

SALUTOGENESIS AND CARDIOVASCULAR HEALTH IN ADULTS: A SCOPING REVIEW

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ABSTRACT

Objective: to identify and synthesize evidence that relates the salutogenic theory proposed by Antonovsky with cardiovascular disease in adults.

Methods: we conducted a scoping review as proposed by Arksey and O'Malley. Bibliographic databases were searched for original research articles about salutogenesis and cardiovascular health. The search yielded 29 studies that met the previously defined inclusion criteria. The results were evaluated and summarized in the form of a narrative.

Results: the findings of the studies pointed to a correlation among a strong sense of coherence, high quality of life and a greater likelihood of adopting healthy behaviors. Furthermore, the articles showed that social support improves perceived health and well-being of adults with cardiovascular disease.

Conclusions: as a central concept of the salutogenic theory, a sense of coherence represents a topic of interest for nursing professionals. Through their interventions, nurses can strengthen and improve people's skills in the quest for and maintenance of their own health.

DESCRIPTORS: Sense of coherence. Cardiovascular health. Adults. Health. Review.

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SALUTOGÉNESIS Y SALUD CARDIOVASCULAR EN ADULTOS: SCOPING REVIEW

RESUMEN

Objetivo: identificar y sintetizar la evidencia que relaciona la teoría salutogénica propuesta por Antonovsky con enfermedad cardiovascular en personas adultas.

Métodos: se llevó a cabo un scoping review según lo propuesto por Arksey y O'Malley, se identificaron artículos de investigación originales sobre salutogénesis y salud cardiovascular a través de bases de datos bibliográficas, de los cuales 29 cumplieron con los criterios de inclusión definidos previamente. Los resultados fueron evaluados y sintetizados en una narrativa.

Resultados: los hallazgos demuestran relación entre un fuerte sentido de coherencia, con una alta calidad de vida y mayor tendencia a adoptar conductas saludables, además evidencian que el apoyo social mejora la percepción de la salud y el bienestar de las personas adultas con enfermedad cardiovascular.

Conclusiones: el sentido de coherencia como concepto central de la teoría salutogénica representa un tema de interés para los profesionales de enfermería quienes, a través de intervenciones, podrán fortalecer y mejorar las capacidades de las personas para la búsqueda y mantenimiento de su propia salud.

DESCRIPTORES: Sentido de coherencia. Enfermedad cardiovascular. Adultos. Salud. Revisión.

SALUTOGÊNESE E SAÚDE CARDIOVASCULAR EM ADULTOS: UMA REVISÃO EXPLORATÓRIA

RESUMO

Objetivo: identificar e sintetizar as evidências que relacionam a teoria salutogênica proposta pelo Antonovsky com doenças cardiovasculares em adultos.

Métodos: realizou-se uma revisão exploratória da literatura de acordo com a proposta de Arksey e O'Malley e identificou-se artigos de pesquisa originais sobre a salutogênese e a saúde cardiovascular por meio de bases de dados bibliográficas. Desses, 29 cumpriram com os critérios de inclusão previamente definidos. Os resultados foram avaliados e sintetizados em uma narrativa.

Resultados: os resultados demonstram uma correlação entre um forte sentido de coerência, melhor qualidade de vida e maior tendência de adotar condutas saudáveis, além de evidenciarem que o apoio social melhora a percepção de saúde e o bem-estar de adultos com doenças cardiovasculares.

Conclusões: o sentido de coerência como conceito central da teoria salutogênica representa um tema de interesse para profissionais de enfermagem. Por meio de intervenções, estes podem fortalecer e melhorar as capacidades das pessoas na busca e manutenção de sua própria saúde.

DESCRITORES: Sentido de coerência. Doença cardiovascular. Adultos. Saúde. Revisão.

INTRODUCTION

According to the World Health Organization (WHO), health is defined as a state of “complete physical, mental and social well-being and not merely the absence of disease”.¹ This state is the interaction among biological, mental, social, cultural, and economic factors and their relationship with the environment and society. Considering the emphasis given by WHO to the need to prioritize the human dimension, health professionals should strive to understand individuals, learn about their context and reality, and the suffering and difficulties they are up against.

Traditionally, health care has focused on a biomedical approach, which focuses on conditions of health and disease, reducing risk factors to prevent or reduce the consequences of illness, and identifying factors that predict morbidity, disability and mortality.² However, it is necessary to incorporate health promotion models that strengthen what is favorable and positive for health, and that believe that people have the potential and ability to control their health, while emphasizing factors that contribute to maintaining and increasing their well-being.³⁻⁵ Moreover, these models should seek to implement patient-centered actions, which foster patient participation in decision-making to promote life-long health in a relationship of trust between health professionals and individuals. In light of the above, it is necessary to improve nursing skills so that these professionals are able to work with new health promotion practices,⁶ and foster individual capacities to maintain well-being or improve health.

The word salutogenesis means “origins of health”, and in this model proposed by the Israeli sociologist Aaron Antonovsky in 1979,⁷ the focus lies on the factors that support health, within a health (health-ease) and illness (dis-ease) continuum, centered on health maintenance procedures and promoting the use of available resources.⁸ Thus, salutogenesis defends that the adoption of health-promoting behaviors minimizes risks and prevents suffering.⁹

The model is based on two concepts: generalized resistance resources (GRRs) and sense of coherence (SOC). Resistance resources include material resources (financial assets, housing, and diet), cognitive-emotional resources (knowledge of the real world, intelligence), value-attitudinal resources (acquiring coping strategies, effective emotional management), interpersonal relationships (social support), biological (genetic), and macro-sociocultural resources (cultural stability, rituals, religion).¹⁰ Sense of coherence allows people to have meaningful, coherent, balanced and participatory life experiences, while facilitating the use of their skills to cope with life situations successfully (including health situations).¹¹ These two elements are closely related, in a dynamic relationship in which GRRs contribute to strengthen a person’s SOC level and vice versa: a strong SOC mobilizes stress management resources.¹²

Sense of coherence consists of three dimensions: comprehensibility, manageability and meaningfulness.¹³ This concept explains why people in stressful situations stay well and even are able to improve their health, because, in theory, people’s worldview positively influences their well-being.⁵

Moreover, SOC is developed in childhood and remains relatively stable starting around 30 years of age until retirement, when it begins to decrease and is only affected minorly by important life events. This sense is an ability that allows people to see the world as coherent, structured, and meaningful, which promotes health and moderates the stressful effects of life,¹⁴ because it facilitates the proper and effective selection of resources and behaviors to cope with and manage any situation regardless of what is happening in their life.¹⁵

In terms of noncommunicable chronic diseases, the cardiovascular disease (heart disease and cerebrovascular accidents) represents the leading cause of morbimortality in the world¹⁶ and its repercussions - such as complications, premature deaths, disability, higher costs for the health system, psychosocial consequences,¹⁷ and altered quality of life of people and their families¹⁸- are particularly severe in low and middle income countries.¹⁹

As in all chronic illnesses, the cardiovascular diseases require patient participation to manage and care for their own health and thus control the disease. Several studies have investigated the relationship between SOC and health,^{4,20} and between SOC and quality of life.²¹ However, there are no reported studies analyzing SOC in persons with cardiovascular diseases. Thus, the authors decided to explore the current evidence regarding cardiovascular health and salutogenesis in adults, since this approach is congruent with a vision of comprehensive care that promotes the use of one's own resources to improve health through the SOC and the use of GRRs. Considering the above, the aim of this scoping review was to identify and summarize evidence published about salutogenesis and cardiovascular health in adults and to propose possibilities for future research on the topic, in order to contribute to improving cardiovascular health and guide comprehensive care practices for these patients.²²

METHOD

A scoping literature review was conducted. This type of methodological approach is a way of describing, summarizing, and synthesizing knowledge about specific research questions, based on the systematic selection and synthesis of the literature. Scoping reviews do not exclude studies due to their methodological quality, as the aim is to gain greater conceptual clarity about a topic or specific field of research and provide evidence for practice, research, or policymaking.²³

The aim was to carry out a scoping review to determine the reach and type of existing literature, summarize the evidence available and identify gaps in the literature. To this end, the review followed the five steps proposed by Arksey and O'Malley²³: i) identifying the research question, ii) identifying relevant studies, iii) study selection, iv) charting and recording the data and v) summarizing and reporting the results. This review did not include the sixth phase which is optional and includes a consultation exercise with experts.

Step 1: Identifying the research question

Scoping reviews aim to identify available and relevant literature based on data from different levels of evidence and research methodology. Therefore, it was not restricted to quantitative studies or any other type of research design.²⁴

Research question

The research question that guided this scoping review was: what is the relationship among salutogenesis, sense of coherence, and cardiovascular health in adults?

Step 2: Identifying relevant studies

Sources of information and literature

The articles were identified by searching and analyzing all the literature published in English and Spanish between 2000 and 2016 in the following databases: Pubmed/Medline, Academic Search Complete (EBSOCohost), SOCIELO, CINHALL and Wiley Online Library. The following search terms were used in Spanish and English: "sentido de coherencia", "*sense of coherence*", "salutogénesis", "*salutogenesis*", "cardiovascular", "*cardiovascular*", "adultos", "*adults*", "enfermedad del corazón" and "*heart disease*", with different combinations of Boolean operators (AND, NOT, OR). At the time of the search, different filters were used according to the database consulted, such as time period, full text, and population to make the search more specific and sensitive.

Inclusion criteria

The studies were reviewed based on the following inclusion criteria: i) indexed in quality sources of knowledge, ii) in Spanish or English, iii) full text available, iv) population of patients with chronic or acute coronary disease, v) adults older than 18 years old, and vi) that explicitly adopted salutogenesis as their theoretical framework. Studies that only provided an abstract or whose populations were adolescents or children were excluded.

Step 3: Study selection

The first step to selecting articles was to review titles, which had to contain at least two of the key words. This first search strategy yielded 299 documents. The inclusion and exclusion criteria were applied to the abstracts of these studies; those that were identified as potentially eligible were read in full. The results of the literature search are presented in the PRISMA flowchart below (Figure 1).

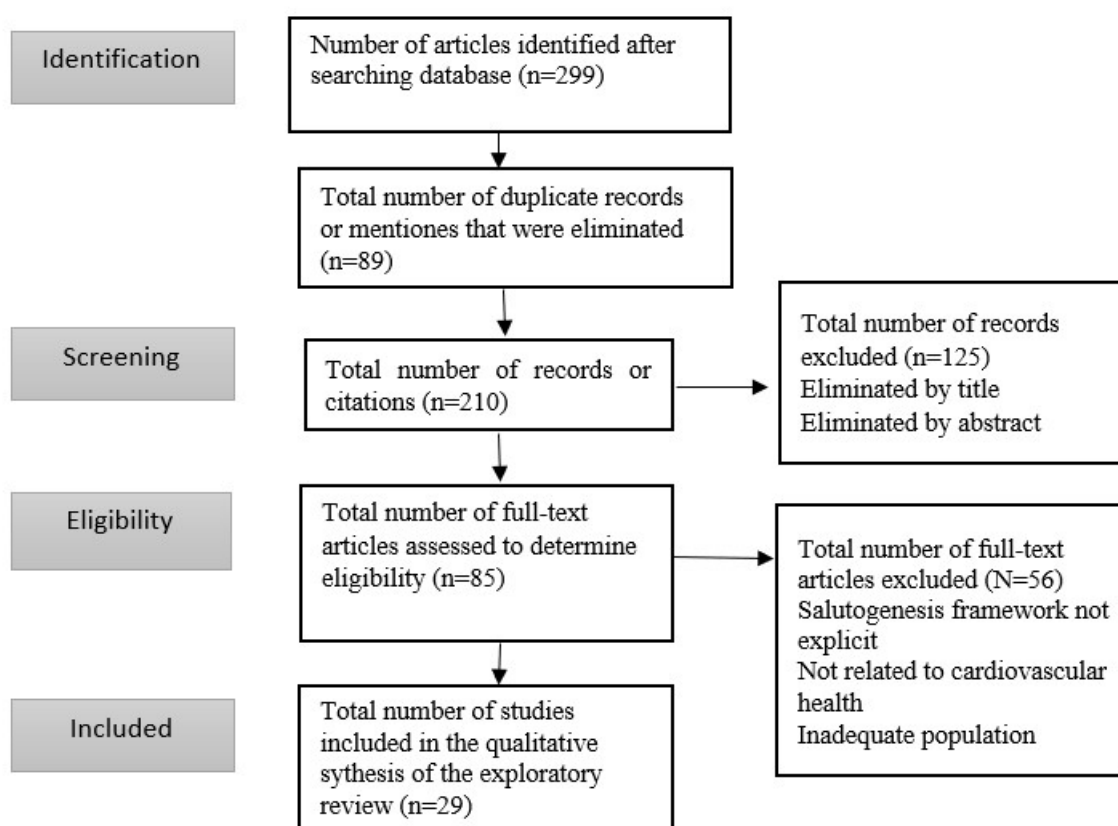


Figure 1. PRISMA flowchart of the article selection process.

Assessing methodological quality

As indicated by Arksey and O'Malley,²³ scoping reviews do not aim to assess the methodological quality of the studies included nor produce quantitative syntheses, given the broad scope of the topics generally included and the variety of study designs. Its purpose is to systematically situate and classify the literature to describe and summarize findings about a given topic and highlight gaps in research.²⁵ However, with the purpose of contributing to methodological rigor, the studies were evaluated using both the CASPe critical appraisal skills program - created by the Oxford University Health Sciences

Institute - and the STROBE guidelines for evaluating observational studies, which assess validity, reliability, and applicability criteria.²⁶

Step 4: Recording data

The fourth step in the review process was to carry out a structured and logical summary of the data, identify themes, and describe the results according to the objective and research question created to carry out the scoping review. To this end, a data extraction table was created, which included the following information categories: author(s), year of publication, country, study objective, population/sample, methodology and main findings.²⁴

Step 5: Summarizing and reporting the results

With the goal of presenting an overview of all the reviewed material (which does not mean a synthesis of the evidence or the consolidation of the findings of different studies), a numerical analysis was carried out and 4 main themes were constructed, in which the concept of SOC was the first unit of analysis. This helped the authors present the existing literature in the form of a narrative,²³ keeping in mind the research question and the objective of the review.²⁷

First, the numerical analysis carried out with the information in the data extraction table pointed to the studies' characteristics, geographical distribution, population, and research methods. This part of the analysis provided an overview of the prevailing concepts and areas of interest of researchers. Last, research gaps were identified based on the literature review, which was limited to identifying areas that have not been well studied within the topic by comparing study topics and designs.

RESULTS

Characteristics of the studies

Of the 29 studies selected,²⁷ were carried out in high-income countries - 16 in Sweden,^{11,13,28-41} three in Finland,⁴²⁻⁴⁴ one in Norway,⁴⁵ two in the United Kingdom,⁴⁶⁻⁴⁷ two in Slovakia,⁴⁸⁻⁴⁹ one in Poland⁵⁰, one in the United States,⁵¹ and one in Australia⁵². The other two were from high middle income - Brazil⁵³ and South Africa⁵⁴. Sample size ranged between 63 patients⁵² and 20,579,⁴⁶ including a total of 50,992 people. Regarding methodology, 28 were quantitative (cross-sectional descriptive^{11,38,40,45,47} and correlational^{13,28,29,31,33-38,40-44,46,48-51,52-54}), while only one was qualitative, with a descriptive and exploratory design.³³

The studies assessed variables relative to physical health, such as the presence of symptoms,^{45,49,52} physical limitations^{31-32,50} and health measures that incorporate psychological aspects such as the use of coping strategies,²⁹ perception of the illness, satisfaction with treatment,¹⁴ emotional well-being and role limitations.⁵⁰ The review identified four main topics: SOC and quality of life, SOC and healthy behaviors, SOC and stability over time, and SOC and social support as GRRs. These categories are presented below.

Sense of coherence and quality of life

Within the findings, some studies showed the influence of strong SOC on the perception of better quality of life.^{32,36,45,49-50} People with greater SOC referred less intense symptoms such as post-infarction angina;³⁴ were more satisfied with their overall health represented by their ability to work, carry out activities of daily living; alternate between periods of rest and sleep;^{45,50} find meaning and opportunities to manage life even after an acute event;³³ had an adequate perception of the

disease, felt capable of transcending it and moving on with life;³² perceive greater confidence in their abilities to reorganize their lives; minimized the family impact due to the disease and participated in significant experiences surrounding the lived experience.⁵¹ Similarly, strong SOC was related with fewer experiences of loneliness, depressive states, stress or anxiety;³⁴ better control and expression of negative emotions (such as hostility, anger and neuroticism or neurosis)^{43,46,49} and greater satisfaction regarding their personal relationships and social support.^{29,31,45}

Sense of coherence and participating in healthy behaviors or lifestyles

This theme is developed by incorporating information about knowledge, skills, exercises, healthy diet, adherence to pharmacological treatment and self-management. There is a positive association between strong SOC and healthy behaviors choice, especially better nutritional habits, shown through the adequate consumption of fruit, vegetables and fiber;⁴⁷ not smoking or quitting smoking and consuming less alcohol.⁴⁸

Those who presented a strong SOC adopted behaviors to self-manage the disease, centered on the use of skills to take medications and improving lifestyle,⁵⁴ monitor symptoms, weight control, participating in health-promoting activities,⁵² ongoing exercise,^{30,37} stress management,³⁸ adhering to pharmacological treatment,⁴⁴ and maintaining normal systolic blood pressure and total cholesterol values.³⁸ On the other hand, people with a low SOC adopted an unhealthy diet,³⁹ which was reflected in biomarkers with low high-density lipoproteins (HDL) levels and high triglyceride levels, which in the long term are associated with acute stress and cardiovascular disease.³⁵

Ultimately, individuals with a strong SOC are better equipped to adopt healthy behaviors and respond to health-related advice. Those with low SOC have fewer chances of improving health behaviors. Therefore, SOC is a predictor of healthy behaviors.

Sense of coherence and stability over time

Some studies have found that SOC can increase, decrease or remain stable over a lifetime, including in people with a high SOC. These individuals can suffer a reduction in SOC, pointing to its variability.

The follow-up time of longitudinal studies ranged between 6 months⁴² and 5 years³⁷ and some reported that women between 36 and 81 years old with acute myocardial infarction, and those who had undergone angioplasty had lower SOC than men.^{30,32,42} Notwithstanding, it was shown that an increase can be achieved at 6, 12, and 60 months post-intervention.^{32,42} Similarly, among both men and women, SOC can increase^{13,34} or decrease with age,^{31,37} remaining stable in those who had a strong initial SOC.^{13,37}

Moreover, individual differences and changes over time were identified in the three components of SOC, with a higher significance in increased comprehensibility in a 2-year follow-up period. This indicates the importance of understanding the disease as a requisite to maintaining motivation and managing life after myocardial infarction.¹³

Sense of Coherence and social support as Generalized Resistance Resources

The articles presented evidence about the role of GRR within the salutogenic model. These studies centered on several dimensions of social support, such as the availability of support, provision of emotional support, information, direct care, and social network. Single men who had suffered their first episode of acute myocardial infarction presented a lower SOC, while married men presented a stronger SOC, due to the perceived interest of their partners in participating and being involved in care during the recovery stage.³¹

Thus, having a partner with whom to talk, share their new health condition, and feeling this person's involvement in the process helps patients cope with the situation. In contrast, men with limited family networks or who were single presented a lower SOC after hospital discharge,⁴¹ while women over 65 years old with a low SOC and low levels of social support felt helpless, incapable, and that they lacked self-efficacy and self-confidence to overcome the difficulties of life, solve problems, and cope with stressful situations.²⁸

DISCUSSION

The present review centered on the relationship between SOC and cardiovascular health in adults, providing evidence about the use of the salutogenic model in cardiovascular prevention, rehabilitation and research. These studies were developed mainly in Nordic countries, where the salutogenic approach has been adopted by different health disciplines, including nursing.^{13,30–31,36,42,45,51–53} meaningful, and manageable, that is, has a sense of coherence (SOC) Most of the reviewed studies used quantitative methodologies, with 28 descriptive and correlational studies. Only one qualitative study was identified.

These studies presented some challenges for advancing knowledge in the field of nursing. The first is the need to develop qualitative studies, which can present elements to describe the experiences and meanings surrounding people with a low or strong SOC, in addition to understanding what conditions and experiences modify SOC. The second challenge is the need to advance the level of evidence of quantitative studies towards quasi- or experimental studies to assess the effectiveness of nursing interventions based on the salutogenic approach.

The identified themes suggest that, as one of the central concepts of the salutogenic theory, SOC explains why people stay healthy by focusing on the successful coping strategies chosen that emerge from the recognition and use of GRRs. These include psychosocial resources, different from the pathogenic approach, which centers on what makes people ill.⁵⁵

Among individuals with cardiovascular disease, a strong SOC has been shown to be related both to physical⁴⁶ and mental health,^{34,43} the latter in terms of well-being and satisfaction with life. Currently, quality of life is considered a multidimensional concept that includes the subjective evaluation of various aspects of life, which are related with perception, satisfaction and reaching life plan objectives.⁵⁶ Therefore, the capacity that individuals have to cope with stressful situations - among them those related to disease and treatment - is a crucial factor to maintain or improve health and quality of life.³⁴

It is worth noting, as observed in the study by Ekman and collaborators,³⁶ that despite the severity of the disease and symptomatology that limits physical and social functioning, older adults with chronic illness who have a strong SOC coping with their illness favorably by using their own resources. In turn, people with a weak SOC mentioned more symptoms such as mental fatigue and difficulty concentrating, and presented a negative perception of the disease, feeling in worse conditions on hospital discharge, being less satisfied with their medical treatment³⁰ and presenting feelings of guilt relative to the disease.²⁹

This shows the positive impact that a strong SOC has on quality of life, demonstrated in the physical, psychological and social dimensions during the process of coping with the illness. Thus, it is important to assess patients' perception regarding the actions they carry out to deal with their health condition.

According to Antonovsky,⁵⁷ orientation to life impacts people's health. The evidence shows a positive association between a strong SOC and the choice of healthy behaviors, such as diet, exercise, quitting smoking and alcohol, adhering to pharmacological treatment, and self-management, factors

that contribute to controlling cardiovascular disease. This is why people with a strong SOC are more inclined to choose positive health behaviors, because of their ability to assess problems or stressful factors with precision and choose the adequate resources to overcome them.⁵⁸ This association between a strong SOC and healthy behaviors supports the perspective of improving human strengths and capacities through health promotion and lifestyle modification, not restricting health care to the minimization of risks and symptoms of the disease.

An important theme identified was the relationship between SOC and its stability over time. According to Antonovsky,⁵⁸ SOC is completely developed around 30 years of age and from then on remains at the same level for the rest of one's life. Therefore, once it is formed and stabilized, change is unlikely. Only temporary changes can occur in individuals with an average SOC, caused by some event of life experience that requires a greater reformulation of objectives and personal goals.

However, this has not yet been completely supported empirically, given that studies have shown that SOC cannot be considered completely stable and that it can change over time and with age. This includes people with a low SOC,^{37,42,59} both men and women who experience changes over their lifetime. Moreover, individual differences and changes have been identified over time in the three components of SOC.¹³

These results reinforce the idea that SOC is dynamic and, therefore, can be modified (increased or strengthened) through interventions that address strategies that complement medical treatment and contribute to improving the health of individuals with cardiovascular diseases. This implies applying theory to nursing practice when developing, implementing and assessing programs aimed at working on factors that preserve and promote health, thus improving the SOC of people with cardiovascular disease in outpatient and inpatient settings, where nurses are in prolonged and constant contact with patients.

Regarding GRR, a relationship was found between SOC and social support, a crucial coping resource that can be used in favor of health maintenance.⁶⁰ According to the salutogenic theory, people must invest in four spheres of life if they do not wish to lose resources and meaning over time: inner feelings, major activities, existential issues, and immediate personal relationships. This last sphere involves the function of social support,⁵⁸ because people who have close relationships with others can resolve tensions more easily than those who do not.

As a result, people with coronary disease who perceive having social support expressed through emotional, instrumental and information support can better cope with the stress of daily life and difficult or critical life experiences than those who do not have such support. Therefore, it is a useful resources to be incorporated into interventions that aim to improve the health of this population.⁶¹ These studies support the idea that establishing close emotional relationships, being able to count on someone, and having someone to talk to, in addition to receiving support from friends, family members, partners or caregivers, allows people to reach an equilibrium between problems and the use of resources to cope easily with physical and mental angst, uncertainty, and lifestyle changes.

CONCLUSION

This scoping review showed that studies based on the salutogenic theoretical framework have focused on the role of SOC as a mediator of stressful life events, which contributes to health promotion and protection, while also allowing for an understanding of how people respond to the challenges of living with a cardiovascular disease. The studies also found an association between a strong SOC and high quality of life, represented by emotional and psychological well-being and better perceived physical health. Similarly, there was an association between a strong SOC and a greater adoption

of healthy behaviors and perceived social support. There were variations between the SOC levels of men and women of different ages, which has implications for research, practice, and public policies.

Further research needs to be conducted based on the salutogenic framework. Similarly, the assessment of SOC can be an outcome measure that can help nurses understand the role of SOC in the participation of patients with cardiovascular disease when providing care, assessing health conditions, and strengthening their skills to manage life challenges. Furthermore, longitudinal studies are needed about the role of other GRRs in coping with disease and in the development and strengthening of SOC.

In practice, it is possible to implement intervention strategies from the salutogenic perspective in which people's capacities are strengthened, based on the identification of health-promoting factors and the use of GRRs, instead of focusing on aspects that represent risk factors. In sum, there is a potential to apply the principles of the salutogenic model in policymaking aimed at health improvement, which would strengthen existing GRRs and facilitate the population's access to these resources so that they can identify and benefit from them.

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NOTES

ORIGIN OF THE ARTICLE

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AUTHORSHIP CONTRIBUTION

Study Design: Esquivel Garzón N, Díaz Heredia LP.

Data collection: Esquivel Garzón N, Díaz Heredia LP.

Data analysis and interpretation: Esquivel Garzón N, Díaz Heredia LP.

Discussion of the results: Esquivel Garzón N, Díaz Heredia LP.

Drafting and/or critical review of content: Esquivel Garzón N, Díaz Heredia LP.

Revision and final approval of the final version: Esquivel Garzón N, Díaz Heredia LP.

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CONFLICT OF INTEREST

There are no conflicts of interest.

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