REGIONAL INSTITUTE FOR POPULATION STUDIES

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WOMEN'S AUTONOMY AND UNDER-FIVE MORTALITY IN CAMEROON

BY

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Acceptance

Acceptance by the College of Humanities, University of Ghana in partial fulfilment of the requirements for the Masters of Arts in Population Studies.

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Dr. Aaron K. Christian

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Date …21-11-2023..…..

Declaration

I, Jessica Gallia Ngakam Siewe declare that apart from the references indicated, this study is an original research conducted under supervision at the Regional Institute for Population Studies of the University of Ghana and no part of this research has been presented elsewhere for the fulfilment of another degree.

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Jessica Gallia Ngakam Siewe

(Student)

Date …21-11-2023……

Dedication

To my lovely parents

Acknowledgement

I am grateful to God almighty for His grace throughout this study. My sincere gratitude goes to Dr. Aaron K. Christian, my supervisor, for his patience, guidance, and support. I also acknowledge the entire RIPS faculty for their criticisms, contributions, and teaching. To my family and friends for their prayers, support, and encouragements I say thank you.

Abstract

Under-five mortality is a key indicator of the health and development of a country. Though under-five mortality has significantly reduced over time in Cameroon, the number of deaths per 1000 live births occurring before the age of five remains high. This situation may be attributed to the mother's inferior status in the household. This study aimed to examine the association between women's autonomy and under-five mortality. Decision-making, asset ownership, and domestic violence were considered as the dimensions of autonomy. The study used data from the 2018 Cameroon Demographic Health survey. The association between under-five mortality and the explanatory variables was assessed using bivariate analysis. Binary logistic models were then employed to re-examine the net effect of women's autonomy and the various dimensions of women's autonomy on under-five mortality. Under-five mortality was highest among women with no formal education (35.24%) compared to their counterparts with primary education (28.19%) and those with secondary or more education (16.09%) in the five years preceding the survey. Results show that out of the three dimensions of autonomy considered, women's decision-making autonomy and autonomy from domestic violence were significant predictors of under-five mortality in Cameroon. Specifically, the odds of under-five mortality decrease with an increase in the woman's decision-making autonomy and opposition to domestic violence. Other sociodemographic characteristics that predicted under-five mortality were respondents' age, level of education, wealth status, child's age and sex. In this context, maternal literacy and involvement in healthcare decision-making appear to be the most powerful predictors of under-five mortality. Thus, to reduce under-five infant mortality, current efforts to improve women's ability to make decisions, particularly those concerning their health and that of their children, should be encouraged.

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List of abbreviations

5q0: Under-Five Mortality

CDHS: Cameroon Demographic and Health Survey

SDG: Sustainable Development Goal

WASH: Water Sanitation and Hygiene

WoA: Women's autonomy

Chapter One

Introduction

1.1 Background

Under-five mortality is a critical health outcome and an indicator of socioeconomic development. Under-five mortality (5q0) refers to "the probability of dying between birth and exact age five" (Ghana Statistical Service, 2004). Worldwide, 5q0 is estimated to have reduced from 93 deaths per 1000 live births in 1990 to 37 in 2020 (UNICEF, 2021). The World Bank (2022), estimated the 5q0 rate at 73 deaths per 1000 live births in sub-Saharan Africa. Meanwhile, in Cameroon, this figure is estimated at 72 deaths per 1000 live births in 2019 and this represents 3.6% of under-five deaths occurring in western and central Africa (CME Info, 2021). The Sustainable Development Goal (SDG) 3.2 of the United Nations (UN) aims to "end preventable deaths of new borns and children under five years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 deaths per 1,000 live births and under-five mortality to at least as low as 25 deaths per 1,000 live births" (Buse & Hawkes, 2015). Given the significant caregiving role women play, particularly with respect to their children's well-being and health, ample inquiry has been made between women's autonomy (WoA) and children's health outcomes (Carlson et al., 2015b; Ziaei et al., 2015). This notwithstanding there are limited studies examining WoA and child survival or infant mortality which is the focus of the current study.

Mothers' socio-demographic, and economic childcaring behaviour has a proximate influence on a child's health and survival(Hossain, 2015). Traditionally, women's roles and status are associated with the constraints they face with their upkeep and that of their children (Princewill et al., 2017). Women have a significant impact on factors critical to their children's health and well-being as primary caregivers, such as food preparation, feeding

practices, psychosocial care, hygiene, and new-born care. (Engle et al., 1999). There has been an increase in attention in recent years on WoA at the household level. Quisumbing & Maluccio (2003) have shown that women tend to devote more resources to health and nutrition expenses than men when they have control over income. It has also been observed that an increase in WoA may lead to a reduction in child mortality (Luciana Luz, 2013). There is no doubt that mothers play an essential role in their children's survival.

An individual's autonomy is their ability to access and make decisions about their lives. Consequently, WoA includes having the right to make decisions and act independently or jointly on all matters pertaining to her well-being and that of her child (Nigatu et al., 2014a). WoA is often used interchangeably with empowerment where empowerment refers to the process of gaining autonomy (Haque et al., 2011). Thus WoA is expected to have influence on her participation in household matters such as, finances, expenditures, work, travel, social outings, health care, and family planning, and childcare, all of which may have an effect on 5q0 (Carlson et al., 2015).

The extent of women's economic empowerment in sub-Saharan Africa is low, but with considerable variation in the distribution. Out of a possible women's economic empowerment score of 9, the average for all countries was 3.0. South Africa scored highest at 4.1, and Niger the lowest at 1.5 (Williams et al., 2022). This is explained by the challenged faced by sub-Saharan African women in accessing and controlling economic opportunities.

1.2 Statement of the Problem

There has been a substantial improvement in the Cameroon's reproductive health outcomes, such as the total fertility rate which reduced from 5.01 births per woman in 2012 to 4.54 births per woman in 2022 (World Bank, 2022.) however, child mortality remains high (72 deaths per 1000 live birth in 2019) (Stiyaningsih & Wicaksono, 2017) as compared with

other developing countries. Cameroon has regularly been listed as one of the countries that has made the least progress in lowering 5q0 (Agborndip et al., 2020). There are many reasons for this unfortunate situation, including the fact that Cameroonian women lag behind their male counterparts in many areas, such as education and participation in decision-making (Njikem, 2017).

Despite Cameroonian women's low social status and lack of autonomy, its effects on healthcare utilization, which directly affects maternal and infant morbidity and mortality, has been understudied. Cameroonian women's lack of agency may limit their ability to make health-related decisions for themselves and their children. (Doku et al 2020). This can result to poor decisions on their own ill health and increase the likelihood of both morbidity and mortality among their children. Although there have been several interventions to reduce child mortality, they have primarily targeted immediate causes such as intrapartum complications, pneumonia, sepsis, and diarrhoea (Hogan et al., 1999) with little emphasis on distal factors such as gender equality and WoA, which fuel the immediate causes (Mullany et al., 2005).

Lastly although a number of studies have linked WoA with children's health outcome such as nutrition (Carlson et al., 2015a) and child healthcare utilization (Nigatu et al., 2014a), inquiry into the effect of WoA on 5q0 is still at an infantile stage.

1.3 Research question

The following questions are addressed by this research.

- What is the association between WoA and 5q0?
- What are the socio-economic and demographic correlates of 5q0?

1.4 Rationale

In developing countries, such as Cameroon, women often have limited autonomy and control over decisions affecting their health (Osamor & Grady, 2016). Adhikari & Sawangdee (2011) suggested that the reason for this is women's servile social status and status within the household have a negative impact on their health and the health of their children. Several studies have demonstrated a positive correlation between higher status for women and their children's health (Das Gupta, 1990; Sarah E. Castle, 1993). In light of the low social status and level of autonomy experienced by Cameroonian women, factors such as healthcare, finances, and expenditures that contribute to child mortality should be further explored at the household level. Further investigation of this situation is clearly warranted, particularly in settings such as Cameroon, where 5q0 is high.

West and Central Africa by 2019 had the highest childhood mortality rate in the world, with about 20 times the rate in high income contexts (Yovo, 2022). Numerous research has shown that neonatal disorder, respiratory infections, diarrheal diseases, congenital birth defects, and malaria are major causes of death among children under age five even though these are deaths that can highly be prevented if their mothers have autonomy over decisions regarding their health and that of their children (Afolabi et al., 2012; Million & Study, 2010).

Smoking and reduced breastfeeding which are causes of childhood mortality are mothers' behavioural and biological responses from stress caused by exposure to domestic violence (Rawlings & Siddique, 2020). Also, an increase in female autonomy has been shown to reduce fertility and child mortality rates by increasing mothers' relative bargaining power (Eswaran, 2002). This is because these women are economically less dependent on their partners. Moreover, maternal decision-making autonomy is associated with reduced under-five mortality which translates from improved child healthcare utilization and nutrition

(Rahman et al., 2015). Therefore, considering the multidimensional nature of WoA, the need to investigate the effects of these dimensions of autonomy on 5q0 is of essence.

Findings from this study can ensure that interventions to reduce 5q0 through WoA are guided towards the dimension of WoA significantly associated with 5q0.

1.5 Research objectives

This study has as its main objective to examine the association between WoA and 5q0 in Cameroon. With specific objectives as follows;

- To examine the relationship between WoA and 5q0
- To investigate the effects of socio-demographic factors on 5q0.

1.6 Organisation of the Study

The research is divided into seven chapters. The background information on the topic, the statement of the problem, the objectives of the study, and the rationale for the study are all discussed in chapter one. Chapter two provides a review of relevant literature on WoA, 5q0 and the relationship between WoA and 5q0, the conceptual framework and hypotheses. Chapter Three gives a detailed description of the methodology employed in conducting this research. Chapter Four describes the background characteristics using charts and tables. The bivariate analyses results establishing the relationship between the variables of interest and under-five mortality will be presented in Chapter Five. Chapter Six will present results from a multivariate analysis which shows the extent of influence of WoA and under-five mortality while controlling for background factors. This chapter also comprises of a discussion of findings of the study. Finally, Chapter Six presents the summary, conclusion and recommendations of the study.

Chapter Two

Literature Review

2.1 Introduction

This chapter provides an overview of the existing literature on WoA and 5q0. It examines literature from around the world that focuses on the concept of WoA, its relationship with 5q0, and the determinants of 5q0.

2.2 The concept of women's autonomy

The discussion of WoA has received considerable attention in the literature. Several studies have established that women's second-fiddle position within the household, negatively affects their health and the health of their children in many civilizations (Santow, 1992; Dyson & Moore, 1983). Women's and children's health is substantially harmed by culturally and socially prescribed roles for women, which are manifested in a complex web of physiological and behavioural interrelationships and synergies that pervade every part of their life (Santow, 1992). In India, Dyson and Moore (1983) highlight the variation that exists in WoA. They pinpoint those women in North-India are limited in several aspects of decision-making. These include; the capacity to limit the number of births, be part of the man's kinship, and the woman's desires are second to the family's wishes and interests. This they identified was unlike the freedom of movement, association, and the right to even possess a property that women in South-India enjoyed.

Many scholars have defined WoA in different ways yet it mainly refers to the ability of a woman to take decisions regarding her work, finances, family, health, childcare, family planning, social outings, and many more. According to Dyson and Moore (1983), WoA is the capacity of a woman to control their personal space (Dyson & Moore, 1983). This definition by Dyson and Moore suggests that a woman is able to take decisions regarding her personal

life without the interference of any other person or sought for the approval of another individual.

WoA is an important part of women's care. Women who have more autonomy are more likely to use contraception, have longer birth intervals, have fewer unwanted pregnancies, and have smaller families (Rahman et al., 2015). Additionally, they are less likely to suffer from depression and anxiety disorders and more likely to use prenatal care (Patel et al., 2022). Women continue to have extremely low degrees of autonomy in many regions of the world.

2.3 Determinants of under-five mortality

Given the concession that the 5q0 rate is a leading indicator of the level of child health and overall development in countries, life expectancy measures the quality of life of a given population. (Afolabi et al., 2012; Alkema et al., 2014a; Luz, 2013; Otupiri et al., 2010) and the fact that this rate is high in developing countries, it is important to get a better understanding of the determinants of 5q0.

2.3.1 Maternal age at birth

It has been generally accepted that the maternal age at birth is an important factor to consider when discussing the health of her child. Women of older ages are highly exposed to pregnancy complications which may have implications on the child's health (Sauer, 2015). Cleary-Goldman et al. (2005) argues that first births at older ages are characterised by low birth weight which is a danger for the child's survival if this is not corrected.

2.3.2 Maternal level of educational attainment

Decline in child mortality is said not be only as a result of technological or economic advancement but also as a result of social advancements. Caldwell & McDonald (1982) argues that female education reduces the sex and age differences in decision making power in the household and this is beneficial to the children as they are allocated more attention in

terms of care. More over mothers are able to take decisions concerning their health or that of their children without consulting their husbands or family elders.

In an attempt to explain the association between maternal education and child mortality, Smith-Greenaway (2013) claims that education increases the reading skills of individuals which for a woman increases her comprehension and communication skills which promote healthy reproductive habits, which will lead to reduced childhood mortality. In addition to increasing mothers' status and decision-making power within their households, maternal education is also believed to increase their readiness and capability to travel out of the community, increase their ability to use health care more promptly, increase their negotiation power with health providers, increase their knowledge, skills, and understanding of modern health systems, and make them more responsive to new developments (Houweling & Kunst, 2010).

2.3.3 Wealth index

Poor-rich disparities in childhood mortality can be attributed to both the effects of poverty on illness and the effects of illness on economic status. A study conducted by Sapienza (2005) shows that childhood mortality is lower among households with high socio-economic status.

2.3.4 Place of residence

Ofori et al. (2013) results showed that unexpectedly, 5q0 is higher in urban areas than in rural areas despite the socio-economic infrastructure available in the urban area aimed at improving health outcomes. On the contrary, Sastry (1997) find a strong association between the place of residence and child mortality where child mortality was loftier in rural areas and lower in urban areas as a result of availability of pies borne water, electricity, sanitation and public cleaning services in urban areas.

2.3.5 Household Water Sanitation and Hygiene

A study conducted by Ofori et al. (2013) on the effects of household characteristics on child mortality reported no significant relationship between the household type of toilet facility and child mortality. However, children of households with unimproved sources of drinking water are highly exposed to death (Ofori et al., 2013). This is because water from these sources is not treated to fight against water borne diseases which are main causes of death among children.

2.3.6 Sex of the child

The child' sex also contributes a major determinant factor of child mortality. Discrimination of healthcare between male and female children were found to explain the higher mortality rate among female children (Costa et al., 2021,Alkema et al. 2014). On the contrary, a study by Muluye & Wencheko (2012) showed that childhood mortality is higher among male children than female children.

2.3.7 Age of the child

A study conducted by Mihrete et al. (2014) established a significant relationship between the age of the child and 5q0. Based on this study, children of ages 0-17 months are at higher risks dying before the age of five. This study reports diarrhoea as the leading cause of death at this age. This is explained by germs transfer through weaning food to children which are easily contaminated by poor hygiene and impure water. Additionally, at this age children crawl and begin exploring their immediate surroundings on their own, they can easily pick up infections, especially if the environment around the house is unhygienic. (Kamal et al., 2015). Meanwhile at older ages, children develop a strong immunity and begin a better interaction with their environment.

2.4 Women's autonomy and childhood mortality

Several studies have been conducted to investigate the association between women's status, women's empowerment, WoA and children's health outcomes. Considering level of educational attainment and decision making in their own health as a measure of women's autonomy, Adhikari & Sawangdee (2011) in their study found a significant relationship between WoA and infant mortality. WoA regarding maternal and child health are important factors in determining health seeking behaviour (Nigatu et al., 2014). Hossain (2015) argues that women with asset ownership autonomy tend to have a higher bargaining power which leads to a decline in fertility and child mortality. Moreover, women who own and control assets contributes in households income and are able to make positive investments on their children which increases their probability of survival (Stiyaningsih & Wicaksono, 2017).

According to Eswaran & Malhotra (2011), the reason for the differing allocation of resources between mothers and fathers is that women typically bear the majority of the costs associated with childrearing. As a consequence of being unavailable for work during pregnancy, childbirth, and childrearing, they suffer considerable income losses. In addition, they have health risks during childbearing. Thus, kids are equally beneficial to the couple, but the costs are disproportionately borne by women. Men would be more inclined to have more children because of the negligible cost of bearing children and the lower cost of raising them, as Eswaran & Malhotra (2011) argues. Alternatively, women, anticipating a high risk of child mortality, may try to invest more in healthcare and other aspects that will improve their children's chances of survival. Accordingly, an increase in the autonomy of women in decision-making should result in a reduction in child mortality.

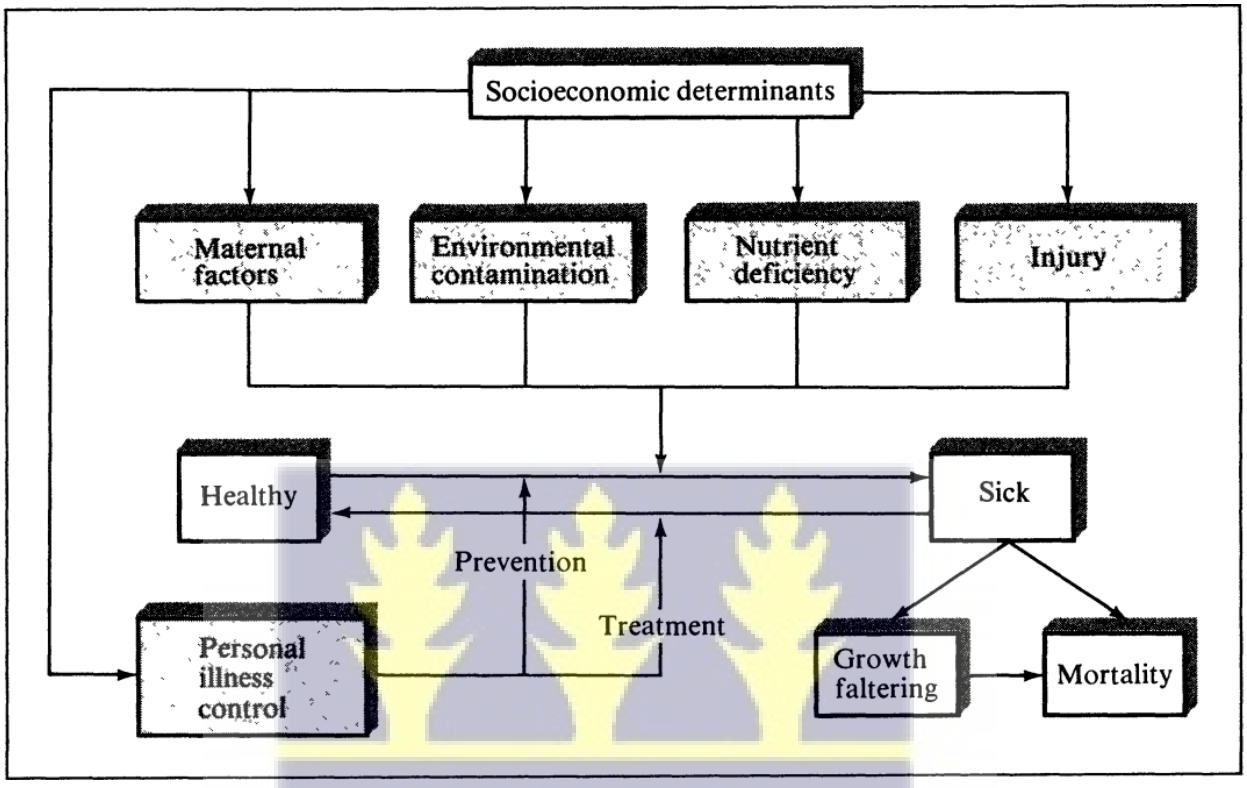
2.5 Theoretical framework.

Mosley and Chen's analytical framework for the study of child survival in developing countries.

The model is founded on the idea that all factors that affect morbidity and mortality both social and economic must inherently work through a common set of biological mechanisms or proximate determinants. The framework focuses on the relationship between socioeconomic factors and mortality patterns (Url et al., 2007, Mosley & Chen 1984). Hill, (2003) adds that "a child's death is not the result of a single biological event, but rather the cumulative effect of several biological/proximate variables".

Mosley and Chen identified a set of proximate/intermediary variables directly influencing the risk of exposure to morbidity and mortality. These proximate determinants are grouped into five categories of a total of 14 proximate determinants: maternal factors (age, parity, birth interval) which have an independent impact on maternal health, pregnancy outcome, and child survival; environmental contamination (air, food/water/ fingers, insect vectors, skin/soil/inanimate objects) constitute ways by which diseases and infections are spread; nutrient deficiency (calories, protein, micronutrients) relates to the intake of nutrients such as proteins, micronutrients and calories necessary for child survival; injury (accidental, intentional) constitute poisoning, physical injuries, and burns; and personal illness control (personal preventive measures; medical treatment) determines the rate of illness and recovery. As illustrated in figure 2.1 Proximate determinants in the first four groups indicate and determine the rate and shift of healthy individuals toward sickness. (Mosley, W.H &Chen, 2003, Hill, 2003). Thus, the framework gives researchers studying child survival whether social scientists or epidemiologists a conceptual foundation.

Figure 2.1 Operation of the five groups of proximate determinants on the health dynamics of a population



Source: (Mosley, W.H &Chen, 2003)

2.6 Conceptual Framework.

The study's conceptual framework was developed from Mosley and Chen's conceptual framework for the study of child survival in developing countries

Under-five child mortality is a serious health issue on a global scale. In developing nations where child mortality is still predominant, the health sector's top priority includes lowering child mortality and improving child health (Islam et al., 2020). The study conceptualizes the independent variable women's autonomy and other characteristics of the mother and other household characteristics (socioeconomic characteristics) can directly influence child mortality. The educational status of the mother is a significant predictor of child mortality.

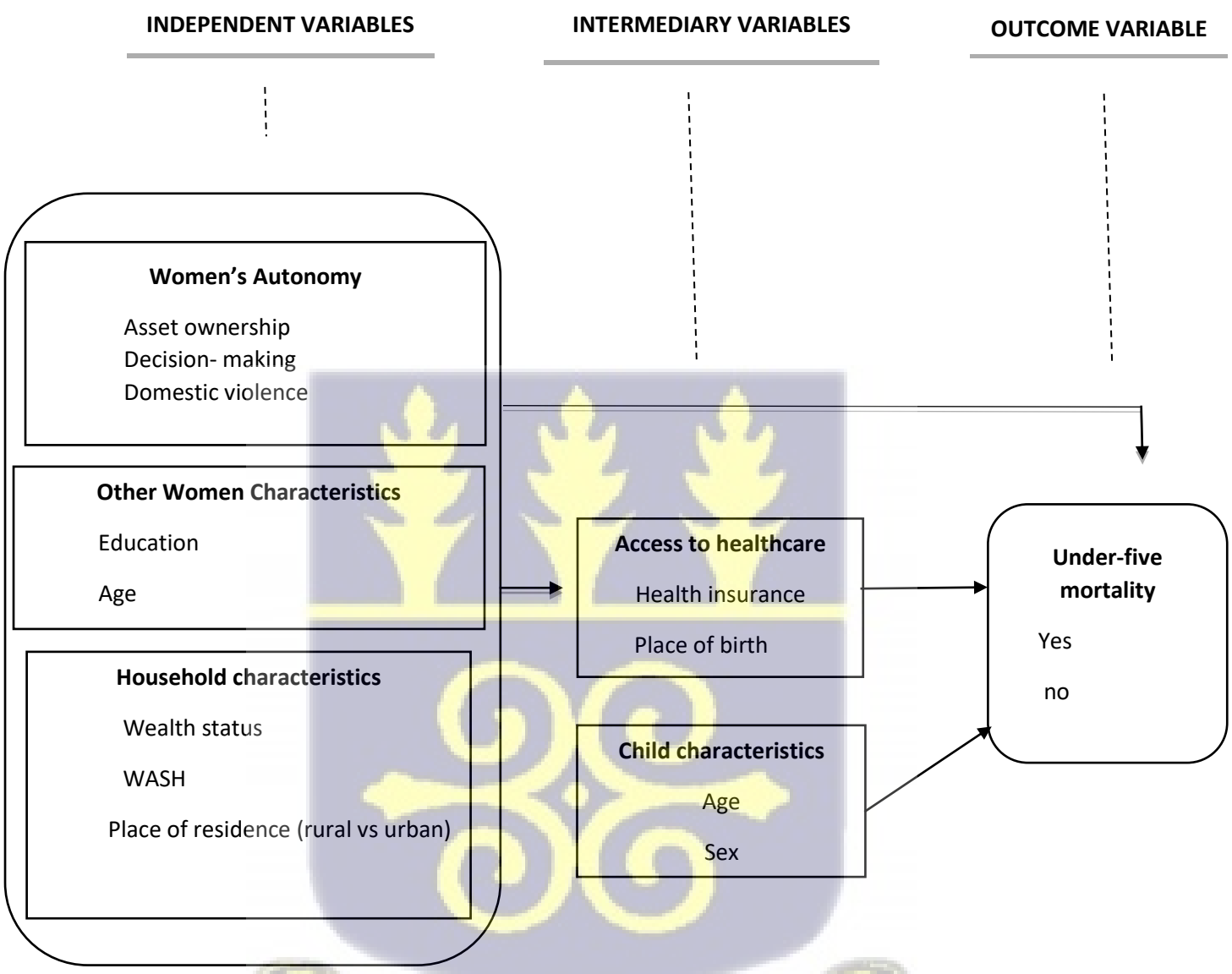
Infants of mothers with secondary or higher level of education have a lower risk of infant mortality. Moreover, the sex of the infants is a significant risk factor associated with infant mortality male infants have a high risk of death compared to female infants (Fikru et al., 2019). Mothers with the poorest wealth quintile have the highest likelihood of experiencing child mortality(Yaya et al., 2020). Compared to children born to rich households, those born to impoverished households had a higher risk of death.

The two factors that seem to have the greatest impact on lowering infant mortality are the mothers' level of education and their ability to make healthcare decisions.(Adhikari & Sawangdee, 2011). Child survival or mortality is significantly correlated with maternal autonomy in health care and general decision-making capacity. Autonomy influences the mother's ability to seek health care, nutrition, and the general well-being of the child, hence is a significant determinant of child mortality (Saaka, 2020). This is because these women participate in decision-making on their health and that of their children. The absence of vital services (such as drinkable water) and good sanitary procedures, which results in diarrhoea and dehydration in children is significantly associated with child mortality (Ahinkorah et al., 2022).

Additionally, the study theorizes that the independent variables will work through the intermediary variable access to health care to determine the child's survival. The child's demographic characteristics thus age and sex determine whether he/she survives. The location, prior birth interval, plurality, infant size at birth, and the child's sex were the most important predictors found to be related to child mortality. The likelihood that children may die before turning five is reduced when access to healthcare services, such as postnatal care, is available (Ahinkorah et al., 2022). Compared to boys, girls have a much lower rate of child mortality. for instance, Boys died more frequently than girls during the 0–3year period. Although studies by Kabagenyi (2013) in Uganda indicate that urban areas had greater child

and infant mortality rates than the rural areas, infant and child mortality rates are typically higher in rural than urban areas.

Figure 2.2 Conceptual framework of the relationship between WoA and 5q0



Authors own construct, 2022.

Hypotheses

Following the related literature, the theoretical framework above and the relationships established in the conceptual framework, the following hypothesis are examined in this study.

i. Women with high decision-making autonomy are less likely to experience 5q0
ii. Women with high opposition to domestic violence are less likely to experience 5q0.
iii. Women with high asset ownership autonomy are less likely to experience 5q0.

Chapter Three

Methodology of the Study

3.1 Introduction

This chapter gives us insight into the data and methods that were adopted to conduct this study. It comprises the description of the study area, the data source used, the research design, the method of analysis, and the variables of interest of the study.

3.2 Study area

Cameroon is a middle-income country located in central Africa. It is bordered by Nigeria to the west, Congo, Gabon, and Equatorial Guinea to the south, Chad to the north, and the Central African Republic to the east. Cameroon is divided into ten administrative regions which include; Central, Littoral, South, South-West, East, North, North-West, West, Far-North, and the Adamawa Regions.

Cameroon is a developing country with a high age dependency ratio of 80% which implies that a greater proportion of the population is of the working age group in 2021 but with a huge dependency burden. This youthful population is associated with a high total fertility rate of 4.4 births per woman with a sex ratio of 100.9 males per 100 females(World Bank, 2020).

3.3 Source of Data

The study used data from the 2018 Cameroon Demographic and Health Survey (CDHS) which was supported by the Cameroonian government and other international agencies. (Cameroon NIS, 2018).

Data collected by this survey includes individual and households' socio-demographic characteristic, women's participation in household decisions, their attitude towards domestic violence, women and child health and nutrition outcomes as well as records of under-five mortality.

A nationally representative sample of 13,527 women aged 15-49 from all selected households was interviewed, as were 6,978 men aged 15-65 from half of the selected households.

The 2018 Cameroon Demographic and Health Survey (CDHS) provides all the variables needed for the analyses done in this study. Moreover, this survey is the most recent nationally representative survey conducted in the country.

3.4 Sample Design and Selection

The 2005 Cameroon Population and Housing Census (CPHC) conducted by the NIS was used as a sample frame for the 2018 CDHS. The selection of participants was done through the random selection of 11,986 households derived from 470 clusters.

Three sets of questionnaires were used for this survey. These included the household questionnaires. women's questionnaire which was responded to by females in their reproductive years (15-49), the men's questionnaire which was answered to by males aged 15-65 years, In the survey, 13,527 women and 6,978 men responded to the questionnaires. The women's file was used for this study and the unit of analysis were women who have experience under-five mortality.

Dependent variable

The main outcome variable for this study is 5q0. It is a dichotomous variable that measures whether a child born at most five years before the survey is dead or alive.

Independent variable

The main explanatory variable in this study is the overall score of WoA and also the various dimension of WoA. These dimensions are:

Attitude toward domestic violence which was based on women's responses to whether in her opinion, a husband is justified if he hit his wife due to any of the reasons below:

i. Burns the food?

ii. Argueing with him?

iii. Neglecting the children?

iv. Refusing to have sex with him?

v. Leaving without telling him?

From the above, tolerance to domestic violence was derived from negative responses which were coded as 0=yes while the positive and "don't know" responses were coded as 1=no implying that the woman doesn't tolerate domestique violence. Acknowledging any form of violence deprives a woman of her autonomy.

Decision-making autonomy measures a woman's control over decisions regarding her health, her mobility, household purchase, personal earnings, and husband's earnings. The questions used to measure this dimension of autonomy are as follows:

i. Usually who decides how the money you earn will be used?

ii. Usually who makes decisions about your own health care?

iii. Who usually makes decisions about major household purchases?

iv. Who usually makes decisions about visits to your family or relatives?

Autonomy consists of being able to make decisions alone. However, for the purpose of this study, we consider decisions made by the respondent alone or in collaboration with her husband as indicators of the women's decision-making autonomy.

Autonomy based on asset ownership measures the autonomy of the woman based on the assets she owns alone or jointly.

i. Do you own this house or another home alone or together with someone else?

ii. Do you own agricultural or non-agricultural land alone or together with someone else?

iii. Do you have an account in a bank or a financial institution you can use yourself?

iv. Do you own a cell phone?

From these questions, we consider women who own these items alone or jointly as having ownership through asset ownership.

Control variables

The control variables are grouped into the women, household, and child characteristics. The different variables and their measurement forming these characteristics are enumerated in the table below:

Table 3.1 Measurements of Socio-demographic variables considered in this study

Type	Variables	Measurement
Maternal characteristics	Level of education	No education Primary education Secondary/higher
	Age	15-19,20-24, 25-29, 30-34, 35-39, 40-49
	Insurance coverage	Yes or no
Household characteristics	Wealth status	Poor, middle, rich
	Place of residence	Rural/urban
	Type of toilet facility	Improved or unimproved
	Source of drinking water	Improved or unimproved
Child characteristics	Place of Birth	Medical or non-medical facility
	Age of the child	Below five years
	Sex of the child	Male or female

3.5 Method of Analysis

The analysis for this study were conducted using STATA statistical software. The analysis was performed at three different levels: univariate, bivariate, and multivariate.

Descriptive analyses were conducted at the univariate level to show the characteristics of the respondents using frequencies and proportions. The percentage distribution of respondents for this study was presented in tables based on their age, level of education, wealth status, health insurance, place of residence, water sanitation and hygiene (WASH), level of individual autonomy, child's age, sex, and place of birth. Whiles means were calculated for the different categories of WoA considered for this study and presented in tables.

Cross-tabulations using the Pearson chi-square test of significance at a 95% confidence level were used at the bivariate level to examine associations between the independent and the dependent variable, as well as other control variables and also, to examine whether or not there existed a statistically significant relationship amongst these variables. Each control variable namely child's age and sex, level of education, place of residence, WASH, Health insurance coverage, and wealth status were tested to indicate their association with 5q0. The independent variable WoA was also tested to show its relationship with 5q0.

Binary logistic regression was employed at the multivariate level to determine the extent to which WoA influences 5q0. Because the dependent variable is dichotomous, binary logistic regression was used. Two models were developed to show how WoA affects 5q0. The first model examines the influence of WoA based on its dimensions on 5q0. The second model examines the influence of WoA on 5q0 while controlling for the other independent variables considered in this study.

Chapter Four

Background Characteristics of Respondents

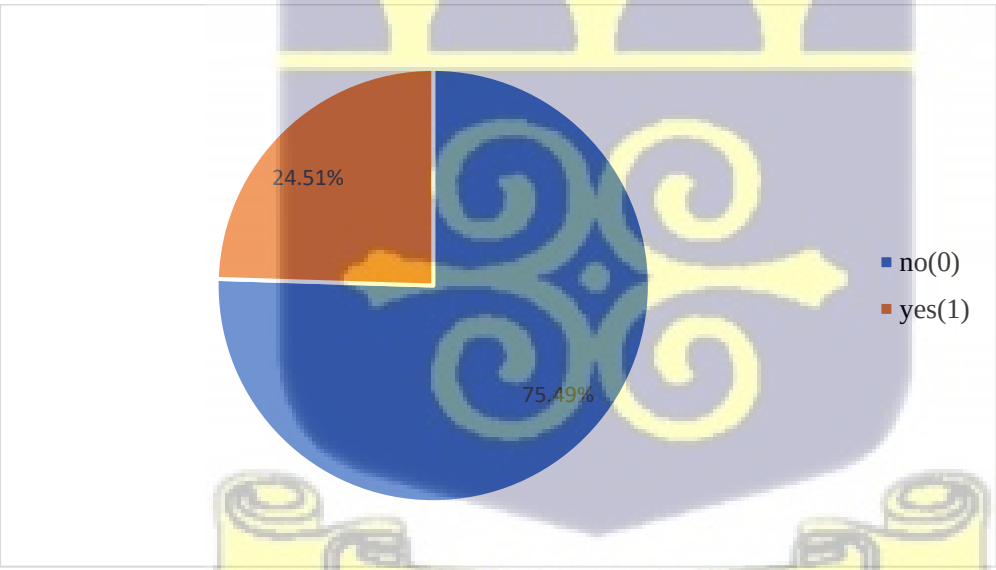
4.0 Introduction

This chapter describes the study population's demographic and socioeconomic characteristics. Using charts, graphs, and tables, information on women's age, place of residence, the households' wealth quintile, Water, Sanitation, and Hygiene (WASH), type of place of residence, and the children's age, sex, place of birth and health insurance status were presented.

4.1 Under-five Mortality

Figure 4.1 below shows that about a quarter (24.51%) of women in union aged 15-49 years in Cameroon experienced 5q0. The remaining 75.49% did not experience 5q0.

Figure 4.1 Percentage of women who experience under-five mortality



Source: Computed from CDHS (2018) data

4.2 Age of Respondents

The age of respondents ranges from 15-49 years are divided in five-years age groups. That is, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45-49. In Table 4.1 respondents between the

ages 25-29 make up 27% of the respondents who were reported to be in union. The age groups 15-19 and 45-49 are the least represented constituting 4.72% and 1.65% of the population of women in union respectively.

Table 4.1 Distribution of respondents by age groups

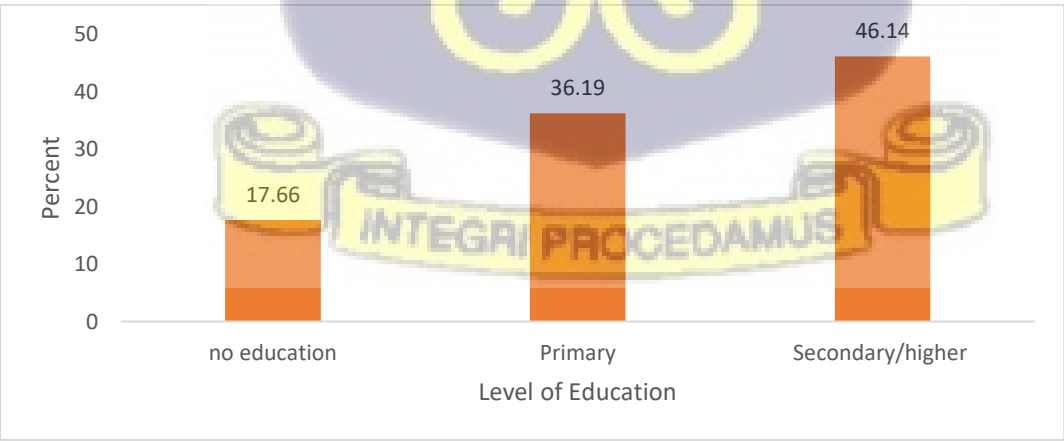
Age of respondents	Frequency	Percent
15-19	120	4.72
20-24	427	16.80
25-29	697	27.42
30-34	620	24.39
35-39	442	17.39
40-44	194	7.63
45-49	42	1.65
Total	2,542	100

Sources: computed from the CDHS 2018 data

4.3 Level of Education

For this study, respondents' level of education is categorized based on the highest level of formal education completed. The figure 4.2 shows that about 82% of the women have had some form of formal education, where about 46.14 % have completed secondary or higher education.

Figure 4.2 Percentage distribution of respondents' level of educational attainment

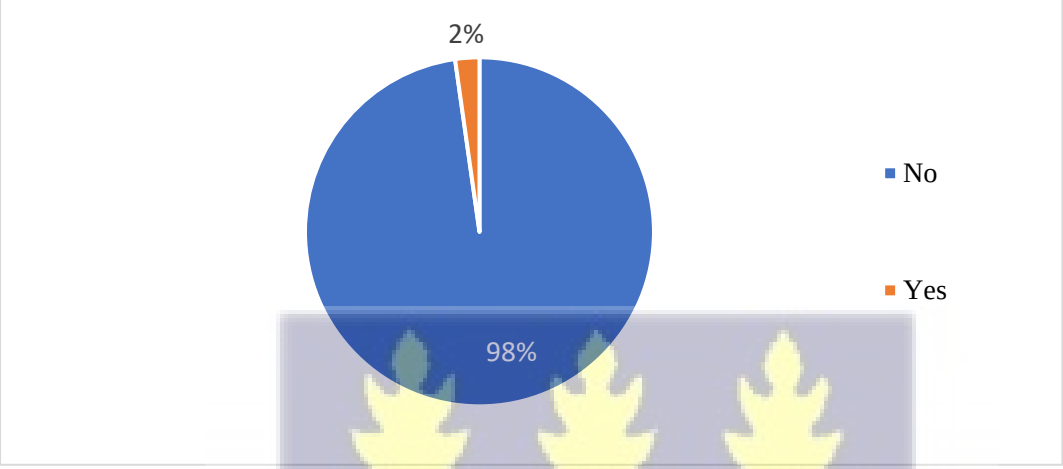


Sources: computed from the CDHS 2018 data

4.4 Health Insurance

Health insurance coverage has an important impact on the utilisation of healthcare services in preventing preventable deaths for both the mother and her children. It is observed from the figure below that 98% of the respondents are not covered by health insurance.

Figure 4.3 Percentage of respondents' health insurance status

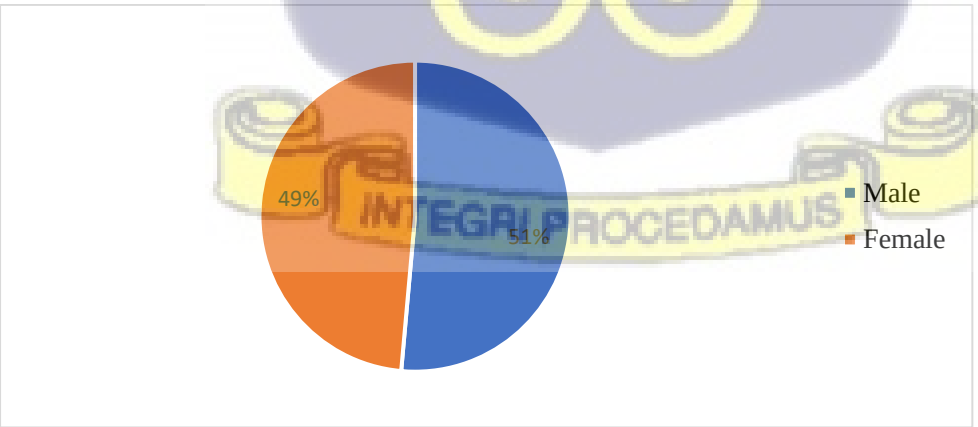


Sources: computed from the CDHS 2018 data

4.4 Children Characteristics

Figure 4.3 shows that 51% of the children aged below five were male while 49% were female.

Figure 4.4 Percentage distribution of children by sex



Sources: computed from the CDHS 2018 data

The age of the child is a continuous variable ranging between 0-4 years. The table below shows the distribution of the ages of children within the five years preceding the survey. The lowest age (0 year) and the highest age (4years) represent respectively 28.79% and 9.54%. the mean age of the child is 1.48 years.

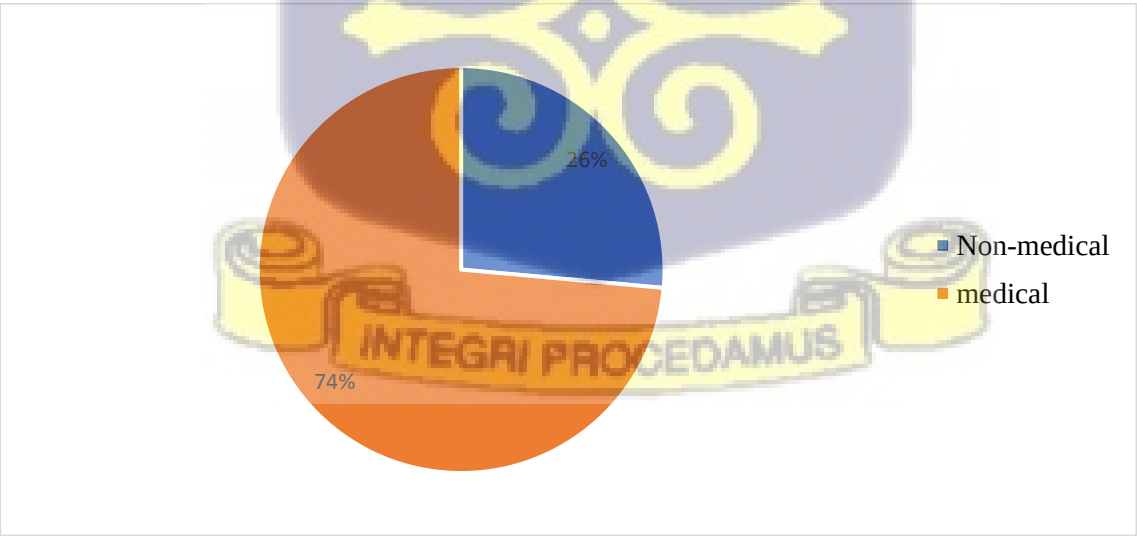
Table 4.2 Distribution of children by age

Age of child (years)	Freq.	Percent
0	700	28.79
1	656	26.98
2	524	21.55
3	319	13.12
4	232	9.54
Mean ± Std Dev	1.48	1.29
Total	2,431	100

Sources: computed from the CDHS 2018 data

The place of birth of the child was categorised into medical and non-medical health facilities. The table below indicates that majority (73.56%) of the children were born in medical facilities. And a little more than a quarter (26.44%) were born in non-medical health facility.

Figure 4.5 Percentage distribution of children's place of birth

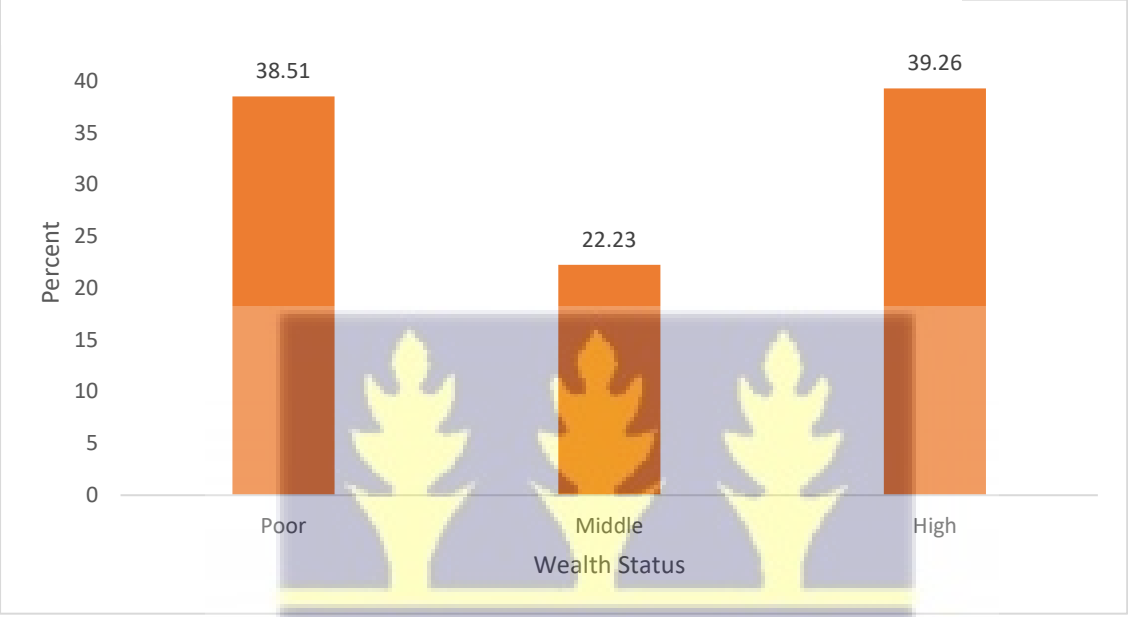


Sources: computed from the CDHS 2018 data

4.5 Wealth Status

The distribution of the respondents by their household's wealth status is illustrated in the chart below. 38.51% of the respondents were of a poor household, 22.23% of middle households and 39.26% of rich households.

Figure 4.6 Distribution of respondents' household wealth status

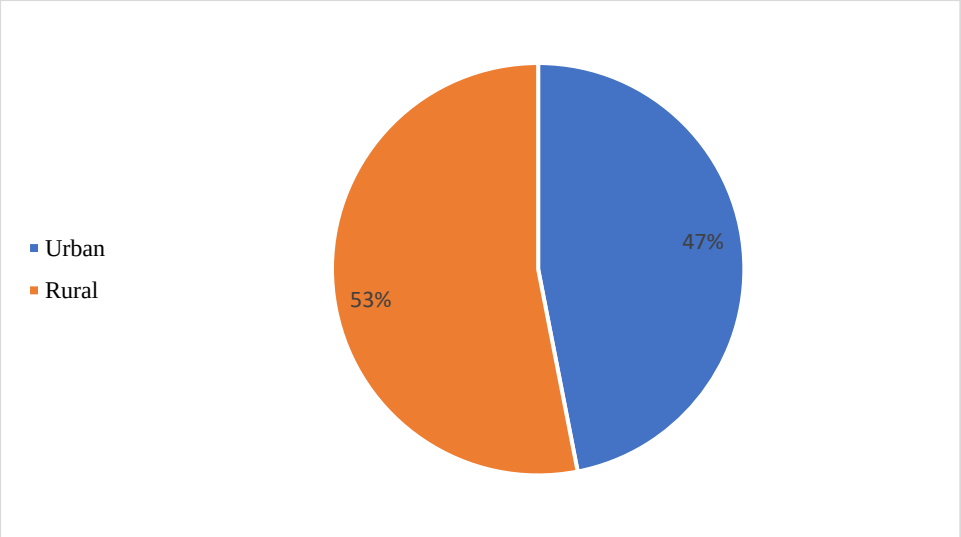


Sources: computed from the CDHS 2018 data

4.6 Type of Place of Residence

The place of residence in this study is divided in two categories i.e., rural or urban. The figure below indicates that more than half (53%) of the women reside in rural areas while the remaining 47% live in urban areas.

Figure 4.7 Distribution of respondents by place of residence

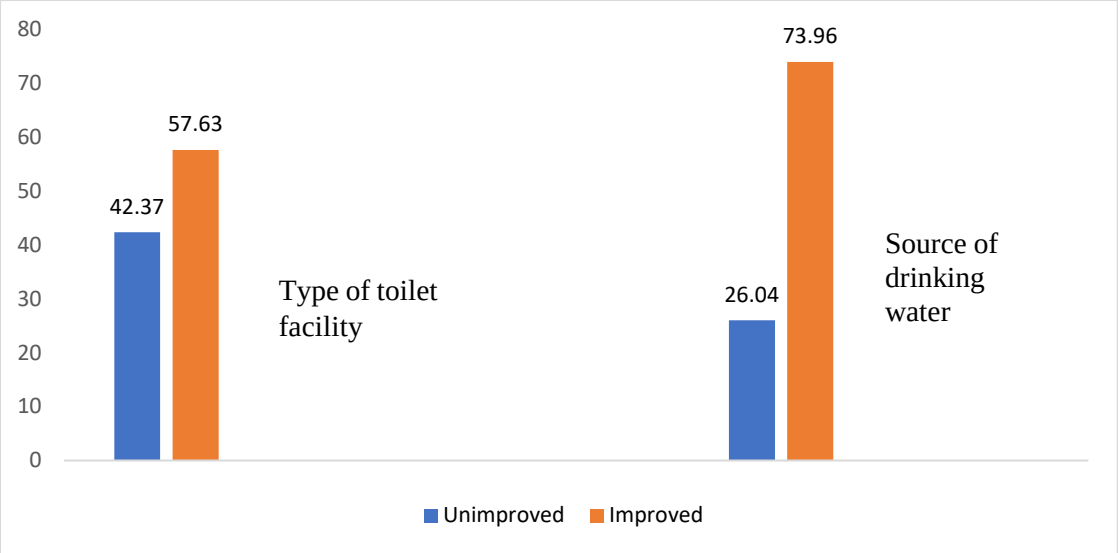


Sources: computed from the CDHS 2018 data

4.7 Water, Sanitation and Hygiene (WASH)

The type of toilet facility and source of drinking water were used to determine the WASH characteristics of the respondents' households. From figure 4.7, 57.63% of the respondents reported to reside in households with improved toilet facility while the remaining 42.37% of respondents reside in households with unimproved toilet facility. Similarly, 73.9 % of respondents reside in households with improved sources of drinking water while 26.04% use unimproved sources of drinking water.

Figure 4.8 Distribution of respondents by WASH characteristics



Sources: computed from the CDHS 2018 data

4.8 Autonomy

The autonomy of the woman is a discrete variable. The table below shows the summary statistics of the autonomy of the women. The lowest level is 0 and the highest 13, with the mean level of autonomy being 7.65 and standard deviation 2.4.

Table 4.3 Summary statistics of autonomy of respondents

Observation	Mean	Std. Dev.	Min	Max
2542	7.65	2.40	0	13

Sources: computed from the CDHS 2018 data

4.9 Decision-Making Autonomy

The table below shows the summary statistics of the level of decision-making autonomy of the respondents. From the table it is observed that the highest level of decision-making autonomy is 4 and the minimum level is 0 with the mean being 3.23 and standard deviation being 1.43.

Table 4.4 Summary statistics of decision-making autonomy of respondents

Observation	Mean	Std. Dev.	Min	Max
2542	3.23	1.43	0	4

Sources: computed from the CDHS 2018 data

4.10 Asset Ownership Autonomy

Table 4.6 shows the summary statistics of the level of autonomy based on the number of assets owned by the respondents. From the table, it is observed that the highest level of asset ownership autonomy is 4 and the minimum level is 0 with the mean being 1.13 and standard deviation 0.9.

Table 4.5 Summary statistics of asset ownership autonomy of respondents

Observation	Mean	Std. Dev.	Min	Max
2542	1.13	0.93	0	4

Sources: computed from the CDHS 2018 data

4.11 Domestic Violence Autonomy

The following table illustrates the summary statistics of the level of autonomy of the respondents based on tolerance to domestic violence. It shows that highest level of domestic violence autonomy is 5 and the minimum level is 0 with the mean being 3.29 and standard deviation 1.24.

Table 4.6 Summary statistics of domestic violence autonomy of respondents

Observation	Mean	Std. Dev.	Min	Max
2542	3.29	1.24	0	5

Sources: computed from the CDHS 2018 data

Chapter Five

Bivariate Analysis of Autonomy and Under-Five Mortality

5.1 Introduction

This chapter examines the bivariate relationships between WoA, its three dimensions i.e., decision-making, asset ownership and, tolerance to domestic violence, the various background characteristics, and 5q0. The analyses show the relationship and association between the independent variables, the various control variables, and the dependent variable. To test the significance of the association, the chi-square test statistics was used at a 95% confidence interval level i.e., 5% alpha value. Therefore, there is a significant relationship between the independent variables and 5q0 if the P-value corresponding with the chi-square test yields a value less than 0.05.

5.2 Women's Autonomy and Under-five Mortality

The relationships between WoA, its dimension, and 5q0 were analysed using the t-test statistics represented in table 5.1. The results from this table are discussed below.

Table 5.1 Association between WoA and 5q0

	Experience 5q0	Mean ± Std. Dev	P-value
Autonomy	No	7.76 ± 2.38	0.0001
	Yes	7.34 ± 2.44	
Decision-making	No	3.28 ± 1.41	0.0023
	Yes	3.09 ± 1.47	
Asset Ownership	No	1.16 ± 0.92	0.0246
	Yes	1.07 ± 0.92	
Domestic Violence	No	3.32 ± 1.21	0.0049
	Yes	3.17 ± 1.33	

Sources: computed from the CDHS 2018 data

5.2.1 Women's Autonomy

From Table 5.1 it is observed that the mean score of autonomy of women who experienced 5q0 is significantly lower than the mean score of autonomy of women who did not experience under-five mortality with a p-value of 0.0001.

5.2.2 Decision-making autonomy

A significant relationship was established between decision-making autonomy and 5q0. The mean score of decision-making autonomy among women who did not experience under-five mortality is higher than the mean score of decision-making autonomy among women who experienced 5q0.

5.2.3 Asset ownership autonomy

The mean score of autonomy from asset ownership of women who experienced 5q0 is significantly lower than the mean score of women who did not experience 5q0.

5.2.4 Domestic violence autonomy

Table 5.1 shows a significant difference (P-value =0.0049) between the mean score of domestic violence autonomy amongst women who experienced 5q0 and those who did not experience 5q0. We observe the mean score of women who experienced 5q0 is lower than the mean score of women who did not experience 5q0.

5.3 5q0 by Background Characteristics

In this section, the association between 5q0, respondents', child, and household characteristics are presented and discussed.

Table 5.2 Relationship between 5q0 and respondents' characteristics

	Experienced 5q0 yes (%)	Total
Age of respondents		
15-19	9.36	120
20-24	13.59	427
25-29	20.78	697
30-34	23.50	620
35-39	34.49	442
40-44	48.20	194
45-49	41.97	42
X^2=132.0092	P-value<0.001	
Formal education status		
No education	35.24	449
Primary	28.19	920
Secondary/high	16.09	1173
X^2=0.1229	P-value<0.001	
Covered by health insurance		
No	24.40	2485
Yes	27.38	57
X^2=0.7136	P-value=0.2591	

Sources: computed from the CDHS 2018 data

5.3.1 Age of respondents

The table 5.2 shows a significant relationship (P-value <0.001) between the age of respondents and 5q0. It can be observed from the table that the percentage of 5q0 increases with the woman's age. The group of women aged 15-19 years had the lowest percentage (9.36%) of 5q0 and the highest percentage (48.2%) of under-five death being of women aged 40-44 years. 41.97% of the under-five deaths occurred among women aged 45-49 years.

5.3.2 Level of education of respondents

The women's level of education was found to have a significant relationship (P-value <0.001) with 5q0. The table shows that 35.24% of the respondents with no education

experienced 5q0, 28.19% of the women with primary education experienced 5q0, and 16.09% of the respondents with at least a secondary level of education experienced 5q0.

5.3.3 Health insurance coverage of respondents

Health insurance coverage was found not to be statistically associated with 5q0 with a P-value of 0.26 and a Chi-square value of 0.7136.

Table 5.3 Relationship between 5q0 and child characteristics

	Experienced 5q0 yes (%)		Total
Age of child			
	0	22.11	700
	1	21.86	656
	2	23.67	524
	3	17.20	319
	4	16.56	232
X^2=8.2048		P-value=0.2545	
Sex of child			
male		24.91	1307
Female		23.99	1235
X^2=0.2939		P-value=0.6040	
Place of birth			
Non-medical facility		24.40	672
Medical facility		27.38	1870
X^2=62.9519		P-value<0.001	

Sources: computed from the CDHS 2018 data

5.3.4 Age of the child

The results from the table above show that there is no association between the age of the child and the 5q0 (P-value=0.2545). this means that the age of the child is not significant associated to 5q0.

5.3.5 Sex of the child

The child's sex with a P-value of 0.6 was found not to have a significant relationship with 5q0. This means that the sex of the child does not have an impact on 5q0.

5.3.6 Place of birth

Table 5.3 shows a significant relationship between the child's place of birth and 5q0 (P-value <0.001). From this table, it is observed that 24.4% of the children born in non-medical health facilities died before the age of five while 27.38% of the children born in medical health facilities died before the age of five.

Table 5.4 Relationship between 5q0 and household characteristics

	Experienced 5q0 yes (%)	Total
Place of residence		
Urban	19.11	1193
Rural	29.36	1349
X^2=36.0285	P-value<0.001	
Wealth status		
Poor	31.53	979
Medium	24.38	565
Rich	17.23	998
X^2=56.8369	P-value<0.001	
Type of toilet facility		
Unimproved	28.03	1077
Improved	21.87	1465
X^2=12.7299	P-value=0.0051	
Sources of drinking water		
Unimproved	29.52	662
Improved	22.66	1880
X^2=12.5576	P-value=0.0052	

Sources: computed from the CDHS 2018 data

5.3.7 Type of place of residence

The place of residence of the respondents is significantly related to 5q0. The table below shows that 19.11% of the respondents in urban areas experienced 5q0 while 29.36% of the respondents in rural areas experienced 5q0.

5.3.8 Wealth status

The wealth status of the respondents was also significantly associated with 5q0. It is observed that 31.53% of respondents from poor households experienced 5q0, 24.38% of respondents from medium-income households experienced 5q0 and finally, 17.23% of respondents from rich households had experienced 5q0.

5.3.9 WASH characteristics

The table above shows the relationships between the households' WASH characteristics (type of toilet facility and source of drinking water) and 5q0. These variables were found to have a significant association with 5q0 indicating that 28.03% of the respondents who lived in households with unimproved toilet facility experienced 5q0 while 21.87% of respondents who lived in households with improved toilet facility experienced 5q0. similarly, 29.52% of the respondents who lived in households with unimproved sources of drinking water experienced 5q0 while 22.66% of respondents who lived in households with improved sources of drinking water experienced 5q0.

Chapter Six

Multivariate Analysis of Women's Autonomy and Under-Five Mortality

6.1 Introduction

This chapter discusses the multivariate analysis of the association between WoA and 5q0 while controlling for respondents, child, and household characteristics. This chapter comprises two sections. In the first section, the effects of WoA on 5q0 are examined while in the second section, the findings of this study are discussed.

6.2 Women's autonomy and Under-five Mortality

Two models were used to investigate the effects of WoA on 5q0. The first model examines the independent effect of WoA on 5q0. In the second model, WoA together with the other demographic and socioeconomic variables are put into a regression to assess their influence on 5q0. The binary logistic regression technic was used to conduct the analysis for this study. This is because the outcome variable 5q0 is a dichotomous variable. That is, whether a woman experienced an under-five death or not with the codes 0 for "yes" and 1 for "no". Odds ratios were used to explain the correlation between the explanatory variable and the outcome variable.

6.2.1 Relationship between women's autonomy and under-five mortality

Table 6.1 presents the first model of this study showing the relationship between WoA in its three dimensions and 5q0. The model is found to be statistically significant at a P-value less than 0.001 at a 95% confidence interval. The results indicated that an increase in the woman's decision-making autonomy will lead to a 0.61 unit decrease in her likelihood of experiencing 5q0. This result is statistically significant with a P-value equal to 0.001. Similarly, in this model, WoA based on opposition to domestic violence was found to be

statistically significant. The result shows that a unit increase in a woman's opposition to domestic violence will lead to a 0.735 unit decrease in her likelihood or experiencing 5q0. While autonomy through asset ownership does not have a significant association with 5q0 in this model.

Table 6.1 Logistic regression women's autonomy and under-five mortality

Model 1				
Under-five mortality	**Odds ratio**	**std. errs.**	**P>t**	**(95% confidence interval)**
Autonomy				
Domestic violence	0.735	0.065	0.001	(0.617, 0.876)
Asset ownership	0.961	0.113	0.734	(0.762, 1.212)
Decision making	0.61	0.086	0.001	(0.463, 0.805)
Number of respondents = 2542 F (3, 398) = 141.48 P-value <0.0001				

Sources: computed from the CDHS 2018 data

6.2.2 The influence of women's autonomy and other individual characteristics on under-five mortality

The table below presents the second model of this study which is a logistic regression of the association between WoA and 5q0 while controlling for women, child and household characteristics considered in this study. Like in Model 1, the result in Model 2 shows a significant association between domestic violence autonomy, decision-making autonomy and 5q0. While autonomy from asset ownership is not significantly associated to 5q0. From the table it is observed that a unit increase in the woman's decision-making autonomy will result in a 0.684 unit decrease in in the likelihood of experiencing 5q0, and a unit increase in a woman's opposition to domestic violence will lead to a 0.808 unit decrease in her likelihood of experiencing 5q0. The variables that demonstrate some significance in their relationship to 5q0 include respondents' level of education, age, wealth status and health insurance coverage, child's sex, age, and place of birth.

With regards to respondent's level of education, women with primary education are 0.887 times less likely to experience under-five mortality that women with no education. This result was however not significant. Women with secondary or higher education are 0.537 times less likely to experience 5q0 and this result is statistically significant in predicting the outcome variable.

With reference to respondents' age, except for the age group 20-24 years, all other age groups show some statistical significance in predicting 5q0. Table 6.2 shows that women of ages 25-29 years are 0.954 times more likely to experience 5q0 as women aged 15-19 years. Also, women aged 30-34 years are 2.57 times as likely as those aged 15-19 years, women aged 35-39 years are 5.199 times as likely as those aged 15-19 years and those women of ages 45-49 years are 4.601 times as likely as women aged 15-19 years to experience 5q0. Women aged 40-44 years are about 9.4 times as likely as women aged 15-19 years to experience under-five mortality and this represents the highest likelihood of experiencing 5q0.

Women of rich households and women from middle wealth households as compared to women of poor households, are 0.536 and 0.774times less likely to experience 5q0 respectively

Households' WASH characteristics show no statistically significant relationship in predicting 5q0. The results, however, indicate that women of households with improved toilet facilities are 0.158 times more likely to experience 5q0 and women of households with improved sources of drinking water are 0.796 times less likely to experience 5q0. Also, type of place of residence does not significantly predict 5q0 in this model.

With a P-value of 0.027, respondents' health insurance coverage significantly predicts 5q0. Results from table 6.2 indicates that women covered by health insurance are 1.516 times more likely to experience 5q0.

Place of child's birth is a significant predictor of 5q0. The results from Model 2 shows that children born in medical facilities are 0.576 times less likely to experience 5q0. With regards to the child's age, with the exception of ages 1 and 2, all other age categories show some statistical significance in predicting 5q0. From model 2 it is observed that children of ages 3 and 4 are 0.551 and 0.493 times respectively less likely to experience 5q0.

Finally, sex of child significantly predicts under-five mortality with a P-value= 0.308. Results indicate that female children are 0.805 times less likely to die before the age of five than male children.

Table 6.2 Regression between WoA and 5q0 with control variables

	Model 2			
Under-five mortality	**Odds ratio**	**std. errs.**	**P>t**	**(95% confidence interval)**
Autonomy				
Domestic violence	0.808	0.086	0.046	(0.656, 0.996)
Asset ownership	0.944	0.137	0.691	(0.710, 1.255)
Decision making	0.684	0.121	0.033	(0.483, 0.970)
Level of education				
No education (RC)				
Primary	0.887	0.133	0.425	(0.661, 1.191)
Secondary/higher	0.537	0.112	0.003	(0.356, 0.809)
Age of respondents				
15-19 (RC)				
20-24	0.948	0.269	0.850	(0.543, 1.655)
25-29	1.954	0.505	0.010	(1.176, 3.247)
30-34	2.570	0.688	0.000	(1.518, 4.351)
35-39	5.199	1.492	0.000	(2.958, 9.139)
40-44	9.433	2.911	0.000	(5.142, 17.305)
45-49	4.601	2.378	0.003	(1.666, 12.711)
Wealth status				
Poor (RC)				
Middle	0.774	0.150	0.187	(0.528, 1.133)
Rich	0.536	0.146	0.023	(0.314, 0.916)
Type of toilet facilities				
Unimproved (RC)				

Improved	1.158	0.182	0.350	(0.851, 1.577)
Source of drinking water				
Unimproved (RC)				
Improved	0.796	0.120	0.129	(0.592, 1.069)
Place of residence				
Urban (RC)				
Rural	0.771	0.123	0.106	(0.563, 1.057)
Health insurance				
No (RC)				
Yes	2.516	1.049	0.027	(1.109, 5.708)
Place child birth				
Non-medical facility (RC)				
Medical facility	0.576	0.102	0.002	(0.406, 0.817)
Age of child				
0 (RC)				
1	0.852	0.131	0.299	(0.630, 1.153)
2	0.908	0.169	0.604	(0.629, 1.309)
3	0.551	0.122	0.007	(0.357, 0.850)
4	0.493	0.125	0.006	(0.299, 0.811)
Sex of child				
Male (RC)				
Female	0.805	0.084	0.038	(0.656, 0.988)
Number of respondents = 2452 F (23, 378) =27.36 Prob>F = 0.0000				

Sources: computed from the CDHS 2018 data

6.3 Discussion

This study has as its objectives to examine the relationship between WoA and 5q0 and to examine the effect of socio-economic and demographic factors on 5q0.

Key findings showed that an increase in a woman's decision-making autonomy will reduce her likelihood of experiencing 5q0 these findings supports other studies showing that women with decision-making power were more likely to better child health outcome (Gebremariam Woldemicael & Woldemicael, 2007; Saaka, 2020; Sharma & Kader, 2013). The findings of this study supports the first hypothesis of this study which states that women with high

decision-making autonomy are less-likely to experience 5q0. Women's final say on decisions regarding issues like day to day household purchase and health may improve reproductive care practices through increase contraceptive use which in turn facilitate birth spacing and increase the child survival rate (Sharma & Kader, 2013).

Similarly, the results shows that the higher the woman's opposition to WoA, the less likely she is to experience 5q0. This is in line with the second hypothesis of this study which states that women with high tolerance to domestic violence are more likely to experience 5q0.

Furthermore, the result shows that women with high asset ownership are less likely to experience 5q0. However, the results shows no significant association between asset ownership and 5q0.

Moreover, among the socio-demographics included in this study, respondents age and level of education, the child's age and sex and the household wealth status were significant predictors of 5q0. Findings from this study showed that the chances of experiencing 5q0 increase with increase in the woman's age. A possible explanation for this may be attributed to the fact that there are higher risks of pregnancy complications associated to increasing maternal age which has implications on the child's health (Cleary-Goldman et al., 2005; Sauer, 2015).

With respect to level of education, results show that risk of a woman experiencing 5q0 decreases with increase in her level of educational attainment. A woman's high level of education promotes healthy habits through her comprehensive and communication capacities (Houweling & Kunst, 2010; Smith-Greenaway, 2013).

Considering wealth status, a significant association was found with 5q0. This results confirms the results by Sapienza (2005) which indicates that child mortality is low among rich households.

The results further indicates that children of younger ages are at higher risk of dying before the age of five. This may be explained by the behavioural particularities at these ages like crawling and exploring the immediate surroundings which exposes them to infectious diseases and death (Kamal et al., 2015).

Finally, male children were found to be a higher risk of dying before the age of five. This may be due to their general biological vulnerability at younger ages than female children (Muluye & Wencheko, 2012).

Chapter Seven

Summary, Conclusion, and Recommendation

7.1 Summary

The study sought to investigate the dimensions of women's autonomy that predict 5q0. Three dimensions of WoA were used namely, decision-making, asset ownership and domestic violence, and their association to 5q0 was measured.

The univariate analyses show that the mean levels of decision-making autonomy, asset ownership autonomy and autonomy from domestic violence were 3.23, 1.13 and 3.29 respectively. At the bivariate level, the mean level of decision-making autonomy, asset ownership autonomy and autonomy from domestic violence among women who experienced 5q0 were respectively 3.09, 1.07 and 3.17.

The first model from the regression analysis showed the net effect of the three dimensions of women's autonomy considered in this study on 5q0. The results established a significant relationship between decision-making autonomy, autonomy from domestic violence and under-five mortality. It was depicted from the results that 5q0 decreases with increase in a woman's decision-making autonomy. Similarly, under-five mortality decreases with increase in a woman's opposition to domestic violence.

The second model showed the association between the dimensions of WoA and 5q0 while controlling for some women, child and household characteristics. Like in the first model, decision-making autonomy and autonomy through domestic violence significantly predicted 5q0. Other socio-demographic characteristics such as the mother's age and level of education, wealth status, age and sex of the child were identified as significant predictors of 5q0.

7.2 Conclusion

Though 5q0 in Cameroon has considerably reduced overtime, the level of mortality before the age of five is far above the target set by the Sustainable Development Goal (SDG) 3 target 2. The relationship between WoA and 5q0 was explored in this study. The woman's decision-making autonomy and autonomy from domestic violence was found to be significantly associated to 5q0 while autonomy from asset ownership was not. Respondents' age and level of education, wealth status, child age and sex were also significant predictors of 5q0. From this, there is need for policies to improve women's autonomy in an attempt to attain the SDG 3.2 to reduce 5q0 to 25 deaths per 1000 live births.

7.3 Recommendation

Based on the study's findings, the following recommendations are made: Sensitisation programs on domestic violence and women's decision-making autonomy should be organised to educate different stakeholders especially at community levels on the effects of this on the child survival. Moreover, public health programs should be introduced to improve the utilisation of health facilities to reduce the effect of poverty on illness and the effect of illness on economic status. Female education should be further reinforced to reduce the proportion of women who experienced 5q0 was high among women with no-education.

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