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FACTORS LEADING TO THE CHILDREN'S PARTICIPATION IN FAMILY DECISION MAKING - FACTOR ANALYSIS APPROACH

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ABSTRACT

Children's influence in family decision making (FDM) emphasizes that children have at least some influence on decisions for variety of problems in the family. Hence there is a need to investigate more on issues affecting children's participation in family decision making . The main aim of this study is to find out factors leading to children's participation in decision-making processes in their families in relation to some socio-cultural values in the society and how these relations may affect the children's rights in general.

On the basis of a well-designed questionnaire, data were collected and analyzed. Factor analysis has been used for the reduction of the data set . Logistic regression model has been fitted to predict the dependent variable given the set of predictor variables. Chi-square test is used to determine whether there is significant association between expected frequencies and observed frequencies among various categorical variables studied.

The results have revealed that children's participation in family decision making can be greatly influenced by sex and age of a child. Regarding children's decision-making knowledge and children's participation in family decision making, the results have shown that children's decision-making knowledge has an influence in children's participation in family decision making. Regarding parents/guardians decision-making experience and children's participation in family decision making, the study findings revealed that children's participation in family decision making is influenced by parents/guardians decision-making experience.

Keywords: family decision making, factor analysis, logistic model, chi-square distribution.

Introduction

Participation of children in family decision making means that they can influence some of the things that effect them and offer a different perspective from adults. Participation is more than just asking children for their ideas and views. It is about listening to them, talking to them seriously and turning their ideas and suggestions into reality. It is also about providing them with the ability to influence some of the things that affect them and at the same time helping adults understand children's issues through their lens.

Participation is important for children because it gives them an opportunity to have a say about issues and decisions that affect them, learn new skills, have fun and develop a closer connection to their family.

The world's population is young, with nearly 2.2 billion people under the age of 18 years. It is estimated that 87 per cent of the world's adolescents live in countries affected by poverty, hunger, disease and violence. Exposure to these problems without any chance to address the issues can lead to social despair, delinquency, alcohol and substance abuse. By strengthening their capabilities and giving them opportunities to participate, young people can develop positive attributes and skills that will have a positive impact on the rest of their lives.

Children, therefore, possess the right to participate in their family and communities decisions making activities (Lundy, L.2007). Questions about children and young people's participation, or lack of it, in decision making have received increasing attention in child welfare (Andenes, 1997,Shemmings, D.2000,Sandbæk, 2002,Spicer & Ruth,2006, McMurphy et al.,2012). Making the right to participate effective, however, is a big challenge because of the deep-thought and views held by adults with regards to limited status and capacity of children. In view of the above, this study was undertaken in order to identify the status of children's participation in family decision-making and applying the outcomes for building children perspectives towards respect and responsibility as active citizens and giving children the opportunity to uncover abuse and rights violations.

Darley and Lim (1986), define the child as 0–18 years of age. Howard & Madrigal (1990) has divided the child category into three age groups, namely, 4–5, 6–10, and 11–14 years of age. Most of the authors defined participation of children in family decision making as their

fundamental right and it is a process of sharing decisions which affect one's life and the life of the community in which one lives [Hart (1992) , Treseder (1997) ,UNICEF (2003) , Fitzgerald (2009), Child Welfare & Supportive Housing Resource Center.(2015)]. On the other part, It is termed as encouraging and enabling children to make their views known on the issues that affect them and ensures their freedom to express . Family Decision-Making (FDM*)* is defined as a decision-making process in which members of the family make choices, determine judgments, and come to conclusions that guide behaviours (Scanzoni & Polonko , 1980). Also Hofstrand (2007) adds that FDM provide an environment where the family works towards goals that all family members have in common.

(Maddux, 2000) and Wang et.al (2004) found that in societies around the world, despite the integral part of a family, children and young people in families, schools and communities, are traditionally regarded as having a lower social status than adults. This limits the opportunities for the children to participate in decision-making . Female children are not given the same opportunities as boys, and all the challenges listed above apply even more to them

Materials and methods

This study is a cross sectional study undertaken in 2016. The study involved primary and secondary school students only, due to the fact that, the research objectives are directly related to the students. The data were collected from children aged seven (7) years old to seventeen (17) years old. The study population included two schools namely Ng'hong'hona Primary and Ng'hong'hona Secondary school in Ng'hong'hona village in Dodoma district of Dodoma region in Tanzania.

Since the population did not constitute a homogeneous group. Therefore, two strata were obtained by looking on the levels of education of the children (i.e. primary education level and secondary education level). 316 respondents were selected from the population (N=1494) by using stratified random sampling technique using proportional allocation method (264 from Ng'hong'hona Primary school and 52 from Ng'hong'hona Secondary school) from the two strata respectively. For collecting data, a well designed questionnaire was designed. For the pilot study, 30 questionnaires were distributed , tested and finally it was reframed accordingly. Research reliability was determined by using the cronbach's alpha test, and the value is calculated for the children's participation in decision making (α=0.81).The questionnaire had five sections consisting of demographic particulars of respondents, self efficacy in family decisions making,

parents/guardian decision making experience, children's decision making knowledge and measures to improve children participation in family decision making.

Data obtained from questionnaires were cross tabulated and descriptive analysis has been done to obtain frequencies, percentages and measures of central tendency for qualitative and quantitative variables. Factor analysis has been used for the reduction of variables and to extract factors responsible for family decision making. Estimates of the eigen values provided the measure of the amount of the original total variance explained by each of the new derived variables. Logistic regression has been used to find the relationship between independent variables and participation of children in family decision-making. Chi-square test has been performed to determine whether there is a significant difference between the expected frequencies and the observed frequencies among categories.

Results and discussion

Descriptive analysis

The results show that the majority of respondents were female (53%) as compared to male (46.84%). Regarding the distribution of age, majority of respondents were aged between $13-15$ years (47.47%) followed by respondents aged between 10-12 years (34.49%) , followed by respondents aged between 16-17 years (14.87%) and followed by respondents aged between 7-9 years (3.16%) respectively. The selected children in both the schools were grouped in 4 education levels. The distribution of respondents according to education level revealed that maximum number of respondents were found from standard $V-VII$ education level (54.75%) compared to other education levels followed by in Standard I-IV (29.22%) and the minimum number of respondents were found in Form II-IV (7.28%). The selected children were interviewed and asked about their participation in decision making in the family. The results showed that most of the respondents are not involved in decision-making since 80.70% of the respondents' show that they were not seriously participated in decision-making compared to 19.30% of the respondents, who were involved in decision-making. Regarding knowledge of respondents about decision-making, the selected students were asked about their knowledge regarding decision taken by the family members in respect of themselves. The results showed that larger number of respondents had knowledge about the decision-making (81.33%), while rest (18.67%) had no knowledge about it. These results are presented in the form of graphs in Fig-1 to Fig-5 below.

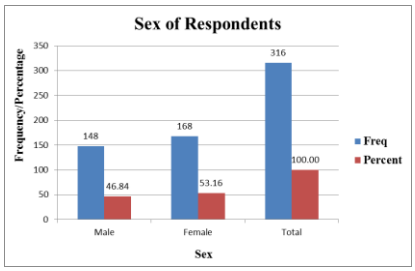

Figure 1: Sex of Respondents

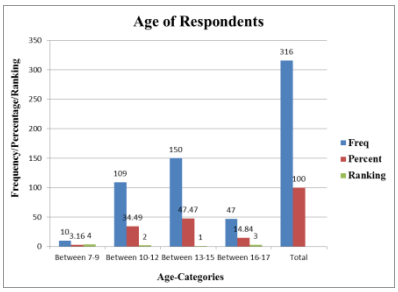

Figure 2: Age of Respondents

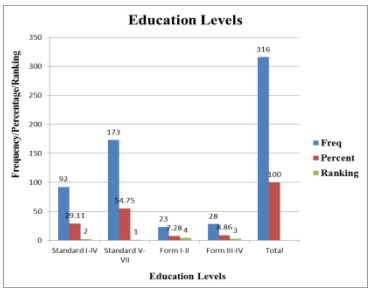

Figure 3: Education Levels

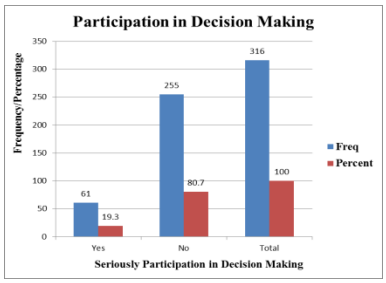

Figure 4: Participation in Decision Making

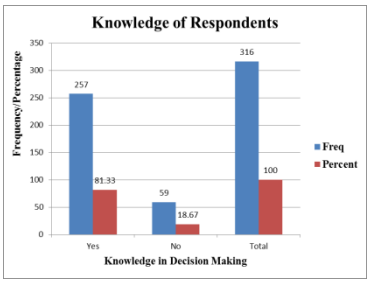

Figure 5: Knowledge of Respondents

Factor Analysis

Factor analysis is a method for investigating whether number of variables of interest are linearly related to a smaller number of unobservable factors . Since factor analysis procedure is not a singular method , principal component analysis technique has been used jointly in extracting factors from corrected factors. The Kaiser-Meyer-Olkin measure of sampling adequacy test was used for the admissibility of factor analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy provides an index (between 0 and 1) of the proportion of variance among the variables that might be common variance (i.e., that might be indicative of underlying or latent common factors). In this analysis, KMO value has been obtained as 0.692 which signifies that there is enough respondents for factor analysis to be applicable.

According to Beavers et.al (2003), since eigen values obtained from the correlation matrix provides the amount of variance in the data associated with each factor. It is necessary and sufficient that the associated eigen value be greater than one (Kaiser, 1960). Therefore, the first four component (factors) having eigen values greater than one, have been considered to perform factor analysis as shown in table 4.1.

Table 4.1: Total Variance Explained

Factor	Initial Eigen values		
	Total	% of Variance	Cumulative %
Sex	2.572	32.72	32.72
Education Level	1.252	27.47	60.19
Parent's/guardian decision making experience	1.170	21.74	81.93
Children knowledge in decision making experience	1.142	10.51	92.44
Age	.982	5.61	98.05
Self efficacy	.913	1.95	100.00

The description of independent variables

On the basis of specific objectives and conceptual framework of this study, we have selected six independent variables as age, sex, parents/guardian's decision-making experience, education level of a child (primary and secondary level), self-efficacy in FDM and children knowledge in decision making. On the basis of factor analysis performed in the study (Figure-6), four factors- sex, education level of a child (primary and secondary level), Parents/guardians decision making experience and children knowledge in decision making were found significant. These four factors were tested using chi-square test to determine the strength of the relationship between the expected frequencies and the observed frequencies among the categories.

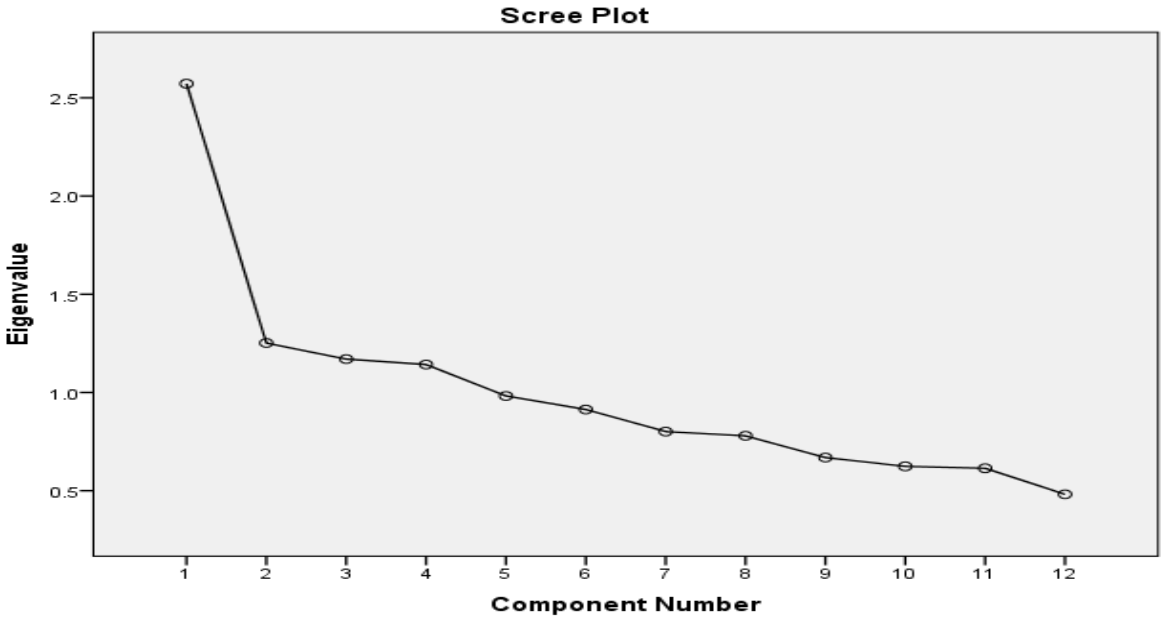

Figure 6: Eigen values of the factors

The description of dependent variable

Children participation in family decision making was used as categorical dependent variable. This variable was expressed by using explanatory (independent) variables after performing factor analysis technique. With regard to that consideration, logistic regression analysis was performed to estimate children's participation in FDM.

Association between discrete independent variables and dependent variable

Chi-square test was used to test which of the categorical variables to include in logistic regression analysis. For this purpose, the association between cchildren's participation in FDM was tested with sex, education level of a child (primary and secondary level), Parents/guardians decision making experience and children knowledge in decision making. The results are summarized in Table 4.2. It is clear that all the independent variables are statistically significant with respect to children's participation in FDM at 5% % level of significance (p value < 0.05)

Table 4.2: Association between age, sex, education level and children's knowledge with Children's participation in FDM

		Sex	Education level	Parents/guardians decision making experience	Children's knowledge in decision making
Children's participation in FDM	Calculated value of chi square	4.6749	26.3950	16.0789	3.8567
	p value	0.031	0.001	0.001	0.049
	d.f.	1	3	2	1

Logistic Regression Analysis

A binary logistic regression analysis has been done to establish the predictive qualities of the dependent variable (children's participation in FDM) in relation to the independent variables i.e. sex, level of education, parents/guardians decision-making experience and children's knowledge in decision-making. Factor analysis was used to determine the significant combination of factors in our model (Maxwell, 2009). A binary logistic regression analysis was performed to determine the factors which are considered to be significant contributors of the participation of children in FDM. The contribution of each variable was indicated by the odds ratio for each of the variable. Table 4.3 below gives the contribution or importance of each of our predictor variables. The Wald statistic has been used as a measure of importance of the variable in the study. The higher the value the more the important it is.

Table 4.3: Variable in the equation

	ß	S.E.	Wald	df.	Sig.	Exp(ß)
Constant	-1.184	0.856	1.916	1	0.166	0.306
Sex	0.790	0.320	6.104	1	0.013	2.204
Education level	-0.394	0.175	5.088	1	0.024	1.653

Parent/guardian decision making experience	1.273	.329	14.965	1	.000	3.570
Children knowledge in decision making	.503	.480	1.100	1	.294	1.653

$$\text{Logit}[\pi(x)] = \text{Logit}\left(\frac{\pi(x)}{1-\pi(x)}\right) = -1.184 + 0.790X_1 - 0.394X_2 + 1.273X_3 + 0.503X_4$$

where $X_1 =$ Sex, X_2= Education level, $X_3 =$ Parent/Guardian decision making, $X_4 =$ Children's knowledge in decision-making.

Sex is one of the indicators of children's participation in FDM. It was found that Exp(ß) for variable sex was 2.204 and hence it is likely to participate in FDM (p-value =0.013) as shown in the table 4.3 above. This means that males are less likely to participate in family decision – compared to female.

Education level in FDM was statistically significantly related to children's participation in FDM (p-value = 0.0024). The estimated odds ratio forEducation level in FDM was 1.653.

Parents/guardians decision making experience in FDM was statistically significantly related to children's participation in FDM (p-value=0.0001). The estimated odds ratio for Parents/guardians decision making experience in FDM was 3.570.

The findings have revealed that Children knowledge in decision making was not statistically significant related to children's participation in FDM (p-value = 0.294). The estimated odds ratio for the Children knowledge in decision making in FDM has been found to be 1.653.

Finally, the results found that the estimated odds ratio for parents/guardians decision making experience is 3.570 meaning that, the increase in one unit of parents/guardians decision making experience, the estimated odds of children participating in FDM increases by a factor of 3.570 holding other variables constant as shown in the table 4.3 . The probability for a

Parents/guardians decision making experience in FDM is statistically significantly related to children's participation in FDM (P-value = 0.0001).

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