

## Promoting Healthy Eating Habits: The Role of Community-Based Research in Nutrition

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Cite this paper as: Melike Serengil Ozcelik, (2025) Promoting Healthy Eating Habits: The Role of Community-Based Research in Nutrition.. *Journal of Neonatal Surgery*, 14 (10s), 900-905.

### ABSTRACT

Obesity, cardiovascular disease, and type 2 diabetes are primarily caused by sedentarism, poor physical exercise, and unhealthy eating habits. Adopting healthy eating habits is a priority for authorities and nutrition researchers, aiming to guide societies towards a healthy life. In public health, community-based research (CBR), also commonly named as community-based participatory research (CBPR) (CBR and CBPR are substitutes for each other in this paper) emphasizes social, related to structure, and physical environmental injustices by actively including researchers, community members, and representatives of organizations in all phases of the study. Partners provide their knowledge to deepen comprehension of an issue and to put that understanding into practice for the benefit of the community overall. In recent years, community health research and practice have increasingly embraced partnership models, which place an emphasis on community impact and involvement in community-beneficial research endeavors. Though the majority of researchers agree that communities must be involved in community-based research, there isn't a single, generally acknowledged approach or set of guidelines for community engagement. The purpose of this paper is to highlight the role and power of community-based research in promoting healthy eating habits in communities.

**Keywords:** *Community-based research, community-based participatory research, CBR, CBPR, research, nutrition, translational research.*

### 1. INTRODUCTION

#### Promoting Healthy Eating Habits: The Role of Community-Based Research in Nutrition

Increasing rates of obesity, cardiovascular disease, and type 2 diabetes are mostly caused by sedentarism, poor physical exercise, and poor eating habits (Shanthi Mendis et al., & WHO, 2014). Adopting healthy eating habits in societies has become one of the key priorities of corresponding and responsible authorities and organizations, as well as researchers working in the field of nutrition, as poor eating habits have been designated as one of the primary triggers of many diseases. This being the case, research in the field of nutrition is directed towards the goal of guiding societies to a healthy life. It is for sure, under today's environmental conditions, in such a universe, it is necessary for societies to strive for a healthy life.

### 2. LITERATURE REVIEW

In recent years, health promotion research and practice have increasingly utilized community participation, which involves collaborating with groups of people connected by proximity, special interests, or similar circumstances to address well-being issues (CDC, 1997).

On the other hand, partnership approaches, which emphasize community involvement and impact in research efforts that benefit communities, have been more prominent in community health research and practice in recent years. However, while most researchers concur that communities need to be involved in community-based research, there isn't one, widely-accepted strategy or set of rules for community engagement (Blumenthal, 2006).

In this regard, research methodologies that actively involve members of the community in the analysis process are referred to as community-based research designs. CBR is different from traditional research methods in that it stresses cooperation, participation, and mutual benefit. Traditional research methods may be carried out by external researchers without community involvement. The community engagement strategy is especially crucial for comprehending and resolving environmental, social, and health concerns within local communities.

CBR is also commonly referred to as “community-based participatory research” and this approach is a reflection of the widespread belief that community involvement is beneficial (Minkler et al., 2003). In order to address social, structural, and environmental injustices, community members, representatives, and researchers collaborate on community-based public health research projects. Partners provide their knowledge and skills to improve comprehension and integrate information for the good of the community. This review outlines fundamental ideas, looks at how it's applied in various scientific

paradigms, talks about obstacles, and looks at what makes community-based research more successful in promoting public health (Israel et al., 1998).

In addition, the CBPR approach is characterized by the following: (a) acknowledging the community as an identity unit; (b) applying the community's strengths and resources; (c) encouraging co-learning among research partners; (d) striking a balance between research and action that benefits the community and science in turn; (e) highlighting the importance of community-defined problems; (f) using a cyclical and iterative process to establish and maintain community/research partnerships; (g) sharing knowledge gained from the CBPR project to and by all involved partners; and (h) requiring long-term commitment on the part of all partners (Israel et al., 2008).

It's critical to realize that CBPR is an approach to research rather than a particular technique or study design. Therefore, there are no "CBPR methods"; instead, quantitative and qualitative approaches, such as focus groups and in-depth interviews, can be used in CBPR investigations. Examples of quantitative methods include surveys and environmental audits (*What Is CBPR?* | Detroit Urban Research Center, n.d.).

Besides, in professional circles, both qualitative and quantitative research are frequently regarded as less valuable methodologies; some even think they are invalid and nonpunishable. Recent viewpoints, however, indicate that the two may really work well together, with the advantages of one compensating the disadvantages of the other. For an accurate understanding of a phenomenon, both approaches should be applied in combination (Mendlinger & Cwikel, 2008, Voils et al., 2008).

There are seven main phases or components of CBPR, and there is a certain order in which they should be performed. Nonetheless, the procedure is more circular than linear, and certain components might persist throughout the duration of the CBPR investigation (*What Is CBPR?* | Detroit Urban Research Center, n.d.).

**Figure 1. Main Phases of CBPR (What Is CBPR? | Detroit Urban Research Center, n.d.).**



On the other hand, applying research conducted in laboratories to human studies and promoting the adoption of evidence-based methods in real-world situations to reach large populations is known as “translational research”. Nutritionists can benefit directly from translational research since it produces the data that support population-based health promotion initiatives and evidence-based clinical practice (Zoellner et al., 2015).

Thus, establishing translational research centers within its institutes and initiating the Clinical and Translational Science Award program in 2006, the National Institutes of Health has made translational research a priority (Leshner et al., 2013).

In this regard, a graphic representing the phases of research and how they interact in translational research has been produced by the National Center for Advancing Translational Sciences (NCATS). As shown by the graphic below, translational research stages are categorized into the translational science spectrum which each stage builds upon and informs the others, with patient involvement being the most crucial aspect of each stage (NCATS, 2024).

**Figure 2. The Translational Science Spectrum by the National Center for Advancing Translational Sciences (NCATS, 2024).**



With the development of translational research, which examines progress from the biological basis of health and disease to treatments that improve public and individual health, community-based research gained significant attention. Moreover, the pandemic has highlighted health disparities, particularly for people of color and those affected by addiction and overdose in rural areas. To ensure health and well-being, NCATS collaborates with people of all backgrounds in research (NCATS, 2022).

On the other hand, translational research faces a minimum of six fundamental challenges. Table 1 describes each of these issues and describes how CBPR resolves them.

Challenge of Translational Research	How CBPR Addresses the Challenge
External validity	Engages community stakeholders in adaptation within complex systems of organizational and cultural context and knowledge
What is evidence: the privileging of academic knowledge	Creates space for postcolonial and hybrid knowledge, including culturally supported interventions, indigenous theories, and community advocacy
Language: incompatible discourse between academia and community	Broadens discourse to include "life world" cultural and social meanings <sup>a</sup>
Business as usual within universities	Shifts power through bidirectional learning, shared resources, collective decision making, and outcomes beneficial to the community
Nonsustainability of programs beyond research funding	Sustains programs through integration with existing programs, local ownership, and capacity development
Lack of trust	Uses formal agreements and sustains long-term relationships to equalize partnership and promote mutual benefit

<sup>a</sup>Habermas<sup>87</sup> defines the lifeworld as shared understandings and values developed within face-to-face family and community relationships.

**Table 1. CBPR – Translational Research Challenges (Wallerstein & Duran, 2010).**

CBR involves community engagement and collaboration, ensuring relevance and mutual benefit for both researchers and communities. It focuses on community needs, empowering them through capacity building, skill enhancement, and education

on research methodologies and health issues. CBR projects often lead to action-oriented improvements in community well-being. Nutrition programs that are community-based may in fact include experimental, quasi-experimental, and observational (epidemiologic) techniques (Van Horn & Beto, 2019). These methodological techniques all have varied applications and can be used to evaluate various aspects of nutrition-related interventions in communities.

In addition, CBR is a crucial method for translating healthcare research into the public domain, improving community health, and promoting social change. It involves collaboration between researchers and community members, differing from traditional academic research. Institutions like the National Institutes of Health Clinical and Translational Science Awards recognize CBR's importance, but cultural barriers can hinder partnerships (Carter-Edwards et al., 2012).

Community-based nutrition projects can effectively utilize observational, quasi-experimental, and experimental methods to gather data, evaluate interventions, and improve nutrition outcomes within communities. The choice of method depends on the research objectives, available resources, and specific community contexts. Integrating multiple methods can often provide a more comprehensive understanding of the nutritional issues faced by communities.

It is an expected result that community-based and participatory projects will reach a wide audience. For this reason, it is inevitable that the research conducted before the implementation of the projects should be carried out with an approach based on communities. This approach should be a preferred approach for institutions and nutrition researchers in the relevant field, with the aim of helping communities acquire better eating habits. Community members including organizational representatives, and researchers actively participate in the research process, contributing their expertise to enhance understanding of social, structural, and environmental inequities, thereby integrating knowledge gained with action for the benefit of the community involved (Isreal et al., 1998).

CBR in nutrition promotes healthy eating by actively involving local communities. This approach tailors interventions to fit cultural and environmental factors, increasing their relevance and effectiveness. Key benefits of CBR include:

- Cultural Relevance, interventions match local food preferences,
- Engagement, active community participation fosters ownership,
- Sustainability, co-developed solutions are more likely to last,
- Behavioral Change, CBR builds trust and addresses barriers to healthy eating.

Overall, CBR helps develop sustainable, healthy eating habits and strengthens local capacity to improve nutrition.

Although CBPR is an attractive model for research with vulnerable populations, with its emphasis on engaging the community as full and equal collaborators in all stages of the research process, the CBPR approach is not without special challenges related to ethical, cultural, and scientific issues. In other words, the CBPR approach is not without unique difficulties, nevertheless, in terms of moral, cultural, and scientific concerns (Holkup et al., 2004).

Moreover, the areas of partnership capability and preparation, time constraints, finance flexibility, and evaluation present difficult challenges for CBPR supporters (Minkler et al., 2003). Such challenges are put forward by CBPR to health funders.

### 3. DISCUSSION

The solution to the increasing health problems that result from societies evolving into communities with unhealthy nutrition and the promotion of healthy nutrition globally are gaining importance day by day.

Moreover, partnerships with representatives of the community can help identify the needs and priorities related to community health, provide crucial information and data on clinically relevant questions, create clinical research protocols that are appropriate for the local culture, facilitate the successful recruitment and retention of research participants, and, in the end, more effectively disseminate and implement research findings (Leshner et al., 2013).

CBR is a research methodology that actively involves community members in the analysis process, promoting cooperation, participation, and mutual benefit. Researchers emphasize the importance of community engagement in CBR, which is crucial for understanding and resolving local environmental, social, and health issues.

Translational research applies laboratory-based studies to real-world situations, promoting evidence-based methods for nutritionists. This data supports population-based health promotion and evidence-based clinical practice.

CBR in nutrition promotes healthy eating habits by actively involving local communities in the research process. This collaborative approach ensures that interventions are culturally relevant, addressing specific dietary behaviors and barriers. By engaging communities, CBR fosters greater awareness, ownership, and trust, leading to more effective and sustainable changes in eating habits. Tailoring solutions to the community's unique needs enhances the likelihood of long-term success in improving nutrition and promoting healthier lifestyles.

Despite the importance of this research approach, CBR supporters face challenges in partnership capability, preparation, time constraints, finance flexibility, and evaluation (Minkler et al., 2003).



Notwithstanding its many obstacles, CBPR offers communities and researchers a useful theoretical, epistemological, and methodological framework for jointly and thoroughly documenting and interpreting local issues of concern. They can then use this information to create community-driven initiatives aimed at resolving these issues. Nutritionists can benefit from the useful data provided by translational research, which supports evidence-based clinical practice and population-based health promotion programs (Duke, 2020). The data obtained will be invaluable and effective in guiding societies toward healthier eating habits.

#### 4. LIMITATIONS OF THESE STUDIES

In this paper, we examined some peer viewed articles as well as publications by the researchers in the field of nutrition as well as CBR. Several studies in CBR in nutrition and public health emphasize valuable contributions, but they also present limitations. One major challenge is the lack of **generalizability**, as many studies focus on specific communities, making it difficult to apply findings to broader populations (Blumenthal, 2006; Mendis et al., 2014). **Inconsistent community participation** is another issue, with engagement varying throughout the study, which can affect data collection and outcomes (Carter-Edwards et al., 2012; Leshner et al., 2013). The **resource-intensive nature** of CBR requiring time, funding, and ongoing collaboration often leads to extended timelines and increased costs (CDC, 1997; Minkler et al., 2003).

In some cases, **community influence** introduces bias, as participants may alter responses based on perceived expectations (Israel et al., 1998). Additionally, the **complexity in standardizing interventions** and data collection makes it challenging to compare results across studies and populations (Zoellner et al., 2015). Lastly, sustaining successful interventions post-study is often difficult due to **limited funding** and shifting community priorities, threatening long-term impact (Minkler et al., 2003; NCATS, 2022).

#### 5. CONCLUSIONS AND FUTURE STUDY

In recent years, partnership approaches which emphasize community impact and participation in research endeavors for the benefit of the community have become more and more common in community health research and practice.

Translational research applies laboratory-based studies to real-world situations, supporting population-based health promotion and evidence-based clinical practice. Partnerships with community representatives can identify health needs, provide data, and create appropriate research protocols. CBR promotes cooperation and mutual benefit, addressing local environmental, social, and health issues.

Community-based nutrition programs often utilize experimental, quasi-experimental, and observational techniques to improve community well-being, evaluating various aspects of nutrition-related interventions through various methodological approaches. Plus, it is understood that qualitative research may be realized as a supplement to quantitative research in this study in terms of CBR design.

Despite the extensive literature on partnership approaches to research in the field of nutrition to “encourage healthier eating habits” in communities, there is a need for more in-depth, multiple case studies on the process and outcomes of community-based research efforts.

It seems inconceivable that nutrition research be not community-based, given that the main objective is to promote healthier lifestyles in communities. However, CBPR supporters may continue to face challenges in partnership capability, preparation, time constraints, finance flexibility, and evaluation, which they present to health funders.

Reducing hierarchical relationships between institutions and local communities, CBPR is a transformative strategy to community participation and researcher-community partnerships. It addresses community challenges and democratizes knowledge generation on a worldwide scale by emphasizing discussion, introspection, mutual learning, and social action (Schensul, 2010). In this respect, CBPR based studies will be beneficial to societies in achieving healthy communities. As a result, participatory research with a community focus, CBPR, is a useful method for enhancing community health. Community partners and researchers can benefit from the long-term, cyclical, and iterative process of CBPR, which calls for a shared commitment to sustainability (Israel et al. 2005).

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