

Assessment Of The Effectiveness Of Healthcare Programs In Promoting Health Awareness And Changing Health Behaviors

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Abstract

Promoting health awareness and changing health behaviors are essential for improving public health outcomes. Healthcare programs are designed to address these goals, but evaluating their effectiveness is crucial for evidence-based decision-making. This article provides an overview of the evaluation process for healthcare programs aimed at promoting health awareness and behavior change. It discusses the importance of clearly defined objectives, appropriate outcome measures, rigorous study designs, representative participant selection, effective intervention implementation, reliable data collection, and sound data analysis techniques. The evaluation also considers factors such as program fidelity, participant engagement, and contextual influences. By evaluating healthcare programs, stakeholders can identify effective strategies, inform program improvement, and optimize resource allocation for better health outcomes. This article explores the components of evaluating healthcare programs and offers recommendations for enhancing program effectiveness and future research directions.

Keywords: healthcare programs, health awareness, behavior change, evaluation, outcome measures, study design, intervention, data analysis, program effectiveness.

1. INTRODUCTION:

Evaluating the effectiveness of healthcare programs in promoting health awareness and changing health behaviors is essential for assessing the impact of these programs and making informed decisions regarding their implementation and improvement. Health awareness and behavior change are crucial components of preventive healthcare, as they contribute to healthier lifestyles, early detection of diseases, and improved overall well-being [2].

Healthcare programs designed to promote health awareness and behavior change can take various forms, including educational campaigns, community interventions, digital health tools, policy changes, and targeted interventions for specific populations or health conditions [6]. These programs aim to enhance individuals' knowledge, attitudes, and skills related to health, as well as motivate them to adopt healthier behaviors and sustain these changes over time.

However, it is important to evaluate the effectiveness of these programs to ensure they are achieving their intended outcomes and delivering measurable benefits. Evaluation helps identify what works and what doesn't, provides evidence to support program implementation or modification, and guides resource allocation and decision-making in healthcare settings.

The evaluation of healthcare programs in promoting health awareness and behavior change involves assessing several key aspects [1]. These include determining clear objectives for the program, selecting appropriate outcome measures, employing rigorous study designs, recruiting representative samples, implementing interventions effectively, collecting reliable data, and employing sound data analysis techniques.

Furthermore, evaluating process and implementation factors, such as program fidelity, participant engagement, and contextual influences, provides a comprehensive understanding of how programs are being delivered and received. This holistic evaluation approach allows for a thorough examination of the effectiveness of healthcare programs in achieving their goals and fostering positive health outcomes [2].

By conducting rigorous evaluations, healthcare providers, policymakers, and researchers can identify effective strategies, best practices, and areas for improvement. This knowledge can inform the development and refinement of future healthcare programs, ultimately leading to more impactful interventions, improved health outcomes, and more efficient allocation of resources.

In this article, we will explore the various components involved in evaluating the effectiveness of healthcare programs in promoting health awareness and changing health behaviors. We will delve into study design considerations, outcome measures, data collection and analysis techniques, and the interpretation of findings. Additionally, we will discuss the importance of evaluating program implementation and provide recommendations for enhancing program effectiveness and future directions in this field of research.

2. SETTING CLEAR OBJECTIVES

Setting clear objectives is a crucial step in evaluating the effectiveness of healthcare programs in promoting health awareness and changing health behaviors. Clear objectives provide a foundation for measuring the program's impact and determining whether it has achieved its intended outcomes. Here are some key considerations for setting clear objectives [5]:

Specificity:

Objectives should be specific and well-defined, clearly stating what the program aims to accomplish. For example, instead of a vague objective like "increase health awareness," a specific objective could be "increase knowledge about the importance of regular physical exercise and its benefits for cardiovascular health.[3]"

Measurability:

Objectives should be measurable, allowing for quantifiable assessments of program outcomes. This involves identifying specific indicators or metrics that can be used to gauge changes in health awareness and behaviors. For example, measurable objectives could include "increase the percentage of participants who engage in at least 150 minutes of moderate-intensity aerobic exercise per week" or "reduce the prevalence of tobacco use among program participants by 10% within six months"[1].

Achievability:

Objectives should be realistic and achievable within the program's scope and timeframe. Setting overly ambitious goals that are difficult to attain may lead to disappointment and undermine the evaluation process. Assess the resources, capacities, and constraints of the program to establish objectives that are feasible and attainable.

Relevance:

Objectives should align with the specific health issues or behaviors targeted by the program. They should address the needs and priorities of the population being served. Consider the context, demographics, and health determinants of the target audience to ensure that the objectives are relevant and meaningful [4].

Time-bound:

Objectives should have a time frame within which they are expected to be achieved. This helps provide a sense of urgency and allows for monitoring progress over time. Time-bound objectives could be set for short-term (e.g., within six months), medium-term (e.g., within one year), or long-term (e.g., within three years) periods, depending on the nature and duration of the program [5].

By setting clear objectives that are specific, measurable, achievable, relevant, and time-bound (SMART), the evaluation process can effectively assess the impact of healthcare programs on health awareness and behavior change. These objectives serve as benchmarks against which the program's outcomes can be measured, providing valuable insights into its effectiveness and guiding future improvements.

3. OUTCOME MEASUREMENT

Evaluation of healthcare programs involves measuring outcomes to assess their effectiveness in promoting health awareness and changing health behaviors [10]. The following section explores key considerations and methods for outcome measurement in evaluating such programs:

3.1 .Selection of Outcome Measures:

Identifying appropriate outcome measures is crucial for evaluating program effectiveness. These measures should align with the objectives of the healthcare program and reflect the desired changes in health awareness and behaviors. Common outcome measures include [13]:

- Knowledge: Assessing the level of knowledge gained by participants regarding specific health topics, risk factors, preventive measures, or treatment options.
- Behavior Change: Measuring changes in health behaviors such as physical activity levels, dietary habits, tobacco or alcohol use, medication adherence, and preventive practices.
- Attitudes and Beliefs: Evaluating shifts in participants' attitudes, beliefs, and perceptions related to health, such as attitudes towards exercise, healthy eating, or seeking medical help.
- Health Outcomes: Tracking improvements in health outcomes, such as reductions in disease incidence, hospitalizations, or complications.

3.2 .Quantitative Methods:

Quantitative methods provide objective and numerical data for outcome measurement. These methods often involve structured surveys, questionnaires, or assessments administered to program participants. Examples of quantitative methods include [14]:

- Pre- and Post-Program Surveys: Conducting surveys before and after the program to capture changes in knowledge, behaviors, or attitudes.
- Biomarkers and Physical Measurements: Collecting physical measurements (e.g., blood pressure, body mass index) or biomarker assessments (e.g., cholesterol levels, blood glucose) to evaluate health changes.
- Administrative Data: Analyzing existing administrative records or healthcare utilization data to assess changes in health outcomes or healthcare service utilization.

3.3 .Qualitative Methods:

Qualitative methods offer in-depth insights into participants' experiences, perceptions, and behavior changes. These methods focus on capturing participants' perspectives and understanding the underlying reasons for observed changes. Common qualitative methods include [13]:

- Interviews: Conduct individual or group interviews to explore participants' perceptions, experiences, and reflections on health awareness and behavior changes.
- Focus Groups: Engaging participants in group discussions to elicit shared experiences, attitudes, and beliefs related to the program's impact.
- Observational Studies: Observing participants in real-life settings to understand their behaviors, reactions, and interactions concerning health-related choices.

3.4 .Data Analysis and Interpretation:

Data collected through outcome measurement methods should be analyzed and interpreted to draw meaningful conclusions about program effectiveness [18]. This may involve statistical analysis, thematic analysis of qualitative data, or a combination of both. Analyzing data allows for identifying trends, associations, and correlations between program participation and outcomes, providing insights into the program's impact on health awareness and behavior changes.

3.5 .Continuous Monitoring and Feedback:

To ensure ongoing program improvement and effectiveness, continuous monitoring, and feedback are essential. Regularly tracking outcome measures, soliciting feedback from participants and stakeholders, and using that information to refine the program can enhance its impact and address emerging needs [7].

By employing appropriate outcome measurement methods, healthcare programs can effectively evaluate their effectiveness in promoting health awareness and changing health behaviors. These evaluations provide valuable insights into the program's impact, inform evidence-based decision-making, and facilitate continuous improvement to maximize positive health outcomes.

4. BASELINE DATA AND CONTROL GROUPS

When evaluating the effectiveness of healthcare programs in promoting health awareness and changing health behaviors, collecting baseline data and using control groups are essential components. These elements provide valuable context and comparisons for assessing the impact of the program [4]. The following highlights the importance of baseline data and control groups in the evaluation process [17]:

1. Baseline Data:

Baseline data refers to information collected before the implementation of the healthcare program. It establishes the initial status of participants' health behaviors, knowledge levels, attitudes, and relevant health outcomes. Here's why baseline data is crucial:

- Reference Point: Baseline data serves as a reference point for evaluating changes over time. By comparing post-program data to the baseline, the program's impact can be measured accurately.
- Target Population Understanding: Baseline data provides insight into the characteristics, needs, and challenges of the target population. It helps tailor the program to their specific requirements.
- Evaluation Framework: Baseline data supports the development of appropriate evaluation methods and outcome measures, ensuring that the evaluation captures relevant aspects of health awareness and behavior change.

2. Control Groups:

Control groups are comparison group that does not receive the healthcare program intervention. Here's why control groups are important:

- Isolation of Program Effects: Control groups allow researchers to isolate the effects of the healthcare program by comparing outcomes between the intervention group and the control group. This helps determine whether observed changes are due to the program or other factors.
- Internal Validity: Control groups improve the internal validity of the evaluation by reducing confounding variables. They provide a comparison against which the program's impact can be measured more accurately.
- Causality Assessment: Control groups enable the assessment of causality, providing stronger evidence of the program's effectiveness in promoting health awareness and behavior change.

3. Randomization and Selection of Control Groups:

To establish control groups, randomization is often employed to ensure unbiased assignment. Random assignment helps minimize selection biases and ensures that participants in the control and intervention groups have similar characteristics [12]. This enhances the validity of the evaluation and strengthens the causal inferences made.

4. Ethical Considerations:

While control groups are valuable in evaluation, ethical considerations must be taken into account. It may be ethically inappropriate to withhold an intervention from a group that may potentially benefit from it. In such cases, alternative study designs, such as quasi-experimental designs, can be used to compare outcomes between groups that receive different levels or types of interventions.

5. Longitudinal Assessments:

To capture changes over time and assess the sustained impact of the healthcare program, longitudinal assessments are important. This involves collecting follow-up data at various intervals after the program's completion, allowing for long-term evaluation of health awareness and behavior change [10].

By collecting baseline data and utilizing control groups, the evaluation of healthcare programs becomes more robust and credible. These elements provide valuable information for assessing the program's impact, isolating its effects, and determining its effectiveness in promoting health awareness and changing health behaviors.

5. PROCESS EVALUATION

In addition to outcome measurement, process evaluation plays a critical role in evaluating the effectiveness of healthcare programs in promoting health awareness and changing health behaviors. Process evaluation focuses on assessing the implementation process, program fidelity, and the factors that contribute to program success or challenges. The following highlights the key aspects of process evaluation [8]:

• Implementation Assessment:

Process evaluation involves assessing how well the healthcare program was implemented according to its design and planned activities. This includes examining the adherence to program protocols which Evaluate the extent to which the program was implemented as intended, including the delivery of interventions, use of materials, and adherence to guidelines. Program Reach and Participation assess the extent to which the program reached the intended target population and the level of participation among the target audience. Finally, contextual Factors, Consider the external factors and organizational context that may influence program implementation, such as resource availability, staff capacity, and community support.

• Program Fidelity:

Program fidelity refers to the degree to which the program was delivered as originally designed. Assessing program fidelity helps ensure that the program was faithfully implemented and that participants received the intended interventions. This involves monitoring and assessing intervention delivery, and evaluating the consistency and quality of the interventions provided to participants, ensuring they align with program objectives. **Also**, Training and support, assess the adequacy and effectiveness of training provided to program staff or facilitators, as well as the ongoing support they received during implementation.

• Participant Engagement and Feedback:

Process evaluation involves gathering feedback from program participants to understand their experiences and perspectives. This includes participant satisfaction by assessing participants' satisfaction with program components, materials, facilitators, and overall program experience. Participant input solicits feedback from participants regarding program strengths, weaknesses, and suggestions for improvement [9]. Participant barriers and facilitators Identify the factors that may have influenced participants' engagement, adherence to program recommendations, and behavior change.

• Program Modifications and Adaptations:

Process evaluation helps identify the need for program modifications or adaptations to improve effectiveness. This may involve identifying challenges and barriers by identifying barriers and challenges encountered during program implementation, including logistical issues, participant resistance, or external factors impacting program delivery [14]. **Also**, Flexibility and adaptation by assessing the program's ability to adapt to unforeseen circumstances and make necessary adjustments to improve effectiveness.

• Continuous Quality Improvement:

Process evaluation provides a foundation for continuous quality improvement efforts. It informs program managers and stakeholders about areas that require attention and improvement. This involves regular review and reflection which Continuously review process evaluation findings and incorporate lessons learned into program planning and implementation. **Moreover**, Stakeholder collaboration Engages stakeholders, including program staff, participants, and community members, in the process evaluation and improvement efforts.

Process evaluation complements outcome measurement by providing valuable insights into the factors that contribute to program effectiveness or challenges. By assessing program implementation, fidelity, participant engagement, and feedback, healthcare programs can make informed decisions for program improvement, enhancing their impact on health awareness and behavior change.

6. COST-EFFECTIVENESS ANALYSIS

When evaluating the effectiveness of healthcare programs in promoting health awareness and changing health behaviors, conducting a cost-effectiveness analysis is important. This analysis assesses the relationship between the costs incurred in implementing the program and the outcomes achieved. The following highlights the key considerations and benefits of conducting a cost-effectiveness analysis [12]:

Cost Measurement:

In a cost-effectiveness analysis, it is essential to measure both the direct and indirect costs associated with the healthcare program. Direct costs include expenses directly attributable to program implementation, such as personnel salaries, materials, equipment, and administrative costs. Indirect costs encompass broader economic considerations, such as participant time, transportation, and productivity losses.

Outcome Measurement:

To determine the program's effectiveness in promoting health awareness and changing health behaviors, appropriate outcome measures should be selected. These may include improvements in knowledge levels, behavior changes, health outcomes, or other relevant indicators identified during the evaluation planning phase.

Cost-Effectiveness Ratio:

The cost-effectiveness ratio is calculated by dividing the total costs of the program by the outcomes achieved [15]. It provides a quantitative measure of the resources required to achieve a specific outcome. For example, the cost per unit of behavior change or the cost per quality-adjusted life year (QALY) gained.

Incremental Analysis:

In addition to calculating the overall cost-effectiveness ratio, an incremental analysis can be conducted to compare the cost-effectiveness of different interventions or variations of the healthcare program. This analysis helps determine which intervention or program component offers the most cost-effective approach to achieving the desired outcomes.

Cost-Utility Analysis:

In some cases, a cost-utility analysis may be appropriate, especially when the health-related quality of life is a primary outcome. This analysis incorporates utility values or preferences to calculate the cost per QALY gained, providing insights into the cost-effectiveness of the program in terms of improving overall well-being.

Decision-Making and Resource Allocation:

Cost-effectiveness analysis provides decision-makers with information on the value for money of the healthcare program. It helps inform resource allocation decisions by identifying interventions that deliver the greatest health impact for a given level of investment. Policy-makers can use cost-effectiveness analysis results to prioritize programs, allocate resources efficiently, and maximize the benefits for the population.

Comparative Analysis:

Comparing the cost-effectiveness of different healthcare programs or interventions enables decision-makers to make informed choices regarding resource allocation. By assessing the costs and outcomes of various options, they can identify the interventions that provide the best value for money and prioritize those with the highest potential for health improvement [11].

Limitations and Considerations:

It's important to acknowledge the limitations of cost-effectiveness analysis. Some considerations include [11]:

- **Data Availability:** The availability of accurate and reliable cost and outcome data is crucial for conducting a robust analysis.
- **Time Horizon:** The time horizon chosen for the analysis may impact the estimation of costs and outcomes, particularly when considering long-term health effects.
- **Uncertainty:** Cost-effectiveness analysis involves various assumptions and uncertainties, and sensitivity analyses can be conducted to assess the impact of these uncertainties on the results.

By conducting a cost-effectiveness analysis, healthcare programs can determine the efficiency of resource allocation and identify interventions that provide the best outcomes in relation to the costs incurred. This analysis assists decision-makers in making informed choices, maximizing the impact of limited resources, and ultimately promoting health awareness and changing health behaviors in a cost-effective manner.

7. STAKEHOLDER ENGAGEMENT

When evaluating the effectiveness of healthcare programs in promoting health awareness and changing health behaviors, conducting long-term follow-up is crucial. Long-term follow-up involves collecting data and assessing outcomes beyond the immediate program duration. Here's why long-term follow-up is important and how it contributes to evaluating program effectiveness [16]:

- **Sustained Behavior Change:**

Assessing the long-term impact of healthcare programs is essential to determine whether the observed behavior changes and improvements in health awareness are sustained over time. Short-term evaluations may show positive results immediately after program completion, but it is essential to examine if these changes persist in the long run

- **Behavior Maintenance and Relapse:**

Long-term follow-ups allow for an evaluation of participants' ability to maintain the desired health behaviors beyond the program period. It provides insights into potential challenges and factors that influence relapse or ongoing adherence. Understanding these factors can inform strategies to support behavior maintenance and prevent relapse [5].

- **Health Outcomes:**

Some health outcomes may require a longer period to manifest or be accurately measured. By conducting long-term follow-up, researchers can assess the impact of the healthcare program on long-term health outcomes, such as reduced incidence of chronic diseases, improved quality of life, or increased life expectancy.

- **Program Sustainability:**

Long-term follow-up provides an opportunity to evaluate the sustainability of the healthcare program itself. It helps assess whether the program continues to be implemented and delivers the intended outcomes after the initial intervention period. Sustainability evaluation involves examining factors such as funding, stakeholder engagement, program integration, and ongoing support.

- **Identifying Delayed Effects:**

Some changes in health behaviors or health outcomes may not be immediately evident but may emerge over time [1]. By conducting long-term follow-up, delayed effects can be identified, providing a more comprehensive understanding of the program's impact and effectiveness.

- **Program Improvement:**

Long-term follow-up data allows for a deeper understanding of participants' experiences, challenges, and successes beyond the immediate program period. This information can be used to refine and improve future iterations of the healthcare program, enhancing its effectiveness and addressing long-term barriers to behavior change [17].

- **Comparative Analysis and Generalizability:**

Long-term follow-up data enables comparative analysis between different interventions or program variations. It allows for a better understanding of the long-term effects of different approaches and their comparative effectiveness in promoting sustained health behavior change. Additionally, long-term follow-up data contribute to the generalizability of the program's findings by assessing outcomes in diverse populations and settings over an extended period.

- **Data Collection Methods:**

Long-term follow-up data can be collected through various methods, such as surveys, interviews, medical records review, or objective measures. Combining self-reported data with objective measures enhances the reliability and validity of the findings [15].

By conducting long-term follow-ups, healthcare programs gain a comprehensive understanding of the sustained impact of interventions on health awareness and behavior change. It allows for the assessment of behavior maintenance, evaluation of long-term health outcomes, identification of program sustainability, and provides insights for program improvement. Long-term follow-up is critical for determining the effectiveness and long-term benefits of healthcare programs in promoting positive health outcomes.

8. CONCLUSION:

In conclusion, evaluating the effectiveness of healthcare programs in promoting health awareness and changing health behaviors requires a comprehensive and multi-dimensional approach. The evaluation process should incorporate various components, including outcome measurement, setting clear objectives, baseline data and control groups, process evaluation, cost-effectiveness analysis, long-term follow-up, and stakeholder engagement. By combining these elements, a comprehensive evaluation framework can be established to assess the impact and effectiveness of healthcare programs. Outcome measurement allows for the assessment of the program's intended outcomes, such as changes in health knowledge, behavior modification, and improved health outcomes. Setting clear objectives provides a framework for

defining the program's goals and aligning evaluation efforts. Baseline data and control groups help establish a comparison point and enable the measurement of program effects by comparing the outcomes of program participants with a control group.

Process evaluation focuses on assessing the implementation process, program fidelity, participant engagement, and feedback. It provides valuable insights into the factors that contribute to program success or challenges, allowing for program modifications and adaptations to enhance effectiveness.

Cost-effectiveness analysis evaluates the relationship between program costs and outcomes achieved, informing decision-making and resource allocation. Long-term follow-up assesses the sustainability of behavior change, health outcomes, and program effectiveness over an extended period.

Stakeholder engagement ensures that diverse perspectives and expertise are incorporated throughout the evaluation process. Engaging stakeholders enhances the relevance and credibility of the evaluation findings, facilitates program improvement, and fosters collaboration and partnerships for sustained impact.

By integrating these evaluation components, healthcare programs can obtain a comprehensive understanding of their effectiveness in promoting health awareness and changing health behaviors. The findings from the evaluation process can inform program refinement, resource allocation, and evidence-based decision-making, ultimately improving the effectiveness and impact of healthcare programs in improving public health.

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