

The science of implementation and its application in primary healthcare

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INTRODUCTION

Low adherence to healthy behaviors is reflected in the prevalence of non-communicable diseases, which continue to be the primary public health concern. Fifteen years ago, the United Nations (UN) noted that engaging in behaviors such as healthy eating, regular physical activity, and not smoking would be associated with a reduction in risk of up to 80% for developing these diseases. However, low adherence to these behaviors has been reported [1].

According to other UN records, obesity affects 650 million adults, 340 million adolescents, and 39 million children. It is also estimated that by 2025, some 167 million people will see their health affected by being overweight or obese [2,3].

Worldwide, in terms of physical inactivity, 31% of adults and 80% of adolescents do not meet the recommended levels of physical activity. In addition, an estimated \$300 billion USD is projected to be spent by public health systems between 2020 and 2030 if physical activity levels do not increase [4].

Regarding smoking, more than 8 million deaths are due to direct tobacco consumption. Around 1.3 million are the result of non-smokers' exposure to secondhand smoke [5].

The First International Conference on Health Promotion, held in Canada in 1986, brought together 212 delegates from 38 countries. From this meeting, the Ottawa Charter was issued to achieve "health for all by the year 2000." Later, in 2015, an international consensus was reached, known as the Sustainable Development Goals (SDGs) for 2030. Global efforts to improve health have been characterized by a series of commitments from each country in the development of their public policies, where health promotion and disease prevention are considered high-priority issues worldwide [6]. Among these objectives, attention is given to the role of the social determinants of health, beyond individual care practices.

Furthermore, according to the World Health Organization (WHO) and the Astaná Declaration, primary health care ensures comprehensive services for people, ranging from health promotion and disease prevention to treatment, rehabilitation, and palliative care. It represents the most inclusive, equitable, just, and effective strategy to improve both the physical and mental health of individuals, as well as the social well-being of families and communities [7].

Given the issues outlined above and the commitments made by countries in the Ottawa Charter, questions arise regarding the role that the Primary Health Care (PHC) strategy has played at the primary care level in promoting health, prevention, and early disease detection through its programs and interventions.

Consequently, this article emphasizes the importance of applying implementation science in the development and implementation of programs and interventions for disease prevention and health promotion in primary healthcare.

BARRIERS IN THE IMPLEMENTATION OF PROGRAMS AND INTERVENTIONS

There are multiple barriers to the effective implementation of programs and interventions for disease prevention, and particularly for health promotion, within the framework of the Sustainable Development Goals. Among them, one of the most significant is the difficulty of translating theory into practice in primary healthcare centers.

The literature strongly emphasizes that the success of programs, interventions, and practices in health services depends on their implementation. Challenges such as the lack of clarity on how to apply evidence in daily clinical practice, gaps in translating evidence into new practices, and the presence of various barriers and facilitators to both implementing and sustaining these practices often result in effective interventions leading to inadequate care. The complexity lies in implementing evidence-based interventions that must be tailored to the context and clinical processes to be effective in real-world settings. It is essential to assess, at the organizational, health team, user, and public policy levels, the extent to which an intervention and its implementation are effective, as well as their utility, practicality, acceptability, and sustainability [8].

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MAIN MESSAGES

- Low adherence to healthy behaviors is reflected in the prevalence of non-communicable diseases. This raises questions about the role played by primary healthcare strategies and health promotion at the primary care level.
- The difficulty of translating theory into practice in primary healthcare centers is the main barrier to the effective implementation of programs and interventions for disease prevention and health promotion.
- Implementation science has been recognized as a new paradigm that allows evidence-based knowledge to be applied and used in real-world settings.
- Implementation science is a powerful tool for strengthening primary healthcare programs and interventions that effectively promote changes in the health of individuals, families, and communities.

To achieve programs and interventions tailored to the context and clinical processes of the real-world environment, formative research must be conducted before their development and implementation. This provides information at the organizational level, from the healthcare team, users, and public policies, to ensure effective implementation. Formative research uses quantitative methods to collect statistically representative information from key participants. In addition, qualitative methods, including focus groups, observations, and interviews, are used to explore acceptance, feasibility, and the barriers and facilitators to implementation [9].

The question “how to use evidence in practice” should replace the question “what to use from the evidence in practice.” In this way, it is possible to transform primary care practice so that it effectively promotes health and disease prevention. All of this should align with the needs of the communities.

IMPLEMENTATION SCIENCE

Consequently, implementation science has been recognized as a new paradigm in response to this problem. It is defined as the scientific study of methods that enable evidence-based knowledge to be applied and used in real-world settings. This is achieved through theories, models, and frameworks that guide the process of translating research findings into practice, understanding or explaining barriers and facilitators, and evaluating implementation [10].

The real-world application of programs and interventions based on implementation science can help close the gap in the prevention of non-communicable diseases and health promotion in primary care.

The application of implementation science in primary care presents its own challenges. Among these, it is vital to understand communities in relation to their health needs and their social, political, and cultural contexts, as well as their resilience capacities, so that interventions can be adapted accordingly. In addition, it is essential to identify barriers and facilitators, as well as the acceptance and feasibility of implementation, among key actors such as professionals, managers, and community members who use health services [11].

However, literature and the use of implementation science in primary care are scarce in Latin America. A study conducted in Brazil identified barriers and facilitators from the perspective

of healthcare teams regarding the implementation of interprofessional collaborative work in basic primary care units [12]. Another Brazilian study identified the conditions that hinder the implementation of an advanced access model in primary care units. It utilized the Consolidated Framework for Implementation Research (CFIR) to understand the context in which the innovation was implemented, including the planning strategies, procedures used for its implementation, as well as the barriers and facilitators [13].

Aspects that ensure sustainable, more effective implementation tailored to primary care needs and local contexts include:

1. Evaluating programs and interventions in conjunction with managers, professionals, and community stakeholders, with a view to implementation based on the perceived quality and validity of the evidence supporting the belief that the program or intervention will have the desired results.
2. Consider the advantage of implementing the program or intervention over an alternative solution.
3. Assess the extent to which a program or intervention can be adapted, refined, or reinvented to meet local needs.
4. Understand the barriers and facilitators to implementation, as well as the usefulness, practicality, acceptability, and sustainability of implementation.

When it comes to transferring knowledge generated from research to public policy formulation, the use of scientific evidence in Anglo-Saxon countries is based on the premise that a solid academic foundation increases the chances of solving collective problems. The usefulness of implementation science in achieving good public policy outcomes lies in adopting transfer models that understand communities and identify barriers and facilitators for successful implementation, optimal cost planning, and ensuring sustainability [14].

The implementation stage of public policies is of essential importance and involves the use of models according to the actors and contexts involved. A review of the literature on models used to analyze the implementation of public health policies found that the most widely used was the Consolidated Framework for Implementation Research. This model consolidates constructs from various recognized theories

of implementation science, facilitating the identification and understanding of potentially relevant constructs and their application in different contexts. It has five domains: characteristics of the intervention, external environment, internal environment, characteristics of individuals, and implementation process. The studies that utilized the Consolidated Framework for Implementation Research conducted interviews and focus groups with key participants and program managers, focusing on the domains of this framework, to gather their perceptions of implementation. These studies conclude that this model enables the early identification of barriers, which allows them to be addressed and the expected results to be achieved.

CONCLUSIONS

Bridging the gap between knowledge and practice in primary care involves strengthening the implementation of programs and interventions based on scientific evidence, while also considering the local knowledge of communities. Community participation in healthcare has been a relevant issue in primary care. The Ottawa Charter emphasizes the effective and imperative participation of communities in the development and implementation of policies, plans, and programs that impact health, promote empowerment, and achieve health equity [15].

Finally, implementation science, with its theories, models, and frameworks, has emerged as a paradigm and a substantial tool in assessing the barriers and facilitators that influence the success of programs and interventions that effectively promote changes in health behaviors toward positive health and complement public policies that mitigate the effects of the social determinants of health.

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