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Variation in Household Violence and Maternal Autonomy in Rural and Urban Areas: Their Effect on Child Health in Cameroon

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Abstract

This study examines the variations in household violence and maternal autonomy in rural and urban areas and their effect on child health in Cameroon. Using data from Cameron Demographic Health Survey (CDHS, 2018), a mixed-method approach (Ordinary Lease Square Regression and the Oaxaca-Blinder decomposition method) was used for the analysis. The study found that household violence had an insignificant negative effect on child health while maternal autonomy exhibited a very significant positive effect on child health globally, in rural and in urban areas in Cameroon. Also, the rates of household violence and maternal autonomy are significantly higher in urban areas than in rural areas in Cameroon. Policy recommendations includes raising awareness, providing educational and economic opportunities for women, improving health care services and strengthening legal framework to combat violence while strengthening maternal autonomy through educational and economic initiatives which improves their own and child health in both rural and urban settings in Cameroon.

Keywords: household violence, maternal autonomy, child health and Cameroon

1. Introduction

In recent years, an increasing body of research has focused on understanding the complex interplay between household violence, maternal autonomy and child health outcomes (Christina et al., 2020; Mootz et al., 2019; Salman et al., 2020; Chol et al., 2019). These factors are particularly important in the context of developing countries, where the prevalence of household violence and its impacts on maternal autonomy can have profound implications for child well-being. Cameroon, a country in central Africa provides a unique setting to investigate this issue due to its unique setting to invest this issue due to its diverse socio-economic landscape, with both rural and urban area presenting distinct challenges and opportunities (Kimengsi & Muluh, 2023; Pongou et al., 2006).

Household violence refers to any form of physical, sexual psychological abuse that occurs within the family unit. It is a pervasive human right violation affecting millions of women globally (Misch & Yount, 2013; Lourenço et al., 2013; Ferro et al., 2018). In Cameroon like in many other countries, household violence is a significant public health concern that affect women across socio-economic strata. However, the nature and prevalence of household violence can vary between rural areas and urban areas, influence by factors such as cultural norms, economic disparities and access to resources (McIlwaine, 2013; Bradshaw, 2013).

Maternal autonomy, on the other hand, refers to a woman's ability to make decisions and take actions that affect her own well-being and that of the children. It encompasses a range of dimensions, including financial independence, educational attainment and decision-making power within the household (Barón-Lozada, et al., 2022; Bradshaw, 2013). Maternal autonomy is crucial for positive child-health outcomes as it enables mothers to

make informed choices about health care utilisation, nutrition and other determinants of child well-being. This also vary between women in rural and urban areas due to their level of accessibility of these resources.

Understanding the relationship between household violence, maternal autonomy and child health is vital for designing effective interventions and policies to improve child well-being in Cameroon by exploring the variations in household violence and maternal autonomy between rural and urban areas, we can identify the challenges faced by women in different context and develop targeted strategies to address these issues (Chol et al, 2019; Khanna et al., 2021).

The overall aim of this paper Is to examine the association between household violence, maternal autonomy and child health outcomes in rural and urban areas of Cameroon. Specifically, we will investigate how household violence and maternal autonomy influence child health and overall well-being as explain by access to health care services, social support networks and gender norms prevalence in the different setting.

The key driver to this study is the fact that the study recognises that household violence and maternal autonomy are key determinants of child well-being and aimed to explore their relationship specifically in the context of rural and urban settings. By understanding the factors contributing to child health disparities, policy makers and stakeholders develop targeted interventions to improve child health outcome in Cameroon. It is for this reason that this piece of research aims to analyse the variation of household and maternal autonomy in rural and urban areas of Cameroon and their impacts on child health outcomes.

2. Literature Review

2.1 Conceptual Literature

On the conceptual front, Partner violence according to National Coalition against Domestic Violence (NCADV), domestic violence includes “willful intimidation, physical assault, battery, sexual assault, and/or other abusive behavior as part of a systematic pattern of power and control.” It occurs when such abuse is “perpetrated by one intimate partner against another” and is marked by one “partner’s consistent efforts to maintain power and control over the other.” (NCADV, 2019). This control may manifest in a variety of forms, including economic and emotional abuses. Other specific forms of partner violence may include homicide, physical and verbal assault, threats of violence, kidnapping, harassment, criminal trespassing, or stalking. Stalking, “generally refers to harassing or threatening behavior that an individual engages in repeatedly, such as sending the victim unwanted presents, following or lying in wait for the victim, damaging or threatening to damage the victim’s property, appearing at a victim’s home or place of business, defaming the victim’s character or spreading rumors, or harassing the victim via the Internet by posting personal information”. Many advocates recognize that stalking behaviors may “signal particular risk, as it has been linked with repeat violence (including lethal violence), increased psychological distress and diminished physical and mental health.” (Botuck et al., 2019)

Autonomy is a multiphase concept. In most studies autonomy has been defined as the capacity to influence one’s personal environment through control over resources and information in order to make decisions about one’s own concerns or about close family members (Dyson & Moore, 1983; Basu 1993). According to Bloom et al. (2001), maternal autonomy is defined as control over finances, decision making power, and extent of freedom of movement by women in a society. Also, women autonomy can be defined as a concept that has several dimensions which include both control over resources (that is, physical, human, intellectual, and financial) and ideologies (such as, beliefs, values, attitudes, internal strength, self-esteem, and self-confidence) (Pradhan, 2003). It was found out that some direct measures of women autonomy which include accessibility and control over resources, participating in economic decisions, self-esteem, and freedom of movement (ability to move freely without restrictions) play major role in the utilization of maternal health care services (Adhikari, 2016; Kishor & Subaiya, 2008).

According to the World Health Organisation (WHO, 2014), child health is a state of physical, mental, intellectual, social, and emotional wellbeing of a child and not merely the absence of diseases or infirmity. This international organisation argues that children live in families, environments, and communities that provide them with opportunity to reach their fullest developmental potentials (Boachie et al., 2014, Rigby & Kohler, 2002; Adhikari, 2016).

The authors came out with a clear view of the inter-relationship existing between the concepts in a conceptual analytical framework of this study as can be seen in Figure 1 below.

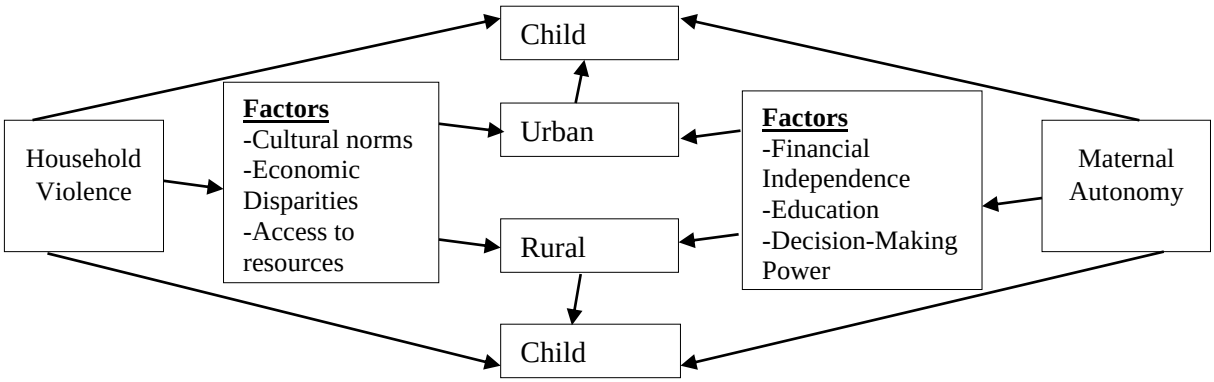

Figure 1. Conceptual Analytical Framework

Source: Author's Conception.

From the conceptual analytical framework in Figure 1 above, the variables of interest are household violence, maternal autonomy and child health. In which case household violence and maternal autonomy are the independent variables and child health the main dependent variable. Household violence depends on factors such as cultural norms, economic disparity and access to resources, while maternal autonomy on its part depends on factors such as financial independence, education and decision-making power. All these factors listed above vary within areas of residence in Cameroon (rural and urban areas). Hence, their variability causes the intensity of household violence to vary too between urban and rural areas in Cameroon.

2.2 Theoretical Literature

The most important and fundamental theory that explains the linkages and interactions between the concepts of maternal autonomy and quality of child is the "simple model on mothers' autonomy, health inputs, and child health", by Grossman, (1972) and Wagstaff, (1986). Augmented by Manda et al. (2016), they modify the utility function of the representative individual in such a way that child health, which itself is a produced input, enters into the utility function, since a healthy baby probably gives significant amount of satisfaction to the parents. We assume that children are endowed with some initial stock of health, although such health stock is exogenous. Therefore, we have two different objective functions: one is the family utility function and the other one is the child health production function. The representative family or individual allocates resources among different health inputs for child health and the composite good. Social learning theory maintains that individuals learn social behaviors by observing and imitating other people (Bandura, 1989; Bandura 1977). Imitation of models is the most important element in how children learn. This process can be seen in the development of language, aggression, and moral decision-making (Papalia et al., 2010). Social learning theory posits that individuals become aggressive toward family members because their aggressive behaviors are learned through operant conditioning and observing behavior in role models (Malley-Morrison & Hines, 2004).

2.3 Empirical Literature

Continued debate on factors that influence women's decision-making within households. Specifically, it considers the influence of income generation and gender ideology on women's decision-making in urban and rural households in Nicaragua (Bradshaw, 2013). He adds to the debate by extending the household decisions that are considered to include not only monetary decisions but also "life option" decisions, including those around women's sexuality. Barón-Lozada, et al. (2022) also did findinds to show a clear variation in household violence and maternal autonomy in rural and urban Brazil. He added in his adjusted model found that women with a low level of autonomy had a higher prevalence of IPV compared to women with high autonomy.

3. Methodology

3.1 Data Sources and Scope

Looking at the time scope, the work used secondary data from the Cameroon Demographic Health Survey (CDHS, 2018) collected from 2015 and published for use by the National Institute of Statistics in 2018. CDHS, 2018 data set is relevant for this study because it comprises of information that can be used to construct detailed explanatory variables for household violence, maternal autonomy and child health. This can help in the identification of the variation of household violence and maternal autonomy in rural and urban areas; and their effect on child health in Cameroon, which is the major objective that this study seeks to attain. Furthermore, the comprehensive information provided by this dataset can be useful in generating reasonable results, which can be valuable in deducing important policy implications.

In terms of conceptual scope, this study limits itself to the empirical analysis of women autonomy, and child health. With regards to the definitional scope, the study adopts the definition of (Mason, 1995) which defines and conceptualize as the ability of women to make and execute self-determining decisions pertaining to personal matters of importance to their lives or their family, even though men and other people may be opposed to their wishes. This definition is adopted because in constitute all the domains of enhancing women capabilities whose indicators are readily available in Cameroon. Indicators of maternal autonomy includes; decision on how to spend earnings, decides on health care, decides on large household purchases, decides on visits to family or relatives and decides what to do with money husband earns. Therefore, maternal autonomy (MA) is an index constructed from the various indicators using multiple correspondent analysis (MCA) because the indicators are categorical in nature.

Household violence on its part, was consider to violence against women or intimate partner violence (IPV), which according to National Coalition against Domestic Violence (NCADV), "willful intimidation, physical assault, battery, sexual assault, and/or other abusive behavior as part of a systematic pattern of power and control." It occurs when such abuse is "perpetrated by one intimate partner against another" and is marked by one "partner's consistent efforts to maintain power and control over the other." (NCADV, 2019) Therefore, household violence (HV) is an index constructed from the various indicators (beat wife because she visits her family, beat wife because she burn food etc.) using multiple correspondent analysis (MCA) because the indicators are categorical in nature.

According to the World Health Organisation (WHO, 2014), child health is a state of physical, mental, intellectual, social, and emotional wellbeing of a child and not merely the absence of diseases or infirmity. This international organisation argues that children live in families, environments, and communities that provide them with opportunity to reach their fullest developmental potentials. Boachie et al. (2014), Fambon & Baye (2017) and Tambi (2017) supported this contextual definition. They employed in their studies anthropometric indicators such as height for age (HAZ), weight for height (WHZ), weight for age (WAZ), leg length for age among others. This study therefore adopts the HAZ because it gives the state of the child (height for age indicator to measure long-term malnutrition effect and weight for height indicator to measure body mass in relation to height) for a long period. Therefore, various factors in which mother's ability to take decisions in the household is dominant can affect child's health.

3.2 Estimation Framework

To address the objective of mean differentials between urban and rural household violence and maternal autonomy, the study makes use of the Oaxaca (1973) and Blinder (1973) decomposition method. This is a technique used to carry out the mean outcome difference between two groups (Jann, 2008). The aim of the Blinder-Oaxaca decomposition is to explain how much of the difference in mean outcomes across both groups is due to group differences in the mean levels of explanatory variables, and how much is due to differences in the magnitude of regression coefficients.

The outcome differential between household violence and maternal autonomy are "explained" by group differences in characteristics. The "unexplained" part is often used as a measure of discrimination. In general, the technique can be employed to study group differences in any (continuous and unbounded) outcome variable. The mean outcome difference can be expressed as the difference in the linear prediction at the group-specific means of the regressors. Here, we have two groups: urban household violence (U) and rural household violence (R), and an outcome variable Y that's the household violence index.

The mean outcome difference to be explained (ΔY) is simply the difference of the mean outcomes for observations in the group of the group of Urban household violence (U) and Rural household violence(R), denoted as Y_U and Y_R, respectively. Where;

$$\Delta\overline{Y} = \overline{Y}_U - \overline{Y}_R \quad 1$$

$$\overline{Y}_U = \hat{\alpha}_U \overline{X}_U \quad 2$$

$$\overline{Y}_R = \hat{\alpha}_R \overline{X}_R \quad 3$$

Where $\overline{X}_U$ contains the mean values of explanatory variables of maternal autonomy and $\hat{\alpha}_U$ are the estimated regression coefficients of the maternal autonomy. $\overline{X}_R$ is the mean values of explanatory variables of not being autonomous and $\hat{\alpha}_R$ are the estimated regression coefficients. So we rewrite in the equation below as:

$$\Delta\overline{Y} = \hat{\alpha}_U \overline{X}_U - \hat{\alpha}_R \overline{X}_R \quad 4$$

This expression can, in turn, be written as the sum of the following three terms:

$$\Delta\overline{Y} = \Sigma(0.5)(\hat{\alpha}_U + \hat{\alpha}_R)(\overline{X}_U - \overline{X}_R) + \Sigma(0.5)(\overline{X}_U + \overline{X}_R)(\hat{\alpha}_U - \hat{\alpha}_R) \quad 5$$

The equation above is the SOB decomposition of the mean outcome difference. $\Sigma\ (0.5)(\hat{\alpha}_U + \hat{\alpha}_R)\ (\overline{X}_U - \overline{X}_R)$ measures the average input violence between the urban and the rural household and is considered as access to violence. It measures the empowerment differential which would persist if women were to enjoy the average autonomy input responsiveness in the sample, while preserving their given stock of input autonomy. The maternal autonomy effects is the contribution of differences in explanatory variables across groups in terms of violence ($\overline{X}_U - \overline{X}_R$).

The second part of the equation $\Sigma(0.5)(\overline{X}_U + \overline{X}_R)\ (\hat{\alpha}_U - \hat{\alpha}_R)$ gives us the returns to endowments and it measures differences in the responsiveness of input-endowments between autonomous women and non-autonomous women, and further indicates the contribution of natural difference to violence different. The coefficient effect is the part that is due to group differences in the coefficients; ($\hat{\beta}_{MW} - \hat{\beta}_{SW}$).

4. Presentation and Discussion of Results

4.1 Weighted Descriptive Statistics

Table 1 shows the weighed sample statistics for short listed variables to be used for our regression results. The weighted descriptive statistics indicates that a random sample 31591 observations for most of the variables, but for the variable Child health, Maternal autonomy and mothers' meanings with different observations. Also, from the table above, the mean of height for age Z-score (HAZ) is -0.9303 and the maximum and minimum value is 5.18 and -59.8 respectively. Its standard deviation is 1.5980 indicating a high deviation from the mean. The min and max value of HAZ differs from others because this variable is not normalised like the other variables in the model. Table 1 is also use to test for normality, which is to test if the variables used in the model are normally distributed. Table 1 also shows that the standard deviations of the other variables used is smaller than their mean values. This is an indication that all the other variables used in the model are normally distributed, implying that the variables are perfect variables to be used in the model.

Table 1. Weighted Descriptive Statistics

Variable	Obs	Mean	Std. dev.	Min	Max
A). Outcome Variable of Interest					
Child Health (Height-for-Age Z-Score)	31,591	-0.9303	1.5980	-5.98	5.18
B). Endogenous Determinant of Child Health					
Maternal Autonomy (1=Takes Decision, 0=otherwise)	31,591	0.6385	0.1938	0	1
Household Violence (1=Violence, 0=otherwise)	31,591	0.8419	0.2877	0	1
D). Exogenous Demographics					
Type of cooking_fuel (1=wood (traditional) to 12= Solar (modern))	31,591	7.1508	2.15978	1	12
Parent_smoke (1=Smokes, 0=otherwise)	31,586	0.0028	0.0524	0	1
Asset_TV (1=Watch TV, 0=otherwise)	31,591	0.4571	0.4982	0	1
Radio (1=Listen to Radio, 0=otherwise)	31,591	0.4016	0.4902	0	1

Source: Computed by the researcher from 2018 Cameroon Demographic Health Survey (DHS).

4.2 Regression Results on the Variation of Household Violence and Maternal Autonomy in Rural and Urban Areas, Their Effect on Child Health in Cameroon

From Table 2, in estimating the variation of household violence and maternal autonomy in rural and urban areas in Cameroon, the OLS regression was employed to look at the effect of household violence and maternal autonomy on child health globally in Cameroon (column 1), the effect of household violence and maternal

autonomy on child health in rural areas (column 2) and the effect of household violence and maternal autonomy on child health in urban areas (column 3). Furthermore, the study used the Oaxaca-Blinder decomposition technique to verify if there is a disparity in the effect of household violence and maternal autonomy in rural and urban areas in Cameroon (column 4 and 5).

Table 2. Regression Results

VARIABLES	Global	Rural	Urban	Oaxaca-Blinder(MA)	Oaxaca-Blinder(HV)
HAZ	(1)	(2)	(3)	(4)	(5)
HV	-0.0210	-0.1507	0.0485		
	(0.1292)	(0.2017)	(0.1699)		
MA	0.6719***	0.7233***	0.5952**		
	(0.1835)	(0.2780)	(0.2477)		
tcooking_fuel	-0.0982***	-0.0894***	-0.0706		
	(0.0172)	(0.0183)	(0.0573)		
parent_smoke	1.4868*	1.4588	1.5054		
	(0.7684)	(1.0383)	(1.1279)		
Asset_TV	0.3562***	0.3345**	0.2467*		
	(0.0826)	(0.1423)	(0.1233)		
Radio	-0.0323	-0.0603	0.0078		
	(0.0756)	(0.1082)	(0.1067)		
Group-r_1				0.6230***	0.8111***
				(0.0021)	(0.0023)
Group-u_2				0.6605***	0.8821***
				(0.0024)	(0.0022)
Difference				-0.0376***	-0.0711***
				(0.0031)	(0.0032)
Coefficients				-0.0376***	-0.0711***
				(0.0031)	(0.0032)
Constant	-0.7958***	-0.6773**	-1.0731**		
	(0.2118)	(0.2965)	(0.5043)		
Adj R^2	0.0576	0.0562	0.0101		
Observations	1875	828	1047	15,297	31,591

Note: Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.

Source: Author's Computation Using Stata 17.

From the results in Table 2, it is seen that household violence affects child health negatively globally and in rural areas, but positively in urban areas. Though the effect of household violence globally, in rural areas and in urban areas in Cameroon are all statistically in significant, as seen in column 1, 2 and 3 of Table 2. Maternal autonomy on its part, exhibit a positive effect on child health globally, in rural areas and in urban areas. This effect of maternal autonomy is statistically significant at 1% level globally and in rural areas and at 5% level in urban areas in Cameroon as indicated in column 1, 2 and 3 of Table 2.

The actual variation in maternal autonomy and household violence in rural and urban areas in Cameroon is captured column 4 and 5 respectively. Here, group 1 represents rural areas and group 2 represents urban areas in Cameroon. From the results above, it is seen that there is a significant difference in the rate of maternal autonomy in rural and urban areas in Cameroon indicated by the difference value of |-0.0376|, implying a 3.76% difference (variation). This difference is simply gotten from the fact that the rate of maternal autonomy stands at

0.6605 (66.05%) in urban areas and 0.6230 (62.30%) in rural areas giving a significant difference of 3.76% as seen in column 4 Table 2.

On the other hand, the variation in household violence in rural and urban areas in Cameroon, is presented in column 5. It is seen that there is a significant difference in the rate of household violence in rural and urban areas in Cameroon indicated by the difference value of |-0.0711|, implying a 7.11% difference (variation). This difference is simply gotten from the fact that the rate of household violence stands at 0.8821 (88.21%) in urban areas and 0.8111 (81.11%) in rural areas giving a significant difference of 7.11%.

4.3 Discussion

From the result, maternal autonomy had a very significant positive effect on child health globally, in rural and urban areas in Cameroon. This is explained from the point that when women take decisions on their own, such as decision of the number of children to have; on going out to work; on what to prepare just to name a few. This decision making of women without any external influence can improve not only the health of the child, but also the family wellbeing. The results is in line with those of Wiji et al. (2016) and Salman et al. (2020), who examined the link between a mother's autonomy and the nutritional status of children in India and Nigeria respectively. Household violence on its part portray an insignificant negative effect on child health globally, in rural and urban area in Cameroon. The Simple Model on Mothers' Autonomy, Health Inputs, and Child Health, by Grossman, 1972 and Wagstaff, 1986, has explain the link between mother's autonomy and child health as embedded in the family utility function and the other one is the child health production function.

In terms of variability of household violence and maternal autonomy in rural and urban areas in Cameroon, the results from the study acclaim the fact that both household violence and maternal autonomy are significantly intense in urban areas than in rural areas in Cameroon. This great disparity in their intensity is attributed to the disparity and diverse socio-economic determinants of household violence (cultural norms, economic disparities and access to resources) and maternal autonomy (financial independence, education and decision-making power) in rural and urban areas in Cameroon (Kimengsi & Muluh, 2023). Since women in urban areas tend to have more access to these aforementioned factors, reason for the significant high rates of household violence and maternal autonomy in urban areas than in rural areas in Cameroon.

5. Conclusion and Policy Recommendations

In conclusion, the study on the variation in household violence and maternal autonomy in rural and urban areas and their effect on child health in Cameroon sheds lights on several important findings. The research underscores the significance of considering contextual factors such as rural urban disparities, in understanding the context dynamics of household violence and maternal autonomy and their impact on child health outcomes. Since household violence and maternal autonomy turn to have higher rates in urban areas, the findings suggest that addressing issues of household violence should be prioritize in urban communities to protect the well-being of children taking into consideration the specific cultural, social and economic factors that contribute to the higher prevalence of violence in these areas.

Furthermore, the research emphases the crucial role of maternal autonomy in mitigating adverse effect on child health. Again, maternal autonomy is higher in urban areas. Strengthening maternal autonomy through educational and economic empowerment initiatives can empower women to make informed decisions about their own and their children's health thereby improving child well-being.

The interconnectedness of various factors influencing child health in Cameroon highlights the multifaceted nature of the relationship between household violence, maternal autonomy and child health outcomes. Addressing these issues requires a comprehensive approach that encompasses not only interventions to reduce violence but also efforts to enhance women's decision-making power, access to health care services and educational opportunities for women.

Importantly, the study's findings have significant policy implications. Policy makers should consider the unique need for rural communities and develop targeted strategies to address issues of violence in both rural and areas of Cameroon. Additionally, effort should be made in promoting gender equality and decision-making power of women that positively affect their own and their children's health. Investment in health care infrastructure, education and economic opportunities can also contribute to improve child health outcomes across both rural and urban areas in Cameroon.

JEL Classification: D10, J13, I10.

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