

Health Literacy for Black Community Leaders Using “Responsible Hearts” Program Virtual and Onsite Educational Interventions in Three Colombian Municipalities

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ABSTRACT

Cardiovascular diseases are the number one killer worldwide, with 17.9 million deaths, and in Colombia, with 19,000 in the last quarter of 2022 (accounting for 30% of deaths). Despite healthcare services and educational programs, the epidemiology continues to grow steadily. *Method 10 of Care as a Lifestyle*, created by the Fundación Colombiana del Corazón (FCC) [Colombian Heart Foundation], aims to raise awareness to impact the perception of change and generate confidence to begin the pre-contemplation stage in peoples’ behavior, building a solid educational basis for introducing the concept of collective health to the community using simple and inclusive language, and adopting technological advances as a teaching medium. This refers to ludic and inspiring activities which help promote behavior change which aimed at building care into peoples’ lifestyles. The FCC proposes it as an apt pathway for preventing and/or reducing the incidence of cardiovascular disease by directing their actions more precisely toward clinical and social risk factors.

Keywords: Distance, Health literacy, Collective health, Public health, Health education, Lifestyles, Cardiovascular prevention, Cardiovascular disease

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Problem

Despite the indisputable increased coverage of healthcare services and the development of health literacy programs, cardiovascular diseases continue to be the main cause of death, with an ever-growing incidence. This is an epidemiological reality to which the world is facing today and these figures, which are already dramatic, are expected to increase an alarming 40% by 2035, if immediate action is not taken (1).

Being aware of the shortcomings in health education and literacy strategies for preventing cardiovascular diseases, the Fundación Colombiana del Corazón created

the Responsible Hearts Program in 2010 as an action strategy for achieving health literacy among the Colombian population.

The FCC Responsible Hearts Program’s care as a lifestyle aims to teach people to take action to care for their hearts, adopt care as a lifestyle, learn to talk with their physicians, identify early signs and symbols of lifestyle-related diseases (especially cardiovascular diseases), learn ways of accessing the healthcare system, and choose healthy behaviors.

Throughout these years, FCC has structured a communication and education strategy for creating on-site (through educational events

and projects) and virtual community settings using WhatsApp groups (for community projects), a web page (2), YouTube (3), Instagram (4), Facebook (5), and a Virtual Campus (6). These communication strategies are intended to draw the participants closer, expand coverage, and provide them with valid tools for accessing knowledge. The FCC is aware that the use of information technology, and especially text messages, is effective, as shown in the systematic review by Hall, Cole-Lewis and Bernhardt in 2015 (7).

Since 2021, FCC has been carrying out various educational interventions which aimed at fostering health literacy by encouraging knowledge appropriation and transfer using specific educational strategies. As a result of this commitment, two training programs have been implemented with Black residents of Colombian towns. In 2021 (8-10), in the municipalities of Apartadó (Antioquia), Cartagena (Bolívar) and Montería (Córdoba) and, more recently in 2022, in three other municipalities (San Andrés, Barranquilla (Atlántico) and Tuluá (Valle del Cauca), where a concrete formative approach strategy was employed. The educational components are recorded in the “Care as a Lifestyle” program, which is FCC information-training strategy. The essence of the intervention was to provide elements to support the leaders’ everyday decisions, to motivate them to commit to simple lifestyle changes and become teachers

in their settings to achieve health literacy in their communities.

Solution

To achieve the 2022 training proposal, alliance was made with Universidad Simón Bolívar and the Chambers of Commerce. Community leaders who were recognized by their communities were invited to participate. The intervention focused on Black people due to the differential incidence of cardiovascular disease found in research studies (7), and the three municipalities were chosen as part of a population coverage strategy.

The eight-month educational intervention in 2022 targetted 480 leaders in the selected municipalities, and the axis of the academic content of the training was the 10 cultures that made up the programmatic axis of the care as a lifestyle strategy of Fundación Colombiana del Corazón’s Healthy Hearts program. (Figure 1) Four onsite workshops were conducted in each city and pedagogical training complements were carried out throughout the eight months using the web microsite virtual tools as well as the WhatsApp groups formed in each municipality Program (11).

Results and Conclusion

The analyses were done using Stata 14.0 with a two-tailed level of significance of <0.5, which was considered statistically significant. All the information collected



Figure 1: Method 10 of Care as a Lifestyle

throughout the study from analytical data as well as sociodemographic and psychological questionnaires was consolidated and validated to ensure the quality of the entered data. Multivariate association analyses using linear regression were conducted for each of the dependent variables.

In order to evaluate the impact of the intervention on the intervention population's knowledge acquisition in 2022, we applied three tools:

The first tool was the Cardiovascular Disease Risk Factors Knowledge Level (CARRF-KL) scale. Significant differences were found in various questions related to "smoking is a preventable cause of death and diseases in our country", "hypertension medications should be used for life", and "there is a risk of heart disease if the good cholesterol (HDL) is high." These answers had the greatest difference between the two applications, with $P < 0.001$. It is also important to highlight that, for most items, the answer option of "I don't know" decreased 10% on the final application compared with the initial application of this tool. Likewise, there was a 15% increase in knowledge and identification of the cardiovascular disease risk factors, as well as a more than 30% increase in correct answers between the admission and discharge surveys of the training intervention, generating relevant clinical significance.

The second tool evaluated the impact of the Responsible Hearts strategy on each of the participants. To the question, "How would you rate the workshops you attended in the four interventions?", more than 80% responded positively in the three study groups.

The third tool was the analysis of a case study consisting of nine questions. According to the results, the overall population had a 75% learning index based on the statistics of correct answers selected after the analysis was carried out by each of the participants in the training workshops.

One of the key elements through which the methodology of onsite workshops was consolidated and complemented was the creation of WhatsApp communities,

one per city, through which tips, recipes, commitments, opinions, graphics, tutorials, presentations, motivational examples, testimonials, educational information, and life experiences were shared each week for six months.

Health and Collective Health Literacy as an Essential Tool for Impacting Cardiovascular Health

Achieving *health literacy* means increasing a person's ability to access, understand, and use information to help him/her maintain good health (12). In the implementation of community interventions, FCC has found that while people have varying percentages of knowledge on lifestyles for preserving health or managing identified risk factors, they lack motivation, confidence, and/or empowerment to adopt healthy behaviors. The main objective of FCC community education interventions is to transfer knowledge easily using assertive and motivating language. Information on the risks, perception of risks, and knowledge of what behaviors protect health are essential factors in people incorporating care into their lifestyle. This strategy was adopted in line with the transtheoretical model of change and includes aspects of the theory of planned behavior (TPB) (13).

The findings of the 2022 intervention in the three target study municipalities reinforced the importance of promoting community and population strategies and interventions aided by technology to increase the knowledge and perception of the risks, different ways of managing them with small lifestyle changes, identification of personal commitments and having community leaders to become teachers in their living situations within vulnerable populations.

The construction of teaching elements which aimed at stimulating a step-by-step change in the psychological path from pre-contemplation to action was the basic guarantee supporting the success of the intervention designed for communities whose cultural construct is focused on sedentary behaviors and eating foods which are high

in sodium, sugar, and saturated fat.

The FCC emphasized three key aspects of care as a lifestyle educational program intervention: the use of a new language in daily life, use of persuasion toward new behaviors based on actual possibilities in the cultural context, and creation of a connected peer community sharing experiences, successes, and questions.

The intervention was able to reinforce the knowledge of risk factors and empowered people to achieve change, appropriate the Responsible Hearts teaching strategy, choose more natural and less processed foods and, finally, acquire knowledge of the signs and symptoms of cardiovascular disease.

Lifestyle educational interventions, involving people as subjects of change, are a huge opportunity using care-based strategies to help improve the quality of life and produce good living conditions, prompting behavior changes that have the proposal of care as their essence. This type of intervention, can change the future of community leaders, their families and the community.

Authors' Contribution

LBR: conceptualization, study design, experimentation, data collection, statistical analysis, manuscript preparation; JCS: conceptualization, study design, experimentation, data collection, statistical analysis, manuscript preparation;

Conflict of Interest: None declared.

Ethical Considerations

The authors also state that consent was not obtained by coercion and the participants had the option of withdrawing at any stage of the research.

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