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Abstract

Introduction: Previously published community health assessments (CHA) have explored social determinants of health in low-resource, Haitian-majority Dominican communities. The present CHA was conducted in Las Malvinas II, a Dominican-majority low-resource community, and represented a first step for developing a building a healthier community process. **Method:** A binational community–academic partnership adapted the Centers for Disease Control and Prevention's CHANGE (Community Health Assessment and Group Evaluation) guide to conduct a CHA through community-engaged, mixed-methods research. Data were collected on five community selected public health priorities (i.e., education, sanitation, unwanted pregnancies, chronic disease management, and vaccine-preventable diseases) and community assets through focus groups, interviews with key informants, and a household survey using GIS (geographical information systems) technology. **Results:** Of all five priorities, unwanted pregnancies and sanitation received the lowest average CHANGE tool ratings for both policies and Systems and Environment. However, data gathered on the five public health priorities reflect the perceived needs and assets of Las Malvinas II, and are equally important in improving the community's health and well-being status. Community members identified as important goals the construction of a primary health clinic, as well as a bigger school, that includes pre-school and high school levels. **Conclusion:** A coalition emerged from the CHA to address the identified issues. The coalition used CHA findings to develop a community health improvement plan. The establishment of a primary health care center and a bigger school were identified as primary goals.

Keywords

community health assessment, social determinants of health, building healthier communities, Latin America and the Caribbean, mixed-methods research, community-based participatory research

Purpose

A holistic perspective of health reflects a combination of factors, including an individual's economic, social, cultural, and physical environment; access to health care services; and demographic characteristics (Lovell & Bibby, 2018). This holistic health perspective also includes the economic and social inequalities in society that lead to inequity in social determinants of health (SDH), which in turn contributes to poor health outcomes in members of vulnerable communities (Pan American Health Organization, 2017). Multidisciplinary approaches to community development have been developed based on the impact of community and societal factors on health outcomes. One such approach is asset-based community development, which is a method of developing communities that focuses on identifying and improving assets that already exist in a community (Blickem et al., 2018). Community-based participatory research (CBPR) and community engagement are other approaches, which involve working with and through groups of people to change their

environment and behavior in order to improve their health (McCloskey et al., 2011; Minkler & Wallerstein, 2008).

Community members may begin the process of addressing SDH by identifying their health priorities through the collection of data regarding their health status (Pennel, Burdine, Prochaska, & McLeroy, 2017). The community health assessment (CHA) is one approach to collecting and organizing data on a community's assets and areas for improvement (Rosenbaum,

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2013). Community and academic partners can use data from a CHA to identify critical issues related to policies, systems, and environments that influence the health-related behaviors of individuals (Stewart, Visker, & Cox, 2013). No single organization or group can implement all the changes necessary to improve the health of a community; instead, a collaborative approach is required through the building of coalitions between different organizations and disciplines that influence health (McCloskey et al., 2011; Stewart et al., 2013).

The Dominican Republic (DR) has one of the highest gross domestic product in the Caribbean, but its wealth is unequally distributed among its residents, and its rate of social spending is lower than that of any other Caribbean country (Central Intelligence Agency, n.d.; Flechtner, 2017). As a result, many low-resource communities exist across the DR, and the political corruption at the national level leaves their residents with limited access to education, health care, and opportunities for work (Suiter, 2017). In the DR, CHAs have been conducted in several low-resource communities. However, most published CHA-related studies in the DR have focused on *bateyes*, or villages of squalor, which mostly consist of low-income Haitian immigrants and Dominicans (Miller, Lin, Kang, & Loh, 2016; Suiter, 2017). One CHA concluded that limited access to resources leads to poor health outcomes for residents of low-resource communities (Miller et al., 2016).

The Iberoamerican University (UNIBE) in the DR developed a partnership with community leaders from Las Malvinas II (hereinto referred to as Las Malvinas) in Santo Domingo, the capital of the DR, and for the past 10 years has been conducting service learning activities to improve this community's health. In an effort to promote a more sustainable approach to community development in Las Malvinas, UNIBE extended their partnership to include a faculty facilitator of Dominican origin and students from Clemson University (CU), USA. This article summarizes findings of a CHA conducted by CU, UNIBE, and community partners in Las Malvinas between August 2015 and May 2017. The research team culturally and linguistically adapted the Centers for Disease Control and Prevention's (CDC) Community Health Assessment and Group Evaluation (CHANGE) protocol (CDC, 2010). This CHA served as the basis to promote a building a healthier community approach in Las Malvinas (Norris & Pittman, 2000; Schuck & Rosenbaum, 2006). The CHANGE protocol and corresponding instruments have been widely used in the United States to guide healthy community initiatives and community development (CDC, 2010). However, based on a thorough search of the available literature, the present study seems to be the first to apply this tool to a Caribbean low-resource community.

Methods

The Study Context

Las Malvinas is a low-resource community in the Northern Santo Domingo province in eastern DR that emerged in the early 1980s as residents relocated from rural settings.

Surrounded by La Isabela Industrial Park (LIIP), the 0.1 square kilometers of land that make up the community sustain a dynamic population of over 2,500 residents, most living in substandard housing conditions. The majority of these residents are native Dominicans with a small and fast-growing Haitian immigrant minority. A census conducted in Las Malvinas by UNIBE showed that the average income was only one third of the national average (UNIBE, 2012a). Like many relatively young and poor communities in the city of Santo Domingo, Las Malvinas lacks an adequate sanitation system, access to higher education and health care facilities, and a source of regular and clean drinking water. Most residents also face limited job prospects, with an unemployment rate of 70% and a literacy rate of 65% (UNIBE, 2012a, 2012b). Las Malvinas Neighborhood Association (LMNA) is the only existing community association, and Las Malvinas elementary and middle school is the only community organization.

Contextual, Cultural, and Linguistic Adaptation of the CDC's CHANGE Tool

Castro, Barrera, and Martinez (2004) argued that the adaptation of programs might produce more effective programs than the original ones as culturally tailoring programs encourages a sense of local ownership. However, changes to a program should be made without compromising or eliminating the program's core components, which are the essential characteristics responsible for its effectiveness (Rolleri et al., 2014). In implementing the cultural adaptation of the CHANGE protocol to conduct a CHA in Las Malvinas II, the research team pursued modification of this protocol to make it "compatible with community members' cultural patterns, meanings, and values" (Bernal, Jimenez-Chafey, & Domenech Rodríguez, 2009, p. 362). Chen, Reid, Parker, and Pillemer (2012) posited that community engagement is the first step in the adaptation of programs for cultural groups and that it should continue throughout the process. The present project utilized community engagement by promoting ownership by community members and involved organizations.

The CDC's CHANGE approach takes into consideration both the socioecological and asset-based approach in recommending procedures for data collection and community engagement (CDC, 2010). Therefore, both frameworks guided the development of Las Malvinas II CHA (Bronfenbrenner, 2005; Kretzmann, McKnight, Dobrowolski, & Puntenney, 2005). The socioecological framework (Bronfenbrenner, 1994) explains how the many different factors that influence the health of an individual interact to produce potential individual health outcomes. The framework places factors into one of four levels, which include individual, including biological factors and personal behavior; interpersonal relationships with other individuals; community, including school or workplaces; and society, including policies (World Health Organization, 2019). According to the framework, the factors at each of these levels interact with each other in both directions, with broader levels influencing narrower levels and vice versa (Lovell &

Bibby, 2018). In this study, data were collected from five sectors (community at large, community institutions and organizations, work, health, and school) with the purpose of exploring SDH at various levels of the Las Malvinas socioecological spectrum.

The asset-based community development approach is a method of developing communities, addressing SDH, and reducing health disparities that focuses on identifying and improving assets such as resources that already exist in the community (Blickem et al., 2018). In this study, all data collection instruments included questions to identify individual- and community-level assets perceived to be present in the community by study participants. Furthermore, identified assets were incorporated in a community health improvement plan developed by the community and their partners a posteriori.

In accordance with CBPR principles, the first step in the CHANGE protocol adaptation process was to engage the community in a process to identify five priority public health issues (Minkler & Wallerstein, 2008). The CU research team preselected various public health issues of relevance for Las Malvinas, based on previous studies conducted by UNIBE, as well as information provided by LMNA leadership (UNIBE, 2012a, 2012b). Subsequently, a list of seven potential public health priorities were sent to the LMNA leadership via a local university partner, who met with LMNA leadership at Las Malvinas II. This meeting resulted in LMNA leadership approval of five of the seven preselected priorities proposed by the CU team. The five approved public health priorities were sanitation, education, vaccine-preventable diseases, chronic disease management, and unwanted pregnancies.

Once the five priorities were identified, a multidisciplinary team of CU students and the faculty leader reviewed the literature and health statistics to identify related SDH and outcomes. With this information, and based on the CHANGE protocol, the research team developed and/or adapted data collection instruments and procedures to investigate individual- and community-level assets, along with SDH and outcomes related to each priority, including specific areas within each priority in which programs, policies, and interventions could be developed to improve overall health and community well-being (CDC, 2010). The final products were data collection instruments, including the CHANGE tool analysis platform, which followed a mixed methods data analysis approach. The research team developed data collection instruments in English and translated them to Spanish, using the translation–back translation methodology (Bracken & Barona, 1991). For this end, instruments were back-translated into Spanish by two native Spanish-speaking students and translated back to English by two bilingual students to evaluate language accuracy. In addition, to ensure accuracy, agreement with low community literacy levels (literacy rate of 65%), and the use of culturally appropriate language, the faculty leader, who is a native Dominican with 18 years of experience in the DR public health system, reviewed translations and back translation of instruments. The research team refined data collection instruments through an iterative process with consultations with the CHANGE protocol development team at the CDC, as well as with community leaders through the UNIBE partners.

The institutional review boards of both CU and UNIBE approved all questionnaires and research tools used to collect data in Las Malvinas II. Based on the socioecological framework, data collected on these five priorities were organized based on five sectors, which were the community at large, community organizations, health, school, and work sectors. Figure 1 summarizes the five selected public health priorities, five corresponding sectors, and methods of data collection used.

Sample and Participant Recruitment

Focus group (FG) participants consisted of Las Malvinas community residents and indigenous leaders, between 18 and 60 years of age, who had resided in the community for at least 1 year. The two FGs totaled 17 participants. Six interviews totaled 15 participants because LIIP (3) and Public Health Area Directorate (8) representatives incorporated other members of the organizations in the interview. Other interview participants included two leaders from LMNA who were interviewed separately, and one representative each from the local school and the Ministry of Environment. UNIBE and LMNA partners recruited FG participants with an informational flyer. A household survey, using geographical information systems (GIS) technology (hereinto referred to as "the survey"), sampled caregivers between 18 and 60 years old, from 177 households conveniently selected at the time of the survey, representing 24% of the 750 estimated households in the community.

Data Collection and Data Analysis Procedures

Focus group sessions and interviews were held in a setting within the community in proximity to participants' households. The faculty leader and project principal investigator, who is a native Spanish-speaking researcher, facilitated both FGs and interviews. The facilitator read an informed consent to participants and obtained their verbal consent. Identifiers were not included in the data collection process to ensure confidentiality. Interview and FG participants received a financial incentive of an $11 gift card for participation. The focus group instrument had 37 questions, and interview questionnaires had 35 to 37 questions, depending on the sector. FG and interview instruments all included questions about health practices and access to health care services for the five prioritized public health issues; SDH in the community at large, community organizations, work place, school, and health care sectors; and assets or strengths in the community. FGs and interviews were recorded and transcribed for analysis, first in Spanish, and then translated into English. CU students and faculty analyzed the transcriptions with content analysis by following a deductive approach. Responses were summarized and organized by questions to prepare the CHA report. FG and interview data were combined with GIS survey data through triangulation, to
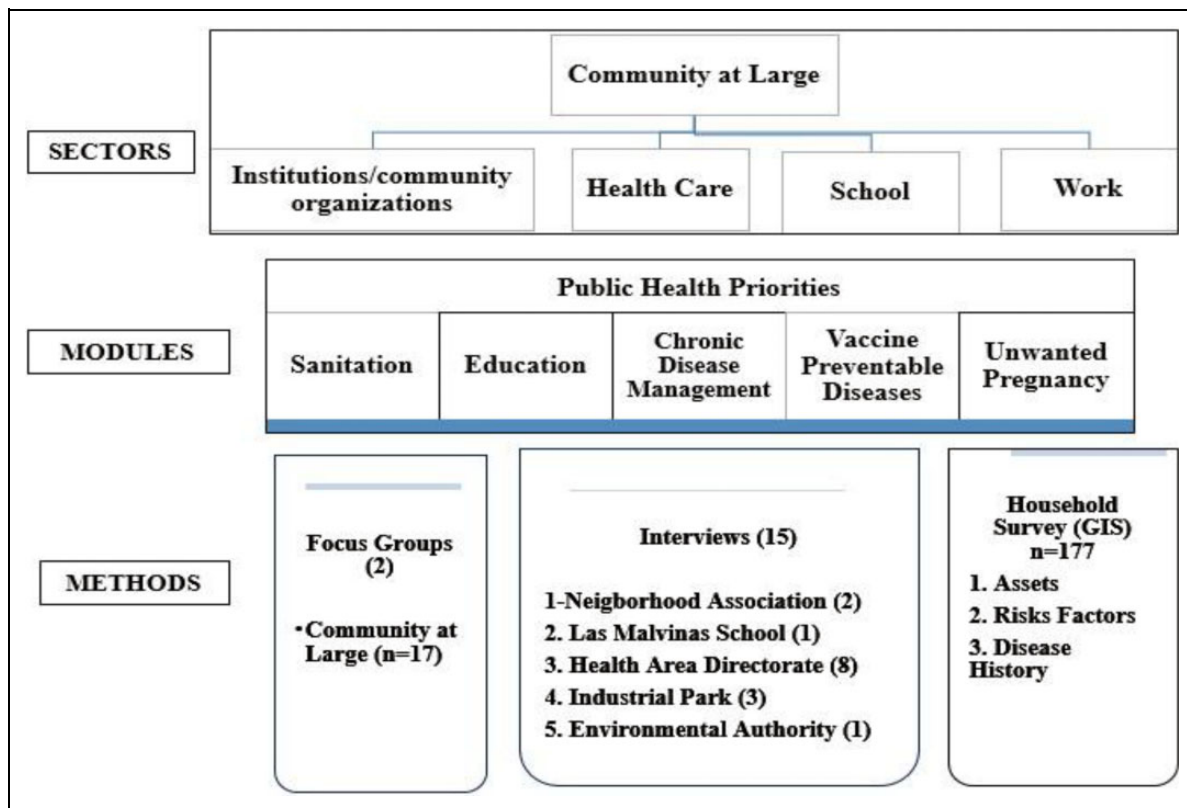
Figure 1. Methodology for conducting the Community Health Needs and Assets Assessment (CHA) in Las Malvinas II, based on the adaptation of the CHANGE protocol (CDC, 2010). March 2016, Santo Domingo, Dominican Republic.

develop a more accurate picture of the health situation of Las Malvinas II, according to its residents.

For the household survey, participants were recruited from a randomly selected group of households within Las Malvinas II through convenience sampling, by dividing the community sketch in six quarters and assigning a team of trained CU and UNIBE students to each quarter. Originally, the research team planned to sample participant households by selecting the first household from each quarter, then selecting a household every 300 m (0.19 miles) until covering the entire community. However, because many household caretakers were at work at the time of the survey, and because the community has an irregular household distribution, the research leader asked students to select all households in which an adult caretaker between 18 and 60 years of age was present. Researchers identified the participant and read the informed verbal consent, including level of comfort with the use of a mobile application by the researcher to record responses. Survey participants were informed they would not receive any incentive. Identifiers were not included in the data collection process to ensure confidentiality. The questionnaire had 24 multiple-choice questions. Questionnaire items inquired about topics such as talents of household members, the quality of health care in Las Malvinas, and cases of malaria or other vector-borne diseases in the home. During the process of household data collection, students also identified a selected number of risk and protective factors (i.e., stagnant water, garbage dumps, fresh food

markets, etc.) to be marked into the GIS map. GIS household survey data were analyzed using an online database provided by CU and known as ArcGIS.

CHANGE Tool

In addition to using the analyzed data, obtained through the focus group, interviews, and the survey, to describe the situation of the five public health priorities in Las Malvinas II, the research team used the content-analyzed data to conduct an analysis of the situation of policies and systems at this community. For this end, the research team used the CHANGE tool. The CHANGE tool is one data analysis instrument (Excel platform) included in the CHANGE protocol that classifies data collected into the three areas of policies, systems, and environment (CDC, 2010). These areas were grouped in this publication into "policies" and "systems and environment (SE)." According to the CHANGE guide, policies are laws, rules, procedures, protocols, and regulations that intend to influence or guide behavior and which can be organizational or legislative (CDC, 2010). The environment, as defined by the CHANGE guide are physical, social, or economic factors that influence the behavior and practices of individuals (CDC, 2010).

Original indicators provided in the CHANGE tool were replaced with the questions and indicators from the data collection instruments used in the focus groups, interviews, and

Table 1. Summary of CHANGE (Community Health Assessment and Group Evaluation) Tool Ratings for Policy and Systems/Environment (SE), Grouped by Sector Within Each Health Priority (Las Malvinas II, Dominican Republic, March 2016).

Sector	Area	CHANGE tool rating by health priority (%)				
		Sanitation	Education	Vaccine-preventable diseases	Chronic disease management	Unwanted pregnancies
Community-at-large	Policy	22	17	37	22	21
	SE	17	15	28	18	20
Community organizations	Policy	18	21	21	25	21
	SE	13	24	19	22	11
Health	Policy	10	12	20	15	10
	SE	10	13	17	13	13
School	Policy	22	54	40	36	18
	SE	23	56	40	40	15
Work	Policy	09	0	0	04	0
	SE	08	0	0	02	0
Five sectors average	Policy	16	21	24	21	14
	SE	14	22	21	19	12

the survey. Analysis of data collected through these instruments first required students to rate overall responses regarding both policies and SE on a scale from one to five. The Excel software provided by the CDC was used to average the one to five rating values assigned by these students for each sector in each priority. The CHANGE Tool Excel platform was then used to convert the one to five rating for all priorities into a percentage rating. Thus, each priority received a score ranging from 0% to 100% each for both policies and SE. A low score for a priority (closer to 0%) indicates that few policies and environmental systems that promote community health and well-being are in place in a particular sector. A high score (closer to a 100%) indicates that a sector has begun to implement strategies or has strong systems already in place to improve or promote health. For more information on how to conduct a CHA policies and SE analysis using the CHANGE tool, please review the CDC's CHANGE protocol (CDC, 2010). In accordance with CBPR principles, both policies and SE ratings were shared with UNIBE and LMNA leaders, who agreed on the ratings obtained.

Results

The following sections describe study findings, which are grouped according to the five health priorities of (1) sanitation, (2) education, (3) vaccine-preventable diseases, (4) chronic disease management, and (5) unwanted pregnancies. Within each health priority, findings are divided into the two categories of "policies" and SE." Findings are also grouped within each priority by the five sectors evaluated: (1) community-at-large, (2) community organizations, (3) health sector, (4) school sector, and (5) work sector. Table 1 includes the summary of ratings for the five priorities. Table 2 includes the comparative status of the five public health priorities regarding policies and SE, according to obtained percentage ratings.

Sanitation

Policies. Las Malvinas had limited policies in place regarding sanitation, which posed many challenges. FG participants shared that the municipal government had established a weekly garbage collection, but the garbage truck could only enter some streets because many were narrow and unpaved. Participants also reported that there was no municipal wastewater or sewage system. LIIP representatives revealed that the work sector had few policies in place regarding sanitation. However, LIIP representatives had noted that industrial waste contaminated Las Malvinas.

Systems and environment. Las Malvinas lacked systems that would have improved sanitation in the community. In the community-at-large sector, representatives from LMNA said that they had attempted to educate community members about sanitation, but residents continued to litter on the streets and dispose of waste in the surrounding rivers. According to FG participants, most families obtained water from wells they constructed themselves, which were highly contaminated, as confirmed by unpublished data from water samples collected by UNIBE (2015). Participants in FGs explained that bottled drinking water was available for purchase, but it was expensive. FG participants reported that the Water and Sewerage Corporation of Santo Domingo had built a large water pump, but there were no water lines in Las Malvinas. Within the school sector, a school authority stated that the school had five water dispensaries as a source of clean drinking water for students, and the school building was cleaned regularly.

According to FG participants, some households had a latrine or toilet, but the waste was disposed underground, thus contaminating water wells. A GIS map showed a spatial relationship between having a latrine or a toilet without sewerage and a higher occurrence of diarrhea cases in the family. A representative from LMNA reported that many of the roads had potholes that collected stagnant water, and many families

Table 2. Public Health Priorities' Status According to Community Health Assessment and Group Evaluation (CHANGE) Tool Ratings (%; CDC, 2010) From the Lowest to the Highest Rating (Las Malvinas II, Dominican Republic, March, 2016).

Priority	Status of ratings[a] for policy[b] and systems[c] and environment[d] (SE)	
	In relation to other priorities	By sectors
Unwanted pregnancies	• Lowest rating out of all health priorities for both policy and SE (14%; 12%)	Lowest rating • For policy: The health sector (10%) • For SE: The community organizations sector (11%) Highest rating • For policy: The community organizations sector (21%) • For SE: The community-at-large sector (20%) 0% rating • The work sector for both policy and SE
Sanitation	• Second lowest rating out of all health priorities for both policy and SE (16%, 14%)	Lowest rating • The work sector had the lowest rating for both policy and SE (9%; 8%) Highest rating • The school sector had the highest rating for both policy and SE (22%; 23%)
Chronic disease management	• Third highest rating out of all health priorities for both policy and SE (20%; 19%)	Lowest rating • The work sector received the lowest rating for both policy and SE (4%; 2%) Highest rating • The school sector received the highest rating for both policy and SE (36%; 40%)
Education	• Second highest rating of all health priorities for policy (21%) • Highest rating of all health priorities for SE (22%)	Lowest rating • The health sector received the lowest rating for both policy and SE (12%; 13%) Highest rating • The school sector received by far the highest rating for both policy and SE (54%; 56%) 0% rating • The work sector for both policy and SE
Vaccine-preventable diseases	• Highest rating out of all priorities for policy (24%) • Second highest rating of all health priorities for SE (21%)	Lowest rating • The health sector received the lowest rating for both policy and SE (20%; 17%) Highest rating • The school sector received the highest rating for both policy and SE (40%; 40%) 0% rating • The work sector for both policy and SE

[a]Ratings range from 0% (absence of) to 100% (full development of), whereas a rating of 0% for policy and/or SE in a sector indicates no policies or systems in that sector in relation to that specific health priority. [b]Policies are laws, rules, procedures, protocols, and regulations that intend to influence or guide behavior and which can be organizational or legislative. [c]Systems are factors that influence all elements, including social norms, of an organization. [d]The environment includes physical, social, or economic factors that intend to influence the behavior and practices of individuals.

collected water in tanks. Survey participants reported that 59% had stagnant water around their home every day, and 66% reported a case of malaria, dengue, or chikungunya in their family in the past year.

Education

Policies. At the national level, the DR has a lower rate (9%) of spending in education than the median (16%) of all countries with similar income (Education Policy and Data Center, 2018). This low spending in education is especially apparent in communities like Las Malvinas, where problems abounded in the school sector.

Systems and environment. FG participants explained that no high school or college education was offered in Las Malvinas, and most community members could not afford the fees and transportation costs to attend school outside the community. In the survey, 55% of individuals reported that no one in the household had attended university. Las Malvinas primary/middle school was identified as a community asset by study participants, together with the LMNA, and other community strengths (Figure 2). School authorities informed that school employees were trained but the school building was too small, had no electricity and poor lighting, and was very hot. Parents who participated in the FGs said their children did not want to attend school due to the condition of the building. School authorities
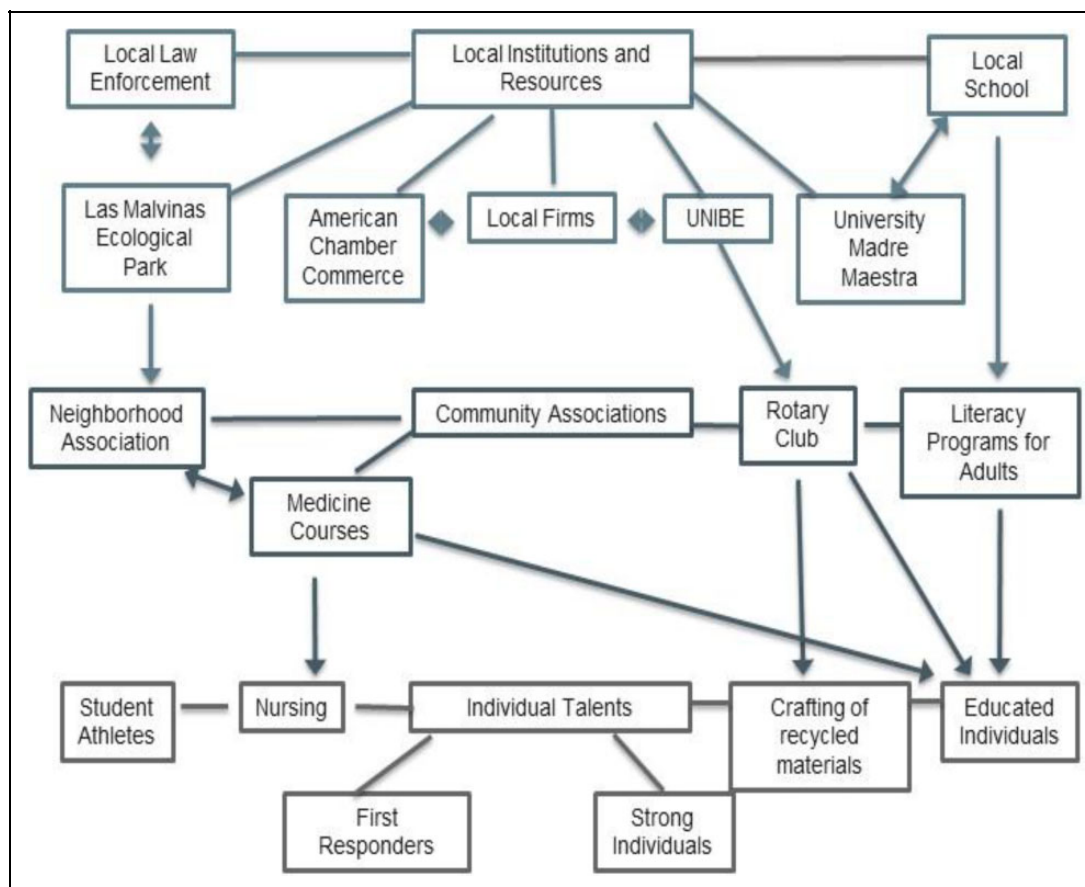
Figure 2. Individual- and community-level assets identified by Las Malvinas II Community Health Assessment (CHA) participants, March 2016, Santo Domingo, Dominican Republic.

described a lack of parent involvement in assisting with tasks at the school, due to their own lack of enforcement of this practice. School authorities informed they discontinued a previous adult literacy program due to low attendance. Thirty-seven percent of survey participants reported having at least one illiterate adult in their household.

Vaccine-Preventable Diseases

Policies. The DR National Immunization Program requires that free vaccinations be provided in all public health clinics (Garib et al., 2016). However, vaccines may still not be available in communities like Las Malvinas, which lacked a health clinic. Representatives from LIIP stated that there were no policies regarding vaccinations for employees, and employees were not required to be vaccinated.

Systems and environment. Las Malvinas lacked systems that would have made regular immunization possible. FG participants revealed that the community understood the importance and safety of vaccines, but many parents were unaware about which vaccines their children should receive and when. Although 86% of survey participants believed that vaccines were safe, 53% did not know which vaccines children needed

to receive at specific ages. No educational programs regarding vaccines were offered, and 27% of survey participants reported that in the past 5 years, at least one member in their family had been diagnosed with a vaccine-preventable disease. Forty-three percent of survey participants stated that vaccination posts were difficult or very difficult to access.

In the community organizations sector, school authorities informed that there used to be a program in which public health officials would come periodically to vaccinate children, but at the time, they only visited during disease outbreaks. They also reported that the school encouraged parents to have their children immunized and attempted to keep students' vaccination records.

Chronic Disease Management

Policies. The DR Ministry of Public Health has established a national program for the surveillance, prevention, and control of chronic diseases, which faces challenges imposed by limited funding (Pan American Health Organization, 2012). According to an LMNA representative, health insurance coverage was limited in the community. Only individuals with DR government health insurance could be seen at certain clinics, which prevented many people from receiving heath care (Seguro

Nacional de Salud/National Health Insurance [SENASA], 2012).

Systems and environment. FG participants revealed that residents were aware of the high prevalence of chronic diseases in Las Malvinas, and most participants had or knew someone who had a chronic disease. Fifty-six percent of survey participants reported that someone in their household had a chronic disease. FG participants revealed that television was the main source of information on chronic diseases; and that they knew which foods are healthy, but they often could not afford healthy foods. According to FG participants, doctors advised community members with chronic conditions to exercise, but many people worked long hours and did not have time. Thirty-eight percent of survey participants informed that they are never physically active. School authorities reported the school had an athletics teacher who exercised with the students. Representatives from LIIP explained that there were no formal chronic disease management programs in the workplace.

Unwanted Pregnancies

Policies. Although the DR has national policies in place to reduce adolescent pregnancy, the country still has a very high rate of adolescent pregnancy, at 100 per 1,000 girls ages 15 to 19 years (Mishra, Gaigbe-Togbe, & Ferre, 2014). The federal government provides family planning, but 11% of women who want contraceptives are unable to obtain them (Mishra et al., 2014). A community representative stated that contraception was available, but adolescents were often unable to access it due to its attached stigma and the absence of a health clinic in the community. In the survey, 52% of participants said they did not have access to family planning services.

Systems and environment. Across all sectors, Las Malvinas lacked formal SE that would have assisted in the prevention of adolescent pregnancy. FG participants stated that the school director had implemented a sexual education program for fifth through eighth grade girls, but noted that many community members seemed unaware about its existence and contents. This lack of awareness was confirmed by the survey, to which 41% of participants responded that their children received sexual education. In the community-at-large sector, FG participants revealed that many people believed adolescent pregnancy was a problem, but that most parents were embarrassed to discuss sex and family planning with their children. FG participants informed that there was no support for pregnant adolescents apart from the support of their families.

Discussion

Research has shown that a community's health is not only determined by its health care system but rather is a complex issue influenced by many different factors at varying levels (Bronfenbrenner, 1994; Lovell & Bibby, 2018). Low-resource communities across the DR face a lack of basic services, which can influence the health of their residents (Flechtner, 2017; Miller et al., 2016). A community−academic partnership between UNIBE and LMNA was expanded to include CU to address SDH in Las Malvinas.

Of all five priorities identified, sanitation had the second lowest average CHANGE tool rating for policies, as well as for SE. A limited supply of drinking water is greatly responsible for negative health outcomes in community members, including diarrheal diseases (Wright, Gundry, & Conroy, 2004). Stagnant water and waste accumulation may provide breeding grounds for mosquitos, which can in turn spread vector-borne diseases (Deressa, Ali, & Enquoselassie, 2003; Vlahov et al., 2007).

Education received the second highest CHANGE tool rating of all health priorities, likely reflecting local school and community leadership efforts. Community members identified Las Malvinas II School as an asset for their community. However, involvement of parents in the school was limited, and studies have shown that parents' involvement in children's daily activities is positively associated with children's social and academic development (Karberg, Guzman, Cook, Scott, & Cabrera, 2017). Survey maps showed a positive spatial relationship between the number of illiterate adults and the incidence of vaccine-preventable diseases in a family. These results are consistent with other studies, which have shown that education is associated with health outcomes (Schillinger, Barton, Karter, Wang, & Adler, 2006).

Vaccine-preventable diseases received the highest average CHANGE tool rating, likely reflecting positive attitudes toward vaccines, but many residents still faced barriers in accessing health care services, and limited health education. Although community members valued healthy foods and exercise, barriers prevented them from practicing physical activity and affording healthy food. These barriers and limited access to health care prevented many residents from managing their chronic diseases, likely contributing to the median average CHANGE tool rating for this health priority. These findings reflect the important role the environment plays in influencing individuals' health-related decisions (Lovell & Bibby, 2018).

Unwanted pregnancies received the lowest average CHANGE tool rating of the five health priorities, which is likely due to difficulty in accessing contraceptives, stigma associated with their use, and lack of parent–child communication about sex, which may be partly culturally determined (Schiappacasse & Diaz, 2006). Though the school had a sexual education program, there was little awareness about this program in the community. Community members identified the construction of a primary health clinic as their main goal. This clinic would become a setting where disease prevention and health promotion programs and resources would be delivered within the community. A bigger school, that includes a high school level, was also identified as an important goal. Findings of this CHA were used to orient development of a community health improvement plan in 2017, which included these two goals alongside other strategies to address needs, challenges, and related community assets identified in this CHA.

Limitations

Limitations of this study include that its findings are specific to Las Malvinas, so they may not be generalizable to other communities in the DR and around the world. However, findings may guide further research and provide a community perspective on health needs and assets of low-resource Dominican communities, particularly those comprised mainly of native Dominicans with a Haitian immigrant minority. Another limitation is that the use of FGs required the participation of a facilitator, which may have influenced the conversation of participants. Some household survey participants did not answer all survey questions. However, the percentage of unanswered questions was small enough that bias may not have been introduced in the study. Questions were translated from English to Spanish, so they may not have gathered the exact information that the researchers sought, and participants may have potentially misinterpreted them. FG, interview, and survey participants were selected using convenience sampling, so they may not have represented the community and institutions as a whole. Despite these limitations, the researchers believe that the mixed-methods approach used provided a comprehensive description of community perspectives on their health-related needs and assets.

Conclusion

The five public health priorities, all reflect the perceived needs and assets of Las Malvinas and are each equally important in improving the community's health status. Findings from this CHA were shared with community leaders and their local partners to assist in the identification of strategies to address identified priorities. The establishment of a primary health care center in Las Malvinas could influence many health priorities by implementing disease prevention and control programs and services locally. Application of this CHA's findings required the development and continuation of partnerships to provide many opportunities to address the identified issues. A coalition emerged from the CHA process comprised the LMNA, four governmental ministries (i.e., Education, Health, Environment, and Water), the local municipality, the two universities, and a local nonprofit. Thus, this report highlighted the vital role alliances have in allowing a community to identify and address its health-related needs in order to improve the health status and well-being of its members.

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