

2019

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### **Recommended Citation**

Perez-Velazco, Ximena (2019) "Brazil's Family Health Strategy: An Examination of the Experience of Community Health Workers and their Impact on the Commonwealth," *The Winthrop McNair Research Bulletin*: Vol. 5, Article 11.

Available at: <https://digitalcommons.winthrop.edu/wmrb/vol5/iss1/11>

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# **Brazil's Family Health Strategy: An Examination of the Experience of Community Health Workers and their Impact on the Commonwealth**

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## **ABSTRACT**

This study explores the experience of community health workers—front line public health workers—who provide low-level health intervention as they are integrated into multidisciplinary teams of health professionals, under the constitution of Brazil's Family Health strategy, a policy established in order to provide universal primary care in Brazil. Furthermore, this research looks into how the community health workers' role in bridging the gap between the public health efforts and the commonwealth initiates health literacy and health practices within the community and the CHWs themselves. There is little to no research on the subject of community health workers' physical or mental health, nor the position's influence of these factors. This study will assess the influence of community health workers' professional practices, education and culturally tailored education intervention programs like the AGITA program, on the individuals who actively work to implement health community and family orientation in their own society. Participants (n = 8) were recruited through working with the municipality and completed paper and pencil surveys in Portuguese. Data analysis utilized content analysis to identify themes. This study serves to analyze the behavior portrayed by community health workers and the potential shifts in their professional and personal practices related to physical and mental health resulting from their inclusion in establishing a sustainable delivery in health education and practices to local communities.

## **INTRODUCTION**

### **The Brazilian Family Health Strategy**

Brazil, a country that is considered home to nearly 1.9 million people and ranks as the fifth largest nation in the world, implements several goal-orientated federal programs as a way of providing a safe and profiting environment for its citizens (Wadge.) One of these goals, as a part of the provision of universal health care—which was authorized by the Alma – Ata declaration in 1978 and the 1988 constitution—is the promotion of a health system that, through primary health care, can provide multidisciplinary and equitable health care services. The country began to approach this goal in 1994 when the Brazilian Health System or Systema Unitaria de Salud (SUS), whose mission is to formulate health policy to provide integrated primary care, established a program known as the Family

Health Strategy (FHS). The FHS is aimed at reducing costly hospital care while providing better access to health care with the help of its seemingly most influential program, the implementation of community health workers (CHWs) (Wadge.) The strategy's approach towards providing preventive and basic health care included creating and promoting multidisciplinary professional teams known as core teams, usually consisting of a physician, a nurse, and six CHWs. As a part of establishing multidisciplinary teams, the FHS also included health professionals like dentists, psychologists and pharmacists who are designated to assist groups of four or five health teams that provide additional specialty care. Each core team is assigned a geographic area covering 3,000 to 4,000 people, with a maximum of 150 families per CHW (Wadge.)

### **Community Health Workers**

CHWs, who are most often local members of the community, are frontline public health workers who serve to help communities with low-level health related problems and chronic disease intervention. The scope of practice within primary health for CHWs varies with geographic distribution; however, CHWs most often provide comprehensive care through health promoting, preventive, and rehabilitative services. Furthermore, CHWs are also expected to encourage and empower their communities as a part of their integrated efforts, as well as provide the members of their community with resources and the education to connect them with the countries' formal health system (Uauy.) Community health workers most often work in their own residential areas, which serves as their designated micro area, in which they are each assigned approximately 150 homes to visit once a month (Wadge.) These visits occur irrespective of need or demand, and inspect the home for risk factors and offer their promotional health services, including providing general health education and regulating a medical prescription (Macinko.)

Since the establishment of the program in 1994, community health workers have served at the center of the primary health care policy in Brazil. Research shows that that the FHS, as of 2015, provides services to 58% of the country's municipalities, and is providing these services to 95% of citizens in each one, reaching almost 62% of Brazil's population (Paim.) Of this population, CHWs work to combat a high and increasing level of non-communicable diseases, including hypertension and diabetes. Other persistent health challenges include the overuse of secondary and tertiary medical services, like medications, and challenges in the field of reproductive health, including the use of unsafe abortion, high rates of adolescent pregnancy, and high rates of mother-to-child transmission of sexually transmitted infections. Because of this, CHWs prioritize vulnerable populations, such as children and pregnant women (Paim.)

To date, CHWs receive one month of a semi-structured educational program in preparation for their employment (Spector.) A 2011 study stated that the training of CHAs is

conducted at the national Ministry of Health (MOH), but the training curriculum is approved by the Ministry of Education. Nurses provide 8 weeks of formal didactic training at regional health schools. Following this, CHAs receive 4 weeks of supervised field training. CHAs also receive monthly and quarterly ongoing training (Aonso.)

### **The History and Economics of the Family Health Strategy**

The Family Health Strategy began as a form of establishing a more regulation provision of primary care, which has become devalued in the 1900's, as a result of the countries' growing dependency on secondary and tertiary care (Brazil's FHS.) The budget for the Family Health Strategy is entirely publicly funded and has multiplied six-fold since a rise in use thirteen years ago. The insurance of a structured and growing public health system has taken priority in Brazil; so much so that a law has been set in place to protect the public health care system from budget cuts or removals (Mendes.)

### **Evidence of Impact**

The benefits of the provision of community health workers has reduced the price of health care since the program costs \$50 per person each year in comparison to much higher costly hospital services (Alonso.) The implementation of this program has reduced pressure often placed on more-expensive care providers and has led to significant improvements in national health demographics—reducing hospitalizations and mortality and improving equity and access (Chronic non – communicable disease.)

### **Challenges**

The weaknesses behind this form of training includes the lack of a follow up class as the CHWs progress into their time as community workers, which limits the understanding of new and modern breakthroughs in the health field. Furthermore, a lack of formal training on the use of technology and the lack of certain medical equipment, including updates in technology used to measure blood pressure and measure heart rates, creates a large set back in the delivery of services by community health workers (Alonso.)

## Gaps in the Literature

The gaps in the literature include little to no research on the perspective or the experience of the community health worker. In addition, there has been limited structure in the educational and training process on behalf of the CHWs established by the FHS. The objective of this study is to examine in depth the role of community health workers in Brazil. In addition, another objective is to examine the feasibility of expanding the role of CHWs to lead interventions on chronic diseases prevention in the community and how the intervention of this program would fill the gaps in the literature on CHWs' physical and mental health practices. 200 community-dwelling men and women aged 50 and over were recruited to participate in the "AGITA" program, and eight CHWs were invited to deliver the program to the community. Quantitative and qualitative instruments addressed both individual and organizational aspects of behavioral change interventions. This culturally sensitive intervention targeted the population by partnering with local organizations to develop and deliver an evidence-based behavioral change curriculum that incorporates religious and family activities.

## THE RESEARCH QUESTION

What is the experience of individuals in their role of community health workers in Brazil?

## SUBSIDIARY QUESTION

How does the AGITA\* program overcome the barriers present in community health workers' ability to combat chronic disease through the implementation of health education, from the perspective of the CHW?

## METHODS

Participants (n = 8) were recruited through working with the municipality and completed paper and pencil surveys in Portuguese. Data analysis utilized content analysis to identify themes. The study design included a semi-structured interview guide that was designed specifically for this project.

Participants included community health workers (n=8) who provided feedback regarding the six-month pilot program in which questionnaires were transcribed verbatim and analyzed using content analysis. Once IRB approval was obtained by the University of Illinois, the collection of data began. Prior to conducting interviews, there was a thorough explanation of the process and written consent was obtained. On an assented basis, interviews were conducted onsite at the clinic during clinical hours that were most convenient for the provider (this usually took place during the provider's lunch hour.) Each interview was recorded and followed by a verbatim transcription. The transcriptions were then analyzed for pressing themes including barriers, limitations and benefits of including the onsite CHW. These significant themes were broken down into subheading and placed into charts to organize them by relevance.

## RESULTS

The database search yielded 497 results; of these, 9 articles included information about the profession of community health workers within the Family Health Strategy. 1 of these articles described the profession from the perspective of the community health workers. Within these nine studies, the following themes were included when identifying pressing themes: Health Demographics, Policy, Professional Practice, Mental Health and Physical Health. Factors of physical health that were considered include the individual application of health behaviors promoted by the Brazilian Family Health Strategy. Perceptions of mental health included confidence in job performance, satisfaction with job, and their sense of self-importance in the role. Most articles discussed the growth of the Brazilian Family Health Strategy and its adoption by other countries. Research studies were conducted within the years 2007 and 2018. The research studies were conducted through the use of cross-sectional studies/surveys, comprehensive studies, systematic review and meta-analysis and placed into a comprehensive table (Table 1<sup>1</sup>).

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<sup>1</sup> See <https://digitalcommons.winthrop.edu/wmrb/> to enlarge Table 1 electronically.

**Table 1: Systematic Review of Literature Including Pressing Themes**

Authors	Country	Setting	Data	Sample Size	Data Structure	Sample	Policy	Professional Practice	Mental Health	Physical Health
Andrade et al.; 2018	England	Community	This article examines factors associated with the implementation and expansion of the FHS.	n=5419	The proportion of the municipal population covered by the FHS over time was assessed using a longitudinal multilevel model for change that accounted for variables covering eight domains: economic development, healthcare supply, healthcare needs/access, availability of other sources of healthcare, political context, geographical isolation, regional characteristics and population size.	Brazilian municipalities; During the 15-year study period, national coverage of the FHS increased from 4.4% to 54%, with 58% of the municipalities having population coverage of 95% or more, and municipalities that had not adopted the program decreased from 86.4% to 4.9%.	Yes	Yes	No	Yes
Alonso et al.; 2018	Brazil	Community	This article examines the analysis of the evidence from qualitative studies that addresses the perception of Brazilian community health agents about their work.	n=33	The strategy was constructed by crossing descriptors, using the Boolean operator "AND," and filtering, which resulted in 129 identified articles. We removed quantitative or qualitative research articles, essays, debates, literature reviews, reports of experiences, and research that did not include Brazilian Community Health Agents as subjects.		Yes	Yes	Yes	No
Macinko; 2007	USA	Community	This research examines the structure and emergence of the Sistema Unica de saude in Brazil.		Data was obtained using the up to date individual and household information obtained by CHWs when working with patients.	This is a descriptive study at the national level, based on secondary data from the Brazilian Institute of Geography and Statistics (IBGE) and the Ministry of Health, with the reference period being the historical series from 1999 to 2009.	Yes	No	No	No
Mendes; 2007	Brazil	Community	This paper assesses inpatient and outpatient care and their capacity to respond to changing demands in the context of the demographic transition in Brazil.		The data were obtained from studies by the Brazilian Institute of Geography and Statistics (IBGE) and databases in the National Health System (CNES, SIH, and SIA). The reduction in birth, fertility, and infant mortality rates and the increase in life expectancy at birth are still driving population growth, while decreasing the dependency rate, thereby providing the opportunity to make necessary adjustments.	This is a descriptive study at the national level, based on secondary data from the Brazilian Institute of Geography and Statistics (IBGE) and the Ministry of Health, with the reference period being the historical series from 1999 to 2009.	Yes	Yes	No	No

**Table 1: Systematic Review of Literature Including Pressing Themes, Continued**

Authors	Country	Setting	Data	Sample Size	Data Structure	Sample	Policy	Professional Practice	Mental Health	Physical Health
Paim; 2011	USA	Community	This research serves to show how the SUS has vastly increased access to health care for a substantial proportion of the Brazilian population, achieved universal coverage of vaccination and prenatal care, enhanced public awareness of health as a citizen's right.	n=120	The data were obtained from studies by the Brazilian Institute of Geography and Statistics (IBGE) and databases in the National Health System (CNES, SIH, and SIA).	The data in this report included 120 articles on the structure of Brazil's primary health care sites.	Yes	No	Yes	Yes
Spector; 2015	USA	Community	Guided by social cognitive theory, this study examines factors associated with ESF workers' provision of drug use services. This study was based upon pilot work that included qualitative interviews with providers and stakeholders in the ESF.		Cross-sectional surveys were collected from 262 ESF workers (168 CHWs, 62 nurses, and 32 physicians) in Mesquita, Rio de Janeiro State and Santa Luzia, Minas Gerais State. Outcome variable: provision of drug-use services.	Cross-sectional surveys were collected from 262 ESF workers.	Yes	Yes	Yes	No
Schmidt; 2011	Brazil	Community	This article was a part of a six part study examining the health disparities in Brazil; including chronic disease and intervention.			Systematic review of the health demographics collected from Brazil 2007-2010 public health records.	Yes	No	No	Yes
Uauy; 2011	Chile	Community	Investing in physical infrastructure (roads, bridges, factories) was necessary for social progress; countries should accumulate wealth before they could afford the provision of health, education, and other benefits to lower-income groups, and cheap labor was considered "not so bad."				No	Yes	No	No
Wage; 2016	England	Community	This case study is the first in a series examining health care innovations in low- and middle-income countries that could help address challenges faced by the U.S. health system and Brazil's Family Health Strategy (FHS), which focuses on the use of CHWs. Health care is a universal right in Brazil, authorized by the Alma-Ata Declaration in 1978 and the 1988 constitution.	n=67% of the Brazilian population (17,225)	Data was collected from the Brazilian census; including demographics from 1999 to 2002+J14	Countries around the world, including the United States, are looking to reduce costs and provide greater access to care	Yes	No	Yes	No

## DISCUSSION

The results indicate that in regard to The Family Health Strategy, specifically the use of community health workers as the preferred form of primary health care delivery, there is limited understanding on the subject of community health workers' mental and physical health, and how these factors influence their ability to satisfy their job requirements, as a part of multidisciplinary health teams. A stronger understanding of personal health practices among CHWs would allow for a stronger comprehension of the most successful form of health education.

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