

Applying the Plan-Do-Study-Act (PDSA) approach to Community Health Worker Job Satisfaction: Local and Global Perspectives

Wendy Thal^{1*}, Rosalinda Jimenez¹

Abstract

Community Health Workers (CHW) have been a continuing presence in the world health care arena for several decades. While the work they do is diverse, all abide by local social and cultural “norms” and are stakeholders within the population they serve. [1] While much literature is available on the importance of community health workers in the provision of care in regions with limited access to health care, there is little known on what inspires someone to engage in the role. The World Health Organization purports that building value for these lay health care providers within their community via training, support, and recognition is critical to the success of any program. An inter-professional team from Texas Tech University Health Sciences Center in Lubbock, Texas works with community health workers in both an urban medically underserved area in our city and in a rural medically underserved area in Nicaragua. The purpose of the quality improvement project was to explore traits and characteristics that motivate community health workers to provide services in these medically underserved regions in Nicaragua and west Texas. Knowledge about motivation can assist community health worker programs to tailor processes to promote better hiring, retention, training, and improved job satisfaction, leading to a higher quality of patient care.

DOI: 10.18297/rgh/vol2/iss2/12
 Submitted Date: March 1, 2019
 Accepted Date: August 26, 2019
 Website: <https://ir.library.louisville.edu/rgh>
 Affiliations:

¹Texas Tech University Health Sciences Center, Lubbock, TX 79430

This original article is brought to you for free and open access by ThinkIR: The University of Louisville's Institutional Repository. It has been accepted for inclusion in the *Journal of Refugee & Global Health* by an authorized editor of ThinkIR. For more information, please contact thinkir@louisville.edu.

Recommended Citation:

Thal, Wendy R. and Jimenez, Rosalinda (2019) "Applying the Plan-Do-Study-Act (PDSA) approach to Community Health Worker Job Satisfaction: Local and Global Perspectives." *Journal of Refugee & Global Health*: Vol. 2 : Iss. 2 , Article 12.

Background

Community Health Workers (CHWs) have been a continuing presence in world health care for the last 50 years. A community health worker can be defined as a community member who is trained to provide health care related services and serves as a liaison between health services and the community. While the work they do is diverse, all follow local, social and cultural “norms” and are considered stakeholders within the population they serve [1]. Much literature is available on the importance of community health workers in the provision of care in regions with limited access to health care, but there is little known on what inspires someone to engage in the role. The World Health Organization purports that building their value within their community via training, support, and recognition is critical to the success of any community health worker program. According to Lehmann & Sanders [1], many community health worker programs have failed because of differences in expectations between what services were provided versus what community members needed from the health workers.

In the United States, community health workers benefit health care providers by helping meet national health goals by steering community activities and interventions that promote health and prevent disease and disability. The Larry Combest Community Health and Wellness Center and Combest Central Clinic in

Lubbock, Texas have long supported the role of community health workers in promoting health among the local population. Referrals are made to the workers via health care providers.

The community health workers provide education, resource assistance, and support to patients through home visits. Using the Transformation for Health Model as a guide to promote behavioral changes among patients, services from community health workers has shown to be beneficial in promoting patient management of chronic illnesses [2]. At the Larry Combest Community Health and Wellness Center, there are several community health worker programs that offer community services, such as maternal/newborn care, behavioral health, chronic disease management, and neighborhood educational interventions. The central focus for all the programs is reducing morbidity and mortality among a medically underserved, low socio-economic status area within the city, empowering and educating patients in the community on managing their chronic diseases at home.

Nicaragua is a country located in Central America with a population of about 6 million [3]. It is also one of the most impoverished countries in the Western Hemisphere with almost half of the population living below the poverty line; with the rural populations having the greatest disparities in relation to

*Correspondence To:

Wendy Thal, DNP, APRN, FNP-C, CEN, APHN-BC
 Associate Professor / Family Nurse Practitioner
 APRN Graduate Program
 Rural Community & Global Health Certificate Programs
 Wendy.Thal@ttuhsc.edu

Copyright: © 2019 The author(s). This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



water, sanitation, and access to health care [3,4]. In Nicaragua, community health workers have been part of the system for over 40 years. Originally known as brigadistas, they were volunteer local people trained to work within their own communities and guided by a philosophy of “solidarity, love and voluntarism”, concepts central to the government of the time [5,6]. There are now more than 20,000 community health workers engaged in various public health activities across the country [4]. The inter-professional team location is based in a sustainable mission setting in the department of Jinotega, and supported by local health care providers.

Texas Tech University Health Sciences Center in Lubbock, Texas is part of an inter-professional team that works with community health workers in both an urban medically underserved area in our city and in a rural medically underserved area in Jinotega, Nicaragua. The Plan-Do-Study-Act (PDSA) design is a commonly used improvement process in health care settings that may aid in identifying future research. A PDSA project uses small changes to optimize a larger change in a process. This paper describes how the utilization of a PDSA assisted our team to identify and obtain needed educational training for community health workers, in order to improve quality of care in their work in a local and global health care setting. Our quality improvement team worked with community health workers in both Lubbock, Texas and Jinotega, Nicaragua, to explore characteristics and traits that may affect job satisfaction among this population. The PDSA cycle included determining motivating factors and educational requirements (Plan), carrying out the interviews needed to gain this information (Do), studying the data collected through content analysis (Study) and identifying steps to improve job satisfaction through meeting identified needs (Act).

The objectives of this project were to: 1) identify common traits that motivate community health care workers to serve; 2) compare basic educational training programs between a US based program with a program based in a developing nation; and 3) identify future educational needs to improve quality of care for medically underserved communities.

Methods

Utilizing the PDSA design, qualitative interviews were conducted with the workers from the participating locations to highlight perceived qualities and determine needs for improving community care and job satisfaction. To date, there has not been an evaluation of community health workers job satisfaction, which is imperative to providing the support perceived as necessary by those in the field. While many quality improvement projects address improvement in processes, the Institute for Healthcare Improvement [IHI] [7], states improvement of a service is just as important; and in this case the service offered is our training activities for community health workers. This project was approved through the Quality Improvement Committee from within the IRB office.

Results

Participants in the Lubbock cohort ranged in age from 29 to 77 years. Educational levels varied with GED, high school only, and 70% reporting some college course work. Time engaged in the role of community health worker ranged from 2 months to 10 years. In comparison, participants in the Jinotega cohort

ranged in age from 27-59 years with educational levels from second grade to some university level. Time engaged in the role of a community health worker ranged from 1 year to 25 years of experience. Results were categorized as motivating characteristics, current educational training, and identified teaching needs.

Motivating Characteristics

Helping people was the top motivator for providing services in both communities. Ministry as a service to others was also found to be a strong motivating factor. This ministry as a service was perceived by many to be their “calling”. Some community health workers in the local cohort stated they provide services to discharged patients and many times identified themselves as a ‘change agent’ to the patient outcome. Thus change agent as an advocate to empower and educate patients to manage their chronic illnesses was another motivating factor. Community health workers in both locations felt they were part of a team in the overall health care network of health care providers. They felt their services filled the gap between health care provider and home care. In Nicaragua, one participant stated “We are doing a lot for our community and I feel so proud. They always know we are there for them” and another stated “I do that with all my heart” indicating an immense satisfaction in their service role. This sense of being part of a team was carried over into their enjoyment at collaborating with other health care providers and was noted to be a strong motivating characteristic. In Nicaragua, the ability to network, participate in trainings, and consult each other was considered especially important in their role as it inspired them to continue to grow as leaders in their communities.

The privilege of being “the voice of the people” was a characteristic shared in both locations. Community health workers perceive their role as constant in that they “are always community health workers, even in private life”. They stated that their communities ‘saw them’ always, and could always reach out for guidance, assistance and support, even after normal hours of workdays. One participant in Nicaragua stated that in her community she is the only health care provider for many miles. She has to be resourceful and use the knowledge and training that she has been given. She described having to deliver a baby from a “very pregnant lady” that was unable to get to a hospital in time for the delivery. While both cohorts felt that their communities perceived them as assets to the community, there was also a negative connotation in that not everyone understands the role of the community health worker. This was more pronounced in Nicaragua, where one community health worker said that the feelings of community members was not always positive; stating “We don’t always shine for everybody. There will always be people that they don’t like you. And there are people that like you. It doesn’t matter because they always know that we are there for them”. However, in both locations this did not keep them from engaging in their community and offering any needed services.

Current Educational Training

In both locations basic educational preparation is required prior to beginning work as a community health worker. Education for community health workers varies across the United States and internationally. In the United States, minimally, a high school education with intensive courses in health promotion, community resources and the role as a liaison is required. These courses result in a certification as a community health worker. However, because the role of the community health worker may

Table 1 Community Health Worker Quality Improvement Project Plan Results

Quality Improvement Project Plan Results	
Interview Feedback	
Community health workers- Local	Community health workers- Global
Motivating Characteristics & Traits	
Reasons We Work	
Helping People	Helping People
Ministry- A service to others	Ministry- A service to others
Change Agent	Peer Support
Being part of a team	Being part of a team
Perception of their Role in Community	
Share knowledge	Share knowledge
CHW even in private life	CHW even in private life
Voice of the people	Servant role
Empowering people	
Perception of how the Community Views their Role	
Community Leader	Community Leader
May not understand role	May not understand role
Welcoming	Not always positive
Current Educational Training	
Interpersonal Skills/ Communication	Interpersonal Skills/Communication
Chronic Disease Management (CDM)	Hands-on Skills
Varies- (State of Texas Requires Certification)	Maternal/Newborn Care
Refreshers available year round	Varies based on region and program
	Refreshers vary every 1-3 months
Identified Teaching Needs	
Mental Health	Substance Abuse/Mental Health
CDM Updates	CDM Updates
Navigating ‘payor’ systems	Elderly Care
Connection to other community health workers	Skills Update/First Aid

consist of health education and social work, some states may require a bachelor’s degree and graduate education. Continuing education is required for community health workers and is available throughout the year via online or face-to-face courses. In Lubbock, interpersonal skills and communication, and training on chronic disease management such as hypertension, diabetes, and asthma were identified by the community health worker interviewed as important to their role in the community. These topics are covered in modules developed specifically for the local cohort and maintained through services with the Larry Combest Community Health and Wellness Center.

In Nicaragua, the community health workers described their training process as varied depending upon the region and program for which they were employed. There are no formal centralized education programs provided, however basic skills are taught at the local level. The community health workers surveyed specified that their initial trainings emphasized interpersonal skills; the ability to communicate and interact with diverse populations and educational levels were central. They described the ability to listen and speak with members of their communities to be very important. Much of their training revolved around maternal/newborn care as morbidity and mortality is high in this population. They stated they are trained to support mothers and help them seek out prenatal care at local health posts or community clinics. The community health

workers also reported they receive some basic training in first aid and a small kit of supplies for use in their communities as needed. They stated refresher trainings and seminars occur every 1-3 months.

Identified Teaching Needs

The community health workers identified several needs for furthering their ability to provide safe, quality care within their communities. While modules for educating on chronic diseases were utilized in their training at the local level, some were considered to be outdated and needing updates. In addition, the Lubbock cohort identified needs for new educational modules based on observed patient needs, such as mental health first aid, and information on insurance and ‘payor’ systems to help seek out appropriate resources.

Community health workers in the Jinotega region identified providing care to the elderly as their top priority. Chronic disease management was considered crucial, especially asthma which is common in that area. One worker described that their current knowledge only allowed them to “give the child back to God” should there be an asthma flare-up. They also stated that substance abuse, in particular alcoholism, was a concern and that training on mental health would be of great benefit. They stated that a skill update to learn to monitor blood sugar, blood pressure, and start intravenous interventions for dehydration

Table 2

Actions	
May 2016-May 2017 Trainings	
Community health workers- Local	Community health workers- Global
Periodic Refresher Courses On:	Hands-on Skills Training On:
<ul style="list-style-type: none"> • Online modules on chronic disease management (CDM) including: <ul style="list-style-type: none"> ◊ Diabetes ◊ Asthma ◊ Mental health 	<ul style="list-style-type: none"> • Blood Pressure • Chronic Disease Updates: <ul style="list-style-type: none"> ◊ Diabetes ◊ Hypertension ◊ Asthma
Resources Provided:	Resources Provided:
<ul style="list-style-type: none"> • Teaching resources to use when engaging with patients in community settings. 	<ul style="list-style-type: none"> • Notebook with handouts for patient education on wound care, asthma, high blood pressure, and diabetes. • Blood pressure logs, blood pressure cuffs, and stethoscopes for remote rural regions.

would be helpful in future educational endeavors.

Results yielded many similarities in characteristics and basic educational training between community health workers in Lubbock and Jinotega. Additionally, the interviews provided insight on perceived role within their communities and depth of job satisfaction. Central to both locations is the sense of helping people, of being a patient advocate, sharing information and resources, and a sense of pride in being part of a team. Overall, both groups of community health workers interviewed describe a moderately high level of satisfaction with their work. Greatest concerns related to need for additional resources in order to provide better care to the people within their community. Despite the lack of resources, community health workers value their role. One participant stated “I am very satisfied, I love it” which seems to be the prevailing theme throughout the interviews. See **Table 1** for an overview of the results.

The next step in the PDSA, was to develop a plan of action based on identified educational needs in order improve the process of service, which is in developing training opportunities for both Lubbock and Jinotega cohorts. The following provides activities and educational changes based on the needs of the community health workers in order to improve job satisfaction. See **Table 2** for an overview of the team action plan. In Lubbock, the quality improvement team provided educational training updates in both 2016 and 2017 focusing on chronic diseases such as asthma, diabetes, hypertension, and heart disease. In addition, new mental health modules were incorporated into the curriculum, including a basic pathophysiology of each mental illness and safety precautions while in the community. Periodic refresher online courses were also created for continuing education, which allowed the community health workers opportunities to download and view the courses on their own time. Teaching handouts on each chronic disease and mental illness were created to use when engaging with patients in community settings. The workers were also allowed time in the coding and billing department of the clinic to better understand insurance benefits and ‘payor’ systems. In Jinotega, the quality improvement team developed interactive training sessions for the seminars based on participant requests. Lecture presentations during the training days included content on diabetes, high blood pressure, and asthma. In addition, hands on training on measuring blood pressure was provided which enabled community health workers an opportunity to monitor patients in more remote rural settings where they were likely to be the closest health care provider. Blood pressure cuffs

and stethoscopes were also provided to each participant as well as blood pressure logs to use in their home communities. Culturally appropriate educational handouts were developed at applicable health literacy levels and provided to the community health workers to utilize with patient teaching interactions.

The IHI model advocates gathering periodic incremental data to study, improve, and complete another cycle of evaluation [7,8]. Information gathered from our baseline survey of job satisfaction among community health workers was used to develop a plan of change. Survey scores on future studies will be evaluated periodically during future training seminars to determine if organizations and team members are addressing improvements on job satisfaction.

Conclusions

Community health workers have shown to be effective in improving patient education on the management of chronic diseases. Many healthcare organizations have begun to utilize community health workers in patient follow-ups, readmission preventions and patient education. Frequent patient education enables patients to manage their own health, which brings satisfaction to the community health workers. While both regions have basic educational training, there were identified needs that were community specific. Training for community health workers must meet the needs of the patients they serve to promote positive health outcomes in the communities. Because these workers are mentors and guides for the people they serve, consistent training and dedicated resources will aid in job satisfaction. While this quality improvement process is limited because it only reflects views from community health workers from two locations, the similarities in characteristics, motivation, job satisfaction, and passion for service bears notice.

Increasing collaborative opportunities among these workers to network and support each other, will in turn strengthen the service they can provide to their communities. Education of community members about the role of community health workers will improve relationships between patients and the workers, allowing them to promote positive outcomes through empowering community. Knowledge about motivation can assist community health worker programs to tailor processes to promote better hiring, retention, training, and improved job satisfaction, leading to a higher quality of patient care. Ultimately this knowledge can serve to empower community members to help themselves establish ownership of health-

related programs regardless of where they call home.

Acknowledgements

We acknowledge Dr. Linda McMurry for her contribution in the project.

Funding Source

The author(s) received no specific funding for this work.

Conflict of Interest

No authors have conflicts of interest to report.

References

1. Lehmann U, Sanders D. Community health workers: what do we know about them. The state of the evidence on programmes, activities, costs and impact on health outcomes of using community health workers. Geneva: World Health Organization. 2007 Jan:1-42.
2. Gary TL, Bone LR, Hill MN, Levine DM, McGuire M, Saudek C, Brancati FL. Randomized controlled trial of the effects of nurse case manager and community health worker interventions on risk factors for diabetes-related complications in urban African Americans. *Preventive medicine*. 2003 Jul 1;37(1):23-32.
3. United States. Central Intelligence Agency. (February, 2019). The World Factbook: Nicaragua. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/geos/nu.html>.
4. Sequeira M, Espinoza H, Amador JJ, Domingo G, Quintanilla M, de los Santos T. The Nicaraguan health system. Seattle, WA: PATH. 2011;201(1).
5. Kvernflaten B. Meeting targets or saving lives: maternal health policy and Millennium Development Goal 5 in Nicaragua. *Reproductive Health Matters*. 2013 Jan 1;21(42):32-40.
6. Nading AM. "Love Isn't There in Your Stomach" A Moral Economy of Medical Citizenship among Nicaraguan Community Health Workers. *Medical anthropology quarterly*. 2013 Mar;27(1):84-102.
7. Institute for Healthcare Improvement. (2019). Plan-Do-Study-Act (PDSA) Worksheet. Retrieved on January 31, 2019 from <http://www.ihl.org/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx>.
8. Langlely GJ, Moen RD, Nolan KM, Nolan TW, Norman CL, Provost LP. The improvement guide: a practical approach to enhancing organizational performance. John Wiley & Sons; 2009 Jun 3.