

**Government, Healthcare and Gender : The Impact of Female Legislators on
Healthcare Expenditure in Latin America and the Caribbean**

By

HYDE, Khalilah Chelsie

THESIS

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

MASTER OF PUBLIC POLICY

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Committee in charge:

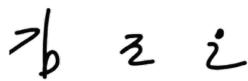
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ABSTRACT

Female parliamentarians are known to prioritize social, and welfare needs in their agenda. Previous studies have found that female representatives in politics lead to increased spending on education, as well as healthcare for the poor. Increased expenditure in healthcare benefits everyone in a society. This study aims to identify whether increases in female representatives in national parliamentarians influence the general government expenditure on healthcare. The paper analyzes cross-sectional time-series data for 29 countries from 2000-2018 within the Latin American and Caribbean region. To examine the relationship between the proportion of seats in national parliaments held by women and government healthcare expenditure, a panel regression model is utilized. The study finds a highly significant positive relationship between the two variables. The overall findings of this paper suggest that national governments should implement policies directed at increasing gender parity in their national parliaments.

Keywords: Healthcare expenditure; Women; Gender; Parliament; Latin America; Caribbean

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I dedicate this paper to my mother.

ACKNOWLEDGEMENTS

It took a long time for me to complete this thesis. I was very discouraged and did not believe that I would ever finish it. I therefore want to express my sincerest gratitude to my mother, **Ms. Tiffany Stuart**, for pushing me to never give up and for believing in me. Without her, this would not be possible.

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ABBREVIATIONS

LAC	Latin America and the Caribbean
GDP	Gross Domestic Product
OLS	Ordinary Least Square
FE	Fixed Effects
RE	Random Effects

CHAPTER 1 INTRODUCTION

1.1 Overview of LAC

The Latin American and the Caribbean (LAC) region comprises roughly half the land mass of the North and South American continents, with 58 countries, territories and protectorates included. Latin America and the Caribbean's roughly 650-million-person population represent various ethnicities and cultures and speak a multitude of languages, including the European and African languages introduced by colonization and slavery, the indigenous languages that have survived to today, the languages introduced by immigration, and the hybrid languages that have been born through the mixing of these languages.

The region is unified through its shared history of colonialism, and its enduring impact of patriarchal and conservative values. The growth of feminism is obstructed by the machismo culture that is present throughout the LAC (Wiedel, 2016). Like many regions throughout the world, women are the backbone of Latin American and Caribbean society, but they are kept in an inferior position to men. They are responsible for child-rearing, caring for the elderly, and are often times themselves working full-time jobs. Over the last thirty years however, there has been a push in the region to increase female participation in electoral office.

1.2 Statement of Problem

The lack of female representation in areas of influence continues to be a problem throughout the world. It is particularly distressing that despite constituting a half of the global population, women are severely underrepresented in almost every level of government worldwide. In the case of democratic countries, this shows that true democracy is not being realized. "The challenge for achieving gender equity by rebalancing power has to be addressed in different spheres: the household, the market,

and society at large” (López-Calva, 2019). As it pertains to the societal level, “women’s capacity to influence decision-making is paramount to progress in terms of equity” (López-Calva, 2019).

Thanks to the introduction of quota systems over the past 30 years, 18 countries in the LAC region are now leading the way in terms of female participation in national government and rebalancing power at the society-level. Gender parity political-electoral laws were introduced in 10 LAC countries between 2019 and 2020 (UN Women, 2021). Despite the success that these countries are seeing, the remaining countries in the region still do not have high participation rates and have not taken appropriate measures to improve the level of participation.

It is the author’s belief that an altruistic appeal is not sufficient to motivate leaders across the board to enact the changes necessary to support female participation, and that it is also necessary to have data supporting the benefit of these efforts. Studies analyzing the effect of women in national parliament on different outcome variables are limited. It is therefore important that researchers continue to add to this subject area, in order to show the need for more gender parity.

1.3 Purpose of the Study

Using data from 29 countries and covering a period of 17 years, this study examines the possible correlation between women’s representation in national parliaments within Latin America and the Caribbean and their effect on government healthcare expenditure. The overall objective of this study is to ascertain a tangible relationship between increasing women’s representation in decision making institutions and an area of social benefit that can result.

By providing a link between these two variables, the author hopes to provide evidence to support the continued efforts of government officials in the LAC region

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who are directing resources and effort into increasing the representation of women in their respective national governments. The author also hopes that the results of this study will encourage leaders from other nations both in the LAC region and throughout the world to increase their efforts to improve gender parity in national government.

1.4 Research Question

This study endeavors to determine an answer to the question:

How do women in national parliaments in the region of Latin American and Caribbean affect domestic government health expenditure?

1.5 Hypothesis

This study seeks to test the hypothesis that an increase in female representatives in national parliament would lead to an increase in government spending on healthcare.

1.6 Structure of the Thesis

The organizational structure of the paper is as follows: Chapter 2 contains the literature review, which provides an overarching picture of the previous work that has been done to analyze the effect of women on social spending. The breakdown of the data and methodology used for this study is detailed in Chapter 3. Chapter 4 gives an analysis and discussion of the findings. Lastly, Chapter 5 includes policy and research recommendations, and the conclusion.

CHAPTER 2
LITERATURE REVIEW

2.1 Women's Role in Latin American and Caribbean Society

The societal structures in LAC are patriarchal and conservative in nature. This positions women to be economically inferior to men. There is a traditional division of labor within households: men are wage earners and women are homemakers (Burbano, 2016). Women are therefore responsible for caring for the household, this includes the developmental well-being of the children, cooking, cleaning, and other domestic duties. Many LAC households also include multiple generations. As a result, care of elderly family members also falls on the shoulders of women.

Even with the global increases in women's workforce participation, their participation is still markedly lower than that of men. Today, many women are also heads of households, however they still hold primary responsibility for domestic duties (Burbano, 2016). These domestic duties are seen as women's work, and thus inferior and mostly unpaid or very underpaid. This leaves women economically disadvantaged and vulnerable to violence. In fact, a considerable amount of women in the LAC region are affected by gender-based violence, which also has an intergenerational component (World Bank, 2012). The toxic "machismo" patriarchal culture subjugates women in LAC both economically and physically.

On a positive note, the LAC region is the only one in the developing world where girls and boys have equal educational attainment (O'Connor, 2014). Despite this, the patriarchal focus of this education affects the way women and men are perceived by and perceive themselves within their society. This has a negative impact on women. Leadership has been seen as a masculine trait and encouraged in men, while women are seen as incapable of assuming such roles. Thankfully, things seem to be changing.

2.2 Gender Gap on Issues

Prior research has identified a difference in opinion and behavior between the genders. Research in the United States has found that men overwhelmingly support tax cuts and reducing the national debt, while women tend to prefer spending on education, working poor tax credits, and childcare relief. Politicians also campaign along gendered lines, with male candidates focusing on the federal budget and taxes, while female candidates direct more focus toward education and healthcare. (Alvarez & McCaffery, 2001).

The ongoing consensus is that women tend to gear priorities more towards the areas that have traditionally impacted their households and focus more on social protection than their male counterparts. This can be attributed to women's traditional roles in the household. The vulnerability of women to economic hardships caused by marital troubles, means that when women are given the opportunity to vote, they show a preference for government spending on health, education and other public goods. (Aidt & Dallal, 2008). Women's priorities have therefore included the areas of healthcare, education, sanitation, and nourishment.

2.3 LAC Governments and Female Representation

Women's role in political leadership is important. Research shows that increasing women's participation in policymaking can bring a gender-lens to policy issues such as equal pay and family leave, among others (López-Calva, 2019). This can be explained through the gender gap on issues. Essentially, by having greater parity in the government, legislators will be more capable of addressing the needs of both men and women.

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With the exception of Cuba, all of the countries the LAC region are democracies. As a whole, the LAC has been very successful at enacting laws to increase the participating of women in government. Beginning in 1991 with Argentina, 18 countries now have a quota system to foster female engagement. But quotas alone are not enough. The machismo culture inherent to the region has led to instances “where quotas remain unimplemented or strategically circumvented” (Lopex-Calva, 2019). Several countries in the region have been very good at identifying the shortcomings of quotas and introducing additional parity laws. In 2011, Mexico, for example, closed a loophole in its quota law when female leaders sued and won (Piscopo, 2020).

2.4 Female Leaders and Social Spending

There is a limited availability of literature that seeks to draw a connection between the impact of women in national parliaments and their countries’ health care expenditure. Many studies have looked at social spending as a whole and have included healthcare as an outcome variable.

In *The Influence of Women Legislators on State Health Care Spending for the Poor*, Marie Courtemanche and Joanne Conner Green used a random effects model to analyze data from the 50 states in the United States. They found that regardless of party, within the context of the United States, that a significant number of female representation leads to more generous spending for healthcare.

Written in 2007 by Catherine Bolzendahl and Clem Brooks, *Women's Political Representation and Welfare State Spending in 12 Capitalist Democracies*, focuses on the effect of female participation in the national legislatures of 12 countries. Bolzendahl and Brooks found a significant relationship between an increase in the

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female legislatures and their government's increased welfare spending relative to GDP.

In *Gendered Representation and Critical Mass: Women's Legislative Representation and Social Spending in 22 OECD Countries*, Researcher Soon Seok Park examines how women in parliament affect public expenditure using a fixed effects and an OLS with PCSE model. Park found a robust effect to be present between women's representation in parliament and the public expenditure directed towards healthcare, daycare, and education. She also finds that there is no threshold below which women do not impact policy outcomes.

Several studies have also focused on other areas of social expenditure, primarily with regards to education. Li-Ju Chen is a researcher who has done several studies on how women impact policy outcomes and spending when they hold government seats. Overall, her research argues that a legislator's identity matters when determining policy.

In the paper, *Female Policymaker and Educational Expenditure: Cross Country Evidence*, Li-Ju Chen explores how female participation in politics affects the way decisions are made, focusing on the educational expenditure within OECD countries. Chen found that a 1%-point increase in the share of female legislators would boost educational expenditure as a share of GDP and per capita educational expenditure by 0.034%-point and by 0.54%, respectively.

Similarly, in her paper, *Do Female Politicians Influence Public Spending? Evidence from Taiwan*, Li-Ju Chen looks at women in local government's effect on spending in Taiwan. In this case, she found that "female mayors propose a higher share of government funding for social welfare." While her paper focuses on

representation at the local level, it does support the idea that female leaders direct more funding towards social needs.

2.4.1 Policy Outcomes

While this paper is specifically focusing on healthcare spending and not outcomes, it is interesting to note that there have been previous studies seeking to analyze the effect of female leaders on specific health and other social outcomes. In the paper, *Are Female Leaders Good for Education? Evidence from India*, Irma Clots-Figueras looks at the relationship between a politician's gender identity and the educational achievement of individuals, within the context of India. Clots-Figueras determines that increasing women's political representation by 10% leads to a 6%-point increase in the likelihood that a person completes primary school. She finds that this effect is due to the policy-making decisions of these women leaders. She likewise concludes that identity does matter for policy decisions.

Edwin Ng and Carles Muntaner in, *The Effect of Women in Government on Population Health: An ecological analysis among Canadian provinces, 1976-2009*, worked to establish the relationship that might exist between women in government, government spending, and the overall health of a population. They focused on Canadian provinces from 1976 to 2009. They found that regardless of political ideology, increased female representation leads to a reduction in total, male, and female mortality rates. They concluded that this correlation is influenced by both the governing practices of female leaders as well as women directing more government spending towards social welfare. "Public spending on primary health care is justified by disease reduction during the productive years of life" (Gupta, Verhoeven, & Tiogson, 2002) .

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The prior research conducted in this field has consistently identified a high correlation between increased female parliamentarians and social spending. This correlation holds even when accounting for political ideology. There have also been studies identifying a correlation between female parliamentarians and key health and education outcomes. This study intends to build on the theoretical framework of previous research to determine the effect of women in national parliament on general government healthcare expenditure.

CHAPTER 3
DATA COLLECTION AND METHODOLOGY

3.1 Data Collection

The primary source for all data sets included in this study is The World Bank. This study covers the period between 2000 and 2018 due to limitations on the availability of data for some of the variables. There is insufficient information provided in the description for the World Bank's indicator for women in government to determine if transgender women were included in these figures.

There are 33 sovereign nations which form the majority of the region known as Latin America and the Caribbean. With the objective of providing inclusive and accurate findings, the researcher made every effort to include the data of all 33 nations in the analysis. Unfortunately, four countries in the region were removed from the data set as a result of insufficient data availability for two or more variables.

In addition to the 33 sovereign states, there are also 15 countries in the LAC region which are still currently recognized as dependencies and territories of other sovereign nations. These countries were also not included in the study, as their respective degrees of political dependency makes it difficult to identify the direct impact of their own central government on expenditures.

3.2 Methodology

This study utilizes data from 29 LAC countries over a period of 19 years. The dependent variable in this model is the domestic general government health expenditure. The independent variable being tested is women in national parliaments. Prior studies have concluded that a government's healthcare spending is dependent on various factors, including its capacity to pay and the demographics of its population. The control variables included in this analysis are GDP per capita, external health

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expenditure, unemployment, and population over 65. See Table 1 for a full description of the variables.

GDP per capita reflects the government's ability to spend more on healthcare, thus an increase in GDP is expected to lead to an increase in healthcare spending. External health expenditure are funds provided from foreign sources. A substitution effect is expected, such that an increase in external expenditure would lead to a decrease in government expenditure. The population over 65 represents the population structure (Xu, Sakena, & Holly, 2011). An increase in the aging population is expected to increase health care spending. The unemployment rate reflects economic conditions (Hart-McGonigle, 2015). If a country's unemployment rate increases, it is therefore expected to increase the government's healthcare spending.

This study utilizes data that is both cross-sectional and time-series. Thus, it is therefore preferable to employ a Fixed Effects (FE) or a Random Effects (RE) regression model, as a pooled Ordinary Least Squares (OLS) would not account for individual-specific effects. The researcher uses the random effect model "because it captures uncertainty derived from heterogeneity between studies. Moreover, the assumption of the random-effects model allows us to apply the results to a wider population rather than just the population in the available studies" (OrthoEvidence, 2019). The control variables were selected based on those identified in prior studies, thus there is low likelihood of an omitted-variable bias. The random effects model would therefore have lower standard errors and its estimates would be unbiased compared to that of the fixed effects model (Courtemanche & Conner Green, 2017).

3.2.1 Econometric model

The regression model used to determine the effect of women in parliament on government healthcare expenditure can be expressed using the following equation:

$$GGHE_{it} = \alpha_i + \beta_1 WNP_{it} + Z'_{it}\gamma + \varepsilon_{it}$$

Where $GGHE_{it}$ is general government health expenditure of country $_i$ in year $_t$, WNP_{it} is the proportion of women representatives in the national parliament of country $_i$ in year $_t$, β_1 is the coefficient of interest for women in national parliament, α_i is country-specific characteristics, $Z'_{it}\gamma$ are the control variables, and ε_{it} is the error term.

3.2.2 Definition of variables

To determine the effect of women in parliament on domestic general government health expenditure, this study analyzes six variables. Table 1 presents a description of each variable along with the code used to identify them in Stata.

Table 1

Description of Variables

Variable Name	Variable Code	Description of Variable
Domestic general government health expenditure per capita	GGHE	“Public expenditure on health from domestic sources per capita expressed in current US dollars” (World Bank, 2021).
Women in national parliaments	WNP	“Women in parliaments are the percentage of parliamentary seats in a single or lower chamber held by women” (World Bank, 2021).
GDP per capita	GDPC	“GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars” (World Bank, 2021).

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External health expenditure per capita	EXHE	“Current external expenditures on health per capita expressed in current US dollars. External sources are composed of direct foreign transfers and foreign transfers distributed by government encompassing all financial inflows into the national health system from outside the country” (World Bank, 2021).
Unemployment %	UNEMP	“Unemployment refers to the share of the labor force that is without work but available for and seeking employment” (World Bank, 2021).
Population ages 65 and above %	POP65	“Population ages 65 and above as a percentage of the total population. Population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship” (World Bank, 2021).

Source: World Bank Database, (2021)

The summary statistics for each variable utilized in this study can be found in Table 2. The variables in this analysis have all been log-transformed in order to make the data more normally distributed and to increase the validity of the analysis (Htoon, 2020)

Table 2

Summary Statistics of Variables

Variable	Obs.	Mean	Std. Dev.	Min.	Max.
<i><u>Dependent variable</u></i>					
Government health expenditure	551	5.024	1.099	0.871	7.097
<i><u>Independent variable</u></i>					
Women in national parliaments	529	2.809	0.612	0.713	3.974
<i><u>Control variable</u></i>					
GDP per capita	547	8.509	0.872	5.807	10.427
External health expenditure	503	0.864	1.663	-5.478	3.891
Unemployment	551	1.929	0.604	0.459	3.182
Population ages 65 and above	551	1.895	0.348	1.246	2.760

Summary results are for log form of all variables

Source: Results from Stata Software, (2021)

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Table 3 presents the expected regression results for each variable based on prior research.

Table 3

Expected Results

Variable	Variable Code	Expected Sign
Women in national parliaments	WNP	Positive
GDP per capita	GDPC	Positive
External health expenditure	EXHE	Negative
Unemployment	UNEMP	Positive
Population ages 65 and above	POP65	Positive

CHAPTER 4
EMPIRICAL RESULTS AND DISCUSSION

4.1 Empirical Results

A pooled OLS, FE, and RE regression were conducted for the 29 countries in this study. Table 4 presents the results of all three regressions. The regression results are consistent with prior research and expectations. All of the models, both inclusive and exclusive of the control variables, show a highly statistically significant positive correlation between women in national parliament and government healthcare expenditure. According to the pooled OLS model (columns 1 and 2), the control variables all have highly statistically significant effects. The results for the FE (columns 3 and 4) and RE (columns 5 and 6) models suggest that external health expenditure and unemployment do not have statistically significant effects.

Table 4

Do Women in National Parliament affect Government Healthcare Expenditure?

Dependent Variable: Domestic General Government Health Expenditure						
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	OLS	FE	FE	RE	RE
Women in national parliaments	0.724*** (0.071)	0.232*** (0.031)	0.901*** (0.060)	0.151*** (0.032)	0.894*** (0.059)	0.163*** (0.031)
GDP per capita		0.964*** (0.024)		0.905*** (0.041)		0.923*** (0.037)
External health expenditure		-0.042*** (0.010)		-0.004 (0.010)		-0.007 (0.010)
Unemployment		-0.106*** (0.029)		-0.014 (0.047)		-0.029 (0.043)
Population ages 65 and above		0.573*** (0.063)		1.06*** (0.148)		0.936*** (0.128)
Observations	529	481	529	481	529	481
R-squared	0.166	0.901	0.310	0.879	0.166	0.889

Standard errors in parentheses

* p<0.05 ** p<0.01 *** p<0.001

Source: Results from Stata Software, (2021)

4.1.1 Breusch-Pagan Lagrange Multiplier (LM) Test

To determine if the pooled OLS or RE model is a better fit for this analysis, a Breusch-Pagan Lagrange Multiplier (LM) test was done. The null hypothesis states that the variances across entities is zero. The null hypothesis could not be rejected because the p-value shows statistical significance. The RE model is therefore more consistent and should be used.

Table 5

Breusch-Pagan Lagrange Multiplier (LM) Test

```

lgghe[country1,t] = Xb + u[country1] + e[country1,t]

Estimated results:

```

	Var	sd = sqrt(Var)
lgghe	1.266734	1.125493
e	.0347924	.1865272
u	.1161835	.340857

```

Test:  Var(u) = 0
          chibar2(01) = 1816.70
          Prob > chibar2 = 0.0000

```

Source: Results from Stata Software, (2021)

4.1.2 Hausman Specification Test: FE and RE

A Hausman Specification test was run to test both the FE and RE regression models for systematic differences and to determine which model is the most efficient. The difference in coefficients is not systematic according to the null hypothesis, meaning that there is no correlation between unique errors and regressors in the model. The null hypothesis could not be rejected based on the lack of statistical significance of the p-value at the 0.05 level. The RE model is therefore more consistent and should be used.

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Table 6

Hausman Specification Test

	Coefficients			sqrt(diag(V_b-V_B)) S.E.
	(b) fixed	(B) random	(b-B) Difference	
lwnp	.1513492	.1628877	-.0115385	.0078973
lgdp	.905	.9234561	-.0184561	.0185965
lexhe	-.0040022	-.007085	.0030828	.0026749
lunemp	-.0140959	-.0284698	.0143738	.0183511
lpop65	1.068067	.9360603	.1320064	.0747955

b = consistent under Ho and Ha; obtained from xtreg
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B)
 = 6.10
 Prob>chi2 = 0.2966

Source: Results from Stata Software, (2021)

4.2 Discussion

The results of the Breusch-Pagan Lagrange Multiplier (LM) test and the Hausman Specification test were in agreement. They both determined that the RE is the most consistent of the three models. The r-Squared for this model is 0.889, meaning that 88.9% of the variance in the data can be explained by the model. The RE regression results, which are presented in columns 5 and 6 of Table 4, are consistent with prior findings.

The study included the independent variable, women in national parliament, and the control variables of GDP per capita, external health expenditure, unemployment, and population over age 65. Only one of the variables did not have the expected sign. That variable was also observed not to have a statistically significant relationship to government healthcare spending. Of the four variables that

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met expectations, three were observed to possess a high statistically significant correlation with government healthcare spending.

Women in National Parliament

This study uses the proportion of women in national parliament as the independent variable and seeks to determine its effects on government healthcare expenditure. According to the results, a high statistically significant positive relationship exists between women in national parliament and domestic government healthcare expenditure, thus confirming the hypothesis. According to column 6 of Table 4, for every 1% increase in the proportion of women in national parliament, a +0.163% increase in government healthcare expenditure is observed.

GDP per capita

This study includes GDP per capita as a country's income proxy. Ke Xu, Priyanka Sakena, and Alberto Holly, in *The Determinants of Health Expenditure: A country-level panel data analysis*, identified GDP “as a very important factor for explaining differences across countries in the level and growth of total health care expenditures.” This has been further supported by all of the previous inter-country research discussed in this study, including the one done by Soon Seok Park. A positive relationship was expected to be found between this variable and the dependent variable. GDP per capita and government healthcare expenditure had a high statistically significant positive correlation, with a coefficient of +0.923.

External Health Expenditure

External health expenditure was identified as a possible control variable in the same paper that identified GDP per capita. Xu, et al. identified it as likely affecting

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mostly low-and middle-income countries through a substitution effect. A negative relationship was expected for this variable, as a government could use the funds it receives from external forces to substitute its own and could divert the funds that it initially intended for healthcare elsewhere. With a coefficient of -0.007, external health expenditure had a negative relationship, as expected. The regression model indicates the relationship is not statistically significant. This could be because the model does not separate countries by income level.

Unemployment

Unemployment was identified as a control variable based on prior research. It is a structural pressure which triggers government spending. Based on prior research, a positive relationship was expected for this variable (Park, 2017). The findings were not as expected. The coefficient is -0.029 and the relationship was determined to not be statistically significant. This unexpected result could be caused by multicollinearity in the data set. It could also be caused by reporting issues for this variable. Most of the countries in this study are developing, and usually have large informal economies. This could prevent the actual unemployment rate from being reported accurately.

Population 65+

The share of the population over 65 has been established as a contributor to healthcare expenditure (Dieleman, Squires, Bui, Campbell, Chapin & Hamavid, 2017). Elderly individuals require more healthcare services, increasing the proportion of elderly persons in a population would theoretically increase healthcare spending by the government. Other researchers have also included this variable as a control. A positive relationship was expected for this variable. According to the analysis, there is

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a high statistically significant relationship, with a coefficient of +0.936, between the population over age 65 and government healthcare spending.

4.2.1 Limitation of the study

There are a few key limitations that are present in this study. One such partial limitation is in its binary approach to gender. The author is uncertain how identity is reported/determined in the World Bank's indicator for women in national parliament. It is not clear whether or how transgender or non-binary individuals are included in the indicator.

The r-Squared for the regression means that 11.1% of variance is not explained by the model. Non-communicable diseases, pollution, and poverty rates were not included in the study as a result of a lack of data availability and may account for the variance. "Non-communicable diseases, such as diabetes, hypertension and cancer, have been becoming more and more important in high income countries as well as in developing countries," (Xu, et al.). "Toxic pollution output and per capita municipal environmental expenditures," have been found to have, "significant associations with health expenditures," (Jerrett, Eyles, Dufournaud, & Birch, 2002). Political ideology was not included because its usage in other studies did not produce statistically significant results (Bolzendahl & Brooks, 2007) (Park, 2017).

CHAPTER 5
SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

5.1 Summary of the Findings

While there continues to be an underrepresentation of women as leaders in governments throughout the world, the LAC region has been leading the way towards fairer participation. Through the use of quotas and gender parity laws, a remarkable number of countries in the region are engendering some of the highest levels of women's political participation in the world today. "In Argentina, Bolivia, Costa Rica, Nicaragua and Mexico, women constitute nearly half of the legislature" (Piscoppo, 2020). Despite the high levels of success in the region, there are still a number of countries, particularly in the Caribbean, that have not enacted the changes needed to increase female representation in their respective national parliaments.

This study sought to identify the effect of women in national parliaments on domestic general government healthcare expenditure within the context of Latin America. The findings of this research support the hypothesis and have found a strong statistically significant correlation between female parliamentarians and government healthcare expenditure. That is, for every additional 1% in the proportion of females in parliament, there is a 0.162% increase in government healthcare expenditure. Two of the controls used in the analysis, GDP per capita and the share of the population over 65, were also shown to possess a strong statistically significant correlation to the government healthcare spending.

This study adds support to the body of work by Catherine Bolzendahl, Clem Brooks, Soon Seok Park, Li-Ju Chen, who have previously looked at the relationship between women in government and some form of social spending, by focusing on the LAC region. This research demonstrates a key benefit of increasing female

parliamentarians. The author hopes that these findings will encourage more countries to increase their efforts to increase female political engagement.

5.2 Policy Recommendations

This study finds that an increase in women parliamentarians helps to increase government spending on healthcare in the LAC region. This study's findings have implications worldwide. The goal of this study was to highlight the importance of female leadership in the hope that more countries will make an effort to increase female representation in political leadership.

To achieve higher participation rates, the researcher suggests that countries follow the lead of the countries in the LAC region that have successfully implemented quotas and parity laws to improve female participation rates. Based on the experience of the countries in the LAC region, effective quota systems require the following: thresholds need to be high, quotas should match the electoral systems, parties should have very little wiggle room, and sanctions and enforcements are imperative (Piscopo, 2020).

5.3 Further Research Possibilities

As a region that has some of the highest global female participation rates in government, research in Latin America and the Caribbean could become a leading source for data with regards to the effect and implications of female government participation. Studies in the area of female leadership are still lacking, but they are important to highlight the benefit of and need for greater inclusion efforts.

With the findings of this study as a basis, further research in the context of Latin America and the Caribbean could be done to analyze the correlation between women in government and health outcomes. The findings of this study are limited in

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that it is only looking at expenditure but does not divulge information about who or what benefits from that expenditure. Further research should be conducted into where the increased expenditure is being allocated, whether it is being utilized effectively, and the demographic breakdown of the beneficiaries. In the event of positive results, this could present a stronger case for the necessity to include women in decision making roles.

5.4 Conclusion

This study sought to identify the relationship between women's representation in national parliament and government healthcare expenditure in Latin America and the Caribbean. While controlling for GDP per capita, external health expenditure, unemployment, and the population over age 65, the study finds a strong positive relationship between women's representation in national parliament and government healthcare spending. For every 1% increase in the proportion of women in national parliament observed, there is a +0.162% effect on government healthcare expenditure. These results highlight a key benefit of female parliamentarians and the need for the continued push to increased gender parity in national parliaments throughout the world.

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APPENDIX A

Appendix A: List of LAC countries in the study

Country	Country Code
1. Argentina	ARG
2. Bahamas, The	BHS
3. Barbados	BRB
4. Belize	BLZ
5. Bolivia	BOL
6. Brazil	BRA
7. Chile	CHL
8. Colombia	COL
9. Costa Rica	CRI
10. Cuba	CUB
11. Dominican Republic	DOM
12. Ecuador	ECU
13. El Salvador	SLV
14. Guatemala	GTM
15. Guyana	GUY
16. Honduras	HND
17. Haiti	HTI
18. Jamaica	JAM
19. Mexico	MEX
20. Nicaragua	NIC
21. Panama	PAN
22. Paraguay	PRY
23. Peru	PER
24. St. Lucia	LCA
25. St. Vincent and the Grenadines	VCT
26. Suriname	SUR
27. Trinidad and Tobago	TTO
28. Uruguay	URY
29. Venezuela	VEN

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