTS AND DISCUSSION

4.1 Demographic Characteristics of the Respondents

Demographic and socio-economic characteristics of the respondents include

gender, age, education, marital status, family status and work status, presented in Table 1 above. These characteristics provide the demographic descriptions of the respondents in the study. The research had 220 respondents' questionnaires to fill out at the Nyang'hwale district council in Geita region. Out of 220 respondents, only 209, equal to 95%, filled out and returned the questionnaires. According to Mugenda and Mugenda [23] a questionnaire return level of 50% is enough to analyze quantitative research. The same source also stipulates that a response rate of 70% and over is excellent.

Similarly, Hartman (1979), as used in Waziri (2019), argues that a 50% return rate is adequate, 60% is good, and 70% is perfect. Similarly, Saldivar (2012), as employed in Mussa [24] an acceptable or desirable response rate of 50% is deemed adequate for data analysis. Also, 60% is suitable for data analysis, and 70% is regarded very well for data analysis. Therefore, based on acceptable rate theory, the respondents' rate, which was 95%, is excellent to enable the researcher to analyze the data.

4.2 Descriptive Statistics

Table .2 shows the descriptive statistics of the variables of the data sampled in the study. The table indicates that the child labour age index (CLI) averages 0.6034, ranging from 0.056 to 0.981. It means that the problem of child labour in the Geita region is great. The index evidences that most children of less age are involved in

small scale gold mining activities. It indicates a value of 0.6034, which equals the age of 7 years, which is extremely risky. In other words, the CLI indicate the risk level relative to the age of the child. Moreover, the table indicates that the socio-cultural factor score of respondents is averaged at 0.3587 with a range of 0 to 1.17. It indicates that about 35.87 per cent of the respondents are not influenced by the cultural factors which lead to child labour in small scale gold mining. It means that about 64.13 per cent of the respondents are influenced by their culture to engage in child labour practices. Cultural influence is still a problem or the determinant of child labour in small-scale gold mining.

4.3 Data Cleansing Report

The study cleansed the data distribution by testing normality, validity and reliability, and Multicollinearity (input correlation). Different software was used to cleanse the data each with its specific advantage [25].

4.3.1 Normality test

Shapiro-Wilk did the normality test of the data with the aid of IBM SPSS statistics software. The data is normally distributed because the Shapiro-Wilk indicated the range of 0.002 to 0.021 significant levels. Hence, the researcher accepts the alternative hypothesis that the data are normally distributed because the Shapiro-Wilk significant value is less than the significant critical value of 0.05 [26].

Map 1. Map of Geita region and its 5 districts including nyang'hwale
Source: Nyang'hwale district planning office (2023)

Table 1. The descriptive statistics for socio-cultural variables

VARIABLE	OBS	MEAN	STD. DEV.	MIN	MAX
CLI	209	0.6034	0.3765	0.0556	0.9815
SCF	209	0.3587	0.2122	0	1.17
PG	209	0.2901	0.2789	0	2
EM	209	0.1731	0.3098	0	1
FC	209	0.4761	0.2488	0	1

Source: Author (2022).

Table 2. The input correlation of the structural socio-cultural child labour determinant model

PG	EM	FC	SCF
0.120835	-0.0607494	-0.147028	0.0586175
0.425512	0.336977	0.0773129	0.486005
-0.247487	0.0119054	-0.0107175	-0.259766
0.0835794	0.465039	-0.130411	0.100526
0.135347	0.410483	-0.026709	0.169321
1	0.166146	0.169414	0.769468
	1	0.103964	0.451004
		1	0.655432
			1

Source: Author (2023)

4.3.2 Multicollinearity test

The study tested the Multicollinearity problem of the data using neural designer software, which detects the input correlation of the model. The researcher found that the data have no Multicollinearity problem because the input correlations are significantly less (Table 2).

Table 2 show the input correlation of the socio-cultural child labour determinant model. The table evidences that the data used have no Multicollinearity problem. The red color indicates the weak correlation of the inputs showing no Multicollinearity of the data. The discriminant validity values of the inner structural model of the constructs are less than the critical value of 0.8 hence are acceptable for the study.

4.3.3 Constructs reliability and validity test

The study tested the reliability of the construct socio-cultural factor (SCF) by using Smart Partial Least Squares (PLS) software. Four methods measured the reliability: Cronbach's Alpha, rho_A, Composite reliability and Average Variance Extracted (AVE). Moreover, the validity was measured by discriminant validity. The results show that the construct is discriminant and reliable (Tables 3 & 4).

Table.4 show the construct reliability test of the inner structural model. The study was interested in testing the composite reliability of the model. The results show that the constructs SCF have significant composite reliability because its values is greater than 0.5 (Wold, 1982 & Dijkstra, 2010). However, the construct SCF has 0.656

Cronbach, which is acceptable because it is greater than 0.6 for a small sample size (Wold, 1982). On the other hand, the study found that the construct is discriminate because its discriminant validity value is less than the critical value 0.8 (Dijkstra, 2010).

4.4 Model Development

The model development involves the modelling of the basic structural outer model and inner structural model. The researcher aimed to get optimal inner structural model which was developed from the basic outer structural model.

4.4.1 Basic structural outer model

The basic structural outer model aimed to test the theoretical assumption of the researcher that socio-cultural factors (SCF) influences child labour practices in small scale gold mining. The model was created using Structural Equation Modelling Partial Least Square (SEM PLS) with the aid of Stata software (Fig. 1).

Fig. 1 shows the socio-cultural model of child labour determinants and indicates the direct and indirect impact of the constructs on child labour practices. Table 5 provides the path coefficients and their significant values (p-value).

Table 3. Constructs reliability test of the inner structural model

Constructs	Cronbach'	rho_A	Composite Reliability	Average variance extracted AVE
SCF	0.665	0.481	0.704	0.430

Source: Field data (2023)

Table 4. Constructs discriminant validity test of the inner structural model

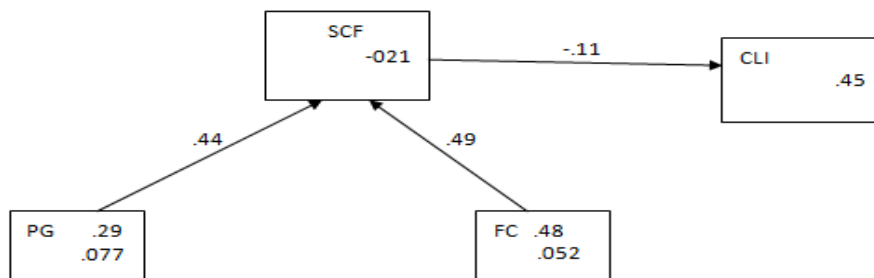|	SCF
SCF	0.656

Source: Author (2023)

Fig. 1. Basic SEM PLS algorithms for a socio-cultural model of child labour
Source: Author (2023)

Table 5. Path coefficients of the SEM PLS algorithm of the sociocultural model

	Coef.	OIM Std. Err.	Z	P>[Z]	[95% Conf. Interval]	
Structural SCF						
PG	.438652	.018302	23.97	0.000	.4027807	.4745232
FC	.4891493	.0184463	26.52	0.000	.4529951	.5253034
_Cons	-.0213404	.0136311	-1.57	0.117	-.0480569	.005376
CLI						
SCF	-.1143527	.0565857	-2.02	0.043	-.2252586	-.0034468
_Cons	.4472455	.0348283	12.84	0.000	.3789833	.5155078

Source: Author

Table 5 shows the sociocultural model's path coefficients. The path SCF to PG has positive coefficients of 0.438652 with a z-score of 23.97 and a p-value of 0.000. This path is significant because its p-value is less than the critical value of 0.05. Moreover, the path SCF to FC has positive coefficients 0.4891493 with a z-score of 26.52 and a p-value of 0.000. This path is significant because its p-value is less than the critical value of 0.05. Additionally, the path SCF to CLI has a negative coefficient of -0.1143527 with a Z-score of -2.02 and a p-value of 0.043. This path is significant because its p-value is less than the critical value of 0.05.

4.4.2 New developed (optimal) structural model

The study developed a new or optimal model, which defines the empirical structural relationship between the constructs SCF and CLI (Fig. 2).

Fig. 2 shows the optimal inner structural sociocultural model of the child labour determinants and depicts child labour practices' direct impact/effects. On the other hand, Table 6

shows the path coefficients of the SEM PLS algorithm.

Table 6 shows the path coefficients of the sociocultural factors model. The path CLI to SCF has a negative coefficient value of -0.110, z-score -1.94 and p-value of 0.052. This path is significant at 90 per cent because its p-value is less than the critical value of 0.1.

4.4.3 Examination of the indirect effect of the structural model

The study examined the indirect effects of the sociocultural model of the child labour determinants to test the level of linearity impact of the construct on the CLI. The indirect coefficients (impact) of each construct are indicated (Table 7).

Table 7 shows the indirect effect of the SEM PLS paths. The paths CLI to SCF have the indirect effect of zero in that there are not indirect paths. This may also be interpreted that the path has direct effects only.
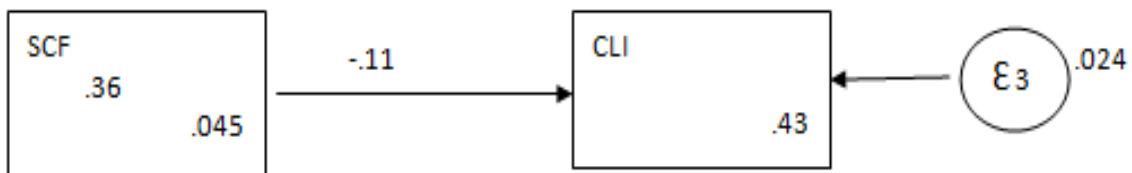

Fig. 2. SEM PLS Optimal inner structural sociocultural model
Source: Author (2023)

Table 6. The optimal SEM PLS path coefficients of the socio-cultural model

	Coef.	OIM Std. Err.	Z	P>[Z]	[95% Conf. Interval	
Structural						
CLI						
SCF	-.1100924	.0567393	-1.94	0.052	-.2212994	.0011145
_Cons	.4285161	.0320611	13.37	0.000	.3656775	.4913548

LR test of model vs Saturated: Chi2 (0) = 0.00, Prob > Chi2 =
Source: Author (2023)

Table 7. Indirect effect of the structural micro-macro model of child labour

			Coef.	OIM Std. Err.	Z	P>[Z]	[95% Conf. Interval]	
CLI								
	SCF		0 (no path)					
		PG	-.0514497	.0260828	-1.97	0.049	-.1025711	-.0003284
		FC	-.0532725	.0270046	-1.97	0.049	-.1062006	-.0003445
	SCF							
		PG	0 (no path)					
		FC	0 (no path)					

Source: author (2023)

4.4.4 Evaluation of mediation effect

The study examined the mediation effect of the structural model. The researcher used the value account for (VAF) to evaluate whether the PLS paths are full or partial. The VAF is the ratio between the indirect effects to the total effects. It expresses the percentage of effect on the model output that is contributed or explained by the indirect path /relationship (Table 8).

Table 8 shows the VAF values of the structural model. The table indicates the paths CLI to SCF have a full linear impact and that there are not indirect paths. The path CLI to SCF has VAF values of 0 significantly less, indicating no mediation effect or indirect paths required. The full mediation implies that the construct needs another factor to be activated or motivated or pull/push to the child labour practices. In this case, the construct SCF needs no any other factor for it to influence child labour practices.

4.4.5 Test of the goodness-of-fit of the structural model

To ensure the empirical applicability of the model, the researcher tested the model by the goodness-of-fit statistics of the SEM. The overall statistics tests are provided (Table 9).

Table 9 shows the goodness-of-fit test statistics. The likelihood ratio reports two tests. The first is a model chi-square test of the structural model, which indicates statistically significant at a 99 per cent level, as the p-value of 0.000 is less than a critical value of 0.01. The saturated model is the model that fits the covariance perfectly. It is accepted at the 1 per cent level that the model

fits and the saturated model. The second test is a baseline versus saturated comparison. The baseline model includes the mean and variances of all observed variables plus the covariance of all observed exogenous variables. Therefore, it is accepted that the baseline model fits the saturated model. Under population error, the RMSEA value and the lower and upper bounds of its 90 per cent confidence interval reports. In this case, the researcher used the upper and lower bounds. As a rule of thumb, if the lower bound is below 0.05, it is accepted that the hypothesis is that the fit is close [27]. Therefore, it is accepted that the fit is close as the lower bound of this study is 0.000. On the other hand, if the upper bound is above 0.10, it is accepted that the hypothesis is that the fit is poor [27] hence, we reject the hypothesis that fit is poor as the upper bound of this study is 0.000, which is less than 0.10. The Pclose is the probability that the RMSEA value is less than 0.05, interpreted as the probability that the predicted moments are close to those in the population [27]. The RMSEA value of this study is 0.000, indicating that the model fits closely. The Pclose is 100 per cent, which indicates the perfect model fits. In the baseline comparison, there are two indices, the comparative fit index (CFI) and the Tucker-Lewis Index (TLI), sometimes known as the non-normed fit index; both as a rule of thumb, values close to 1 indicate a good fit [28]. In this study, the value of CFI is 1.000, and TLI is 1.000, equal to one. This study indicates the structural model is the best fit.

On the other hand, the size of residuals is reported as the standardized root mean squared residual (SRMR) and the coefficient of determination (CD). A perfect fit corresponds to

an SRMR of 0, and a good fit corresponds to a small value at 0.08. And a value of CD close to 1 indicates a good fit [28]. In this study, the structural model has an SRMR of 0.000 which confirms the better fits; the CD of about 0.154 is also a better determination fit of the model (Bundala, 2023).

4.5 Study Hypotheses

The study used three alternative hypotheses to determine if there was a significant relationship between polygamy, early marriage, family conflict (all of them being embedded within sociocultural factors) and child labour practices. Table 10 provides a summary of the significant test statistics:

1. There is a significant relationship between polygamy and child labour practices
2. There is a significant relationship between early marriage and child labour practices
3. There is a significant relationship between family conflict and child labour practices

Table 8. The value account for (VAF) of the structural micro-macro model

SEM PLS Paths	Indirect effect	Total effects	VAF	Mediation
CLI-SCF	0	-0.1119	0	No

Source: Author (2023)

Table 9. Test of the Goodness-of-fit of the structural model

Fit statistic	Value	Description
Likelihood ratio		
chi2_ms(0)	0.000	model vs. saturated
p > chi2	.	
chi2_bs(10)	472.080	baseline vs. saturated
p > chi2	0.000	
Population error		
RMSEA	0.000	Root mean squared error of approximation
90% CI, lower bound	0.000	
upper bound	0.000	
pclose	1.000	Probability RMSEA <= 0.05
Information criteria		
AIC	924.087	Akaike's information criterion
BIC	984.249	Bayesian information criterion
Baseline comparison		
CFI	1.000	Comparative fit index
TLI	1.000	Tucker-Lewis index
Size of residuals		
SRMR	0.000	Standardized root mean squared residual
CD	0.154	Coefficient of determination

Source: Author (2023)

Table 10. Summary of the significant test statistics

Hypotheses statement	$\beta-Values$	z-score	p-value	Decision
There is a significant relationship between polygamy and child labour practices	0.4386	23.97	0.000	Accept at 95 per cent conf.
There is a significant relationship between early marriage and child labour practices	0.4891	26.52	0.000	Accept at 95 per cent conf.
There is a significant relationship between family conflict and child labour practices	0.3815	24.62	0.000	Accept at 95 per cent conf.

Source: Field data (2023)

Table 10 shows the summary of significant test statistics: beta values (Coefficients), z-score and p-value of the structural model. The alternative hypotheses assume a significant relationship between polygamy, early marriage, family conflict factors and child labour practices. The relationship between polygamy factor and child labour practices has a positive beta coefficient of 0.4386, z-score of 23.97 and p-value of 0.000. Therefore, the researcher accepts the alternative hypothesis at a 95 per cent of confidence level because its p-value is less than 0.05. Again, the relationship between early marriage factor and child labour practices has a positive beta coefficient of 0.4891, z-score of 26.52 and p-value of 0.000. Therefore, the researcher accepts the alternative hypothesis at a 95 per cent of confidence level because its p-value is less than 0.05. Moreover, the relationship between family conflict factor and child labour practices has a positive beta coefficient of 0.3815, z-score of 24.62 and p-value of 0.000. Therefore, the researcher accepts the alternative hypothesis at a 95 per cent of confidence level because its p-value is less than 0.05. This result means that socio-cultural factors have a positive impact on child labour practices. The flow of child labour practices increases as much as the social and cultural factors are not improved. Therefore it is concluded that the socio-cultural factors are push and pull determinants of child labour practices.

4.6 Results and Discussion

The study aimed to meet three specific objectives. It aimed to determine the socio-cultural factor (SCF) which are polygamy, early marriage and family conflict which influence child labour practices in small scale gold mining (SSGM) in the Nyang'hwale district council in Geita region- Tanzania. Hence, the researcher established the socio-cultural model of child labour determinants. The study uniquely introduced this model due to existing theoretical gaps in the socio-cultural perspective [29]. The researcher used the structural equation modelling partial least squares (SEM PLS) and automatic linear modelling (ALM) analytic techniques to establish the structural model that empirically defined or determined the socio-cultural determinants of the child labour in small scale gold mining.

The model makes it possible to find the solution by analyzing the goodness-of- fit of the statistics and detecting the direct and indirect effects of the

PLS paths, hence suggest appropriate means to deal with persistent child labour. From a theoretical perspective, socio-cultural factors represent the macro-sociology and the Conflict and Functionalism theory [29]. Therefore, it is learnt that in solving the sociological problem, the socio-cultural factors need to be given consideration.

The findings of this paper evidenced that socio-cultural factors negatively impact children's labour practices. And it is a determinant factor of child labour by having 0.007 scores of empirical importance. This finding means that it contributes about 0.7 per cent of the effect of the structural model or in child labour practices. The finding extended the socio-cultural factors to include polygamy practices, early marriage and family conflict to enhance the results and conclusions. The negative impact are interpreted that whenever the cultural strengthen in the community, reduces child labour practices and vice versa. In a society or community that improves or nourishes its culture, the legal violation is less. Hence, no child labour practices. It is evidenced that the society encouraging polygamy and early child marriage has experienced poor parental care and poor economic support; consequently, the child labour practice increases.

The study found that unstable families encourage children to do mining work which increasing the child labour practices. This finding is empirically open and valid. In general, most of the families in Tanzania are the most advanced in child care. Most children in many areas have minimal parental care, and this problem accelerated the problem of child labour. Children are less economically due to the poor parental care and poverty of parents, and hence they think they are mature enough to fight for their economic gains. This finding highlights the weakness in parental care, such as no punishment, no need to know the child's whereabouts, no buying of uniform, and others.

The study furthermore examines the specific factors that influence the parent and the children. The researcher clearly distinguished between the parental and childhood determinants of child labour practice. The study found that the parental determinants of the child labour practice are embedded within the socio-cultural factors [30]. These imply that the parents are more challenged by the culture of the society on caring for and mentoring their children, consequently, their children engage in child labour practices.

This study introduces a new way or method of measuring the child labour problem in a country. The key factor in identifying the child labour problem is the relative age: the legal age and the current age of the child. The legal age in Tanzania is 18 years, and most literature report that the issue of child labour is at 5-17 years [31,32,33,34,35]. Therefore, this study introduces the child labour age index, Eta (η). It is the proportion or ratio of the difference between the legal age and the child's age to the legal age. This index is straightforward and understandable. The values range from 0.722 (maximum) problem to 0.056 (minimum) problem. These values correspond to the minimum and maximum ages. The values of 0.722 correspond to ages of 5 years. That is, if the country has Eta values of 0.722 in averages indicates that the problem of child labour is at maximum. That is, the children are working starting from the age of 5 years.

On the other hand, the value 0.056 corresponds to the maximum age of 17. That is, a country with an Eta value of 0.056 indicates the child labour problem experienced by children of 17 years. The Eta value in Geita is about 0.61, meaning that most children who engage in SSGM are about seven (7) years old. It indicates that children have a high age risk. This scale is very useful and essential in sociological studies, particularly in detecting the legal-aged determinants such as marriage, retirement age, schooling etc. Eta values measure the age-relative risk of the individual or country, which is age abused or children rights.

5. CONCLUSION

The study found that polygamy, early marriage and family conflict factors are the most important determinants of child labour practices in small scale gold mining. The polygamy factors are the foremost important determinant of child labour. The study revealed that whenever polygamy exists, children lack parental care particularly of the father who ought to be inclined to one wife's household leaving the rest helpless. The children of the helpless mother are forced by the circumstances to engage in child labour. Moreover, family conflict and early marriage are the second the third important child labour determinants respectively. This study established the empirical-importance order of the child labour determinants. This order is a significant help in ranking the empirical relevance of the grand paradigms in sociological studies. The order signifies the relevance in solving social issues.

The study shows that the polygamy and family conflict factors negatively influence child labour practices [36,37]. On the other hand, early marriage factors also do negatively impacting child labour practices.

In addition, the study finds that there are two distinctive determinants of child labour practices, parental and childhood determinants. Childhood determinants directly determine or influence the children or motivate the children to child labour practices. This factor is the socio-cultural factor particularly polygamy, early marriage and family conflict. The parental determinants are the socio-cultural factors. These factors influence the parent or guardians in deterring child labour in small scale gold mining. These factors describe the two theories of sociology, functionalism and structural conflict, which describe macro sociology. Moreover, the study introduced a new level of social factors, the meso-factors, which take part in the micro and part of macro factors.

The study provides comprehensive empirical evidence on the structural (linear and non-linear or so called direct and non-direct) micro, meso and macro determinants of child labour in their functional relationship (model). It means that the study unveils the inner and outer causative relationship among the constructs in relation to persistence of child labour making it easier to tackle the problem. The study also contributes to the understanding of the underlying forces that limit child labour elimination in Nyang'hwale and Tanzania in general. It enables key stakeholders, including international agencies, the government and policy makers to establish effective and sustainable parent-child centered policy interventions in order to achieve long lasting solutions to the problem. Therefore, from these findings, the conclusion is that the micro factors (childhood) are fundamental determinants of child labour in small scale gold mining while the macro-factors are secondary determinants (parental).

6. RECOMMENDATION

The study recommends that the polygamy, early marriage and family conflict (socio-cultural) factors are negatively impacting the child labour practice in the small scale gold mining. The researcher found that the cultural practices encourage child labour practices by destroying the family structure and stability, hence poor parental cares exist. Poor parental care leads to the low-income family support which eventually

open door for children to opt for child labour practices. From these grounds, therefore, the researcher recommends that society, government, and NGOs abandon cultural practices that are not socially supportive, such as polygamies and early and forced marriage. The consequences of the forced and early marriages are divorced and large family size (family members). The larger family size leads to poverty and forces the child to engage in work at low ages.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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