Research

Facilitating Development and Refinement of the “Just Start Walking” Program Through a Delphi Process

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Abstract

Introduction: The alarming global trend toward sedentary living and obesity continues to accelerate. Obesity-related hypokinetic disorders such as cardiovascular and cerebrovascular disease, diabetes, diverse cancers, hypertension, and musculoskeletal disorders comprise the principal causes of morbidity and mortality in developed nations. Irrefutable evidence links increasing regular activity with risk reduction for the most common and deadly chronic diseases.

Objective: This initiative’s objective was to develop a simple, broadly-embraced activity module using a Delphi panel process for shared vision and collective action.

Methods: An international Delphi panel developed a walking module using e-surveys. The 96 panelists included college and university presidents, academic officers, researchers, and leaders of health-related organizations including the World Health Organization, the International Red Cross, the World Federation of Chiropractic as well as other chiropractic organizations, the World Federation for Mental Health, the Alliance for Health Promotion and many others.

Results: All draft slides achieved the requisite 75% consensus on the initial round of voting with a mean
approval rating of 95%. Many partnering organizations have placed Just Start Walking on their websites and are actively encouraging their constituencies to participate.

Discussion and Conclusion: The Delphi process was successful in creating shared vision of the need for increasing activity levels. Achieving campaign sustainability will be critical.

Introduction

Alarming Trends in Inactivity

With the continuing trend of increasing development and modernization, sedentary living and its attendant disorders are escalating at alarming rates. In the developed world chronic hypokinetic diseases related to sedentary living comprise the principal causes of mortality and morbidity. These disorders include cardiovascular disease, cerebrovascular disease, diabetes, diverse types of cancer, hypertension, obesity, musculoskeletal disorders, depression and premature death. The pandemic of sedentary living and its attendant disorders had already become so widespread in the year 2000, that a team of global health leaders called promoting physical activity a “new imperative for public health.” Though this sentiment has been echoed by many, the disastrous trend continues. In the US 66% of adults were overweight or obese in 2004. This percentage is projected to rise to 75% by the year 2015 with 41% of adults being obese.

Health authorities have noted “the irrefutable evidence” that increasing regular activity is “effective in the primary and secondary prevention of several chronic diseases (e.g., cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis) and premature death.” Noting the many health benefits of consistent physical activity, the United States Department of Health and Human Services has responded to the sedentary living crisis through the creation of a number of guidelines and health promoting initiatives. The 2008 Physical Activity Guidelines for Americans and Healthy People 2020 Objectives call for adult Americans to engage in at least 150 minutes of moderate physical activity weekly.

The Gap

Though the benefits of health promoting activity are clear, actually changing health behaviors and increasing levels of regular activity can be difficult. Many health experts including Dr. Margaret Chan, Director General of the World Health Organization, have called attention to the “knowing and doing” gap. Simply put, we know the right things to do, but we often fail to take appropriate action. For example, currently approximately 15% of the US adult population participates in the recommended 30 minutes of daily activity.
Context

The Collective Inactivity Conundrum. In view of this contextual conundrum, the critical question becomes, what can be done to become more active as a society? How do we collectively mobilize ourselves inclusively across disciplines, from diverse levels of society, to approach the inactivity crisis?

One approach to this complex problem might be to collectively increase forms of activity that are simple and easily accessible to the majority of the population. Walking is a readily available form of physical activity that is practiced broadly by diverse elements of society.

Collective Input/Collective Action. Another potential solution is to inclusively engage key stakeholders in health organizations and the public to address the problem of sedentary living collectively for collective action. To increase the impact of collective action, it would be helpful to use an integrative communication catalyst/process to develop shared vision and a sense of buy-in and empowerment. Ideally the shared vision and a sense of buy-in and empowerment would be powerful enough to mobilize leaders, constituencies and the public in more active lifestyles.

Delphi: a Consensus Catalyst. One such consensus/shared vision catalyst is the Delphi group communication process. The Delphi process was developed to solve complex problems through a structured consensus review process. Given the current intransigent sedentary living/inactivity scenario, it is clear that increasing activity levels in sedentary societies qualifies as a complex problem. Sedentary living has strong psychosocial and environmental determinants and ramifications.

Delphi Applications. The Delphi process was originally applied to military tactical problems where developing shared vision and effective solutions was essential. It started as a secret process involved in estimating nuclear offensive and deterrent capability. Delphi has also been applied quite extensively in healthcare contexts, principally related to the development of guidelines through the use of expert opinion. This process has also been used to predict probable future scenarios across a range of settings and disciplines.

Delphi Formats. There are diverse views as to what constitutes appropriate or optimal use of structures for the Delphi process. Authorities recommend creative and flexible structures rather than dogmatically applied formulas. Still, setting basic rules and structure are essential elements. The Delphi process has been combined with seed and nominal group panel activity and other forms of consensus development. It originally began as a paper and pencil activity and currently is applied in online digital contexts.

Objective

The primary objective of this project was to develop and refine a simple broadly-embraced health promotion activity program through the use of a modified Delphi panel process. A secondary objective was to increase integration and communication among a broad array of health disciplines to create greater integration and shared vision.
Methods

Seed Panel Formation and Activities

An individual with experience in successfully facilitating seed and Delphi panel processes invited experts in health promotion to participate on a 9 person seed panel to create and refine health promotion activity modules. The seed panel facilitator asked each of the seed panelists to contribute short and simple PowerPoint draft activity modules in areas of their interest/expertise. Several preliminary activity modules were drafted, reviewed and edited by the seed panel members working collectively through phone and email communications. The seed panel facilitator chose a draft walking module as the initial product for further Delphi panel review and refinement.

Why Walking Was Chosen

The seed and Delphi panel facilitator chose the walking module for Delphi review based on walking’s universal appeal and well-known physical and mental health benefits. Walking is one of the simplest and easiest forms of activity. It may therefore have potential merit to help solve the current inactivity crisis.

A Range of Benefits

Numerous studies indicate that walking has multiple health promotion benefits. These benefits include physical elements positively impacting the health of individuals’ spines, joints, hearts, lungs, osseous structures, brains and immune systems. In addition, walking has been shown to have mental health benefits, including amelioration of depression and the improvement of mood. A randomized controlled study conducted at the University of Illinois indicated that a 6 month trial of brisk walking could significantly increase brain size in previously sedentary individuals 60-79 years old.

Delphi Panel Formation and Activities

The seed and Delphi panel facilitator connected with a broad array of individuals and organizations to comprise a multidisciplinary Delphi panel. The Delphi facilitator issued invitations in person to individuals and groups at national and international conferences including the ACC-RAC Education and Research Conference, The World Federation of Chiropractic Congress and participants at the WHO World Health Assembly. Invitations were also issued by email to both individuals and organizations through a network of health organization leaders with whom the facilitator had developed channels of communication and collaborative working relationships.

Delphi Participants

Individuals who agreed to participate on the Delphi panel included: chiropractic college and university presidents, chief academic officers, researchers, chief clinical officers, leaders of Clusters of the World
Health Organization, the International Red Cross, the Bone and Joint Decade and the United States Bone and Joint Decade, the World Federation of Chiropractic, the Association of Chiropractic Colleges, the International Chiropractors Association, the American Chiropractic Association, the World Federation for Mental Health, the Alliance for Health Promotion, the NGO Forum for Health, Solar Cookers International and many other organizations and members of the public. Because of the open-ended, inclusive nature of the invitations and the intentionally anonymous responses, the number and identity of Delphi participants invited was not tracked.

Delphi Survey Methodologies

The Delphi panel facilitator then contacted with the Director of Institutional Research at his college in order to create an electronic survey to facilitate the Delphi process for refinement of the walking module. Zoomerang was chosen to conduct the electronic surveys as this tool allows for gathering and collating narrative feedback and tallying voting responses. The facilitator then crafted a set of survey directions for Delphi panelists and submitted these to the Director of Institutional Research for incorporation into a Zoomerang survey. The instructions included Delphi voting and feedback rules; an expression of thanks; and a statement that Delphi responses would be anonymous. The lead institution’s Institutional Review Board granted the project exempt status.

Approval Criteria and Voting

The draft walking program was divided into 11 PowerPoint slides, which then were converted to a pdf format. PowerPoint slides contained pictures, program descriptions and instructions. Each individual slide was voted on in a binary format for approval or disapproval by Delphi panelists. Each slide in the Zoomerang e-surveys included an agree and disagree box to click and a comments box for edits and additional input. Zoomerang automatically compiles participant voting percentages and collects comments. Delphi panel participant input was anonymous by design. Open ended qualitative comments were analyzed by the facilitator to identify patterns or trends in the comments. Panelist comments were recorded and collated in an Excel spreadsheet file.

In this Delphi process an approval rating of 75% was set for slide adoption and incorporation within the activity module. By design when a slide achieves the pre-set approval rating no edits need be made. However simple stylistic and formatting recommendations from Delphi panelists were incorporated by the facilitator working in concert with the original seed panelist, who submitted the draft module to the seed panel for review.

Results

Survey Tally

Ninety-six Delphi panelists responded to the initial round of the electronic Delphi consensus surveys. All slides achieved the requisite 75% approval criterion with a mean approval rating of 94.5% on the initial
round of voting. The highest approval rating (98%) was also the modal score (5 slides out of 11 achieved this rating). The lowest approval rating was 87%. These approval ratings suggest a high level of core agreement with the basic intent of the walking module.

**Survey Comments/Trends**

Comments were informative and helpful for draft module shaping and formatting. Most of the comments were positive regarding individual slides. The final summary comments were also generally very positive and encouraging. The seed panel used the comments to make formatting and stylistic improvements without changing the substance of any individual slide or the module itself.

**Buy-in and Organizational Adoption**

A large number of decision makers of national and global health organizations participated in the Delphi process. Many are indicating strong support for the walking module to promote activity. National organizations like the Congress of Chiropractic Associations and global organizations like the Bone and Joint Decade, the World Federation of Chiropractic and the Alliance for Health Promotion have included Just Start Walking on their websites.

**Discussion**

**Limitations**

As the intent of this Delphi process was to create a grassroots, broadly embraced activity module, many national and global organizations were invited in an open-ended manner. There is considerable potential for miscommunication in this broad type of process involving participants from varied linguistic backgrounds and cultural perspectives. Additionally, in this type of grassroots initiative, it is very difficult to track the organizational implementation of the Just Start Walking Delphi product. By design, Delphi panel participants remained anonymous, unless they chose to identify themselves through email communication outside of the Delphi process itself.

The breadth and scope of the organizations and/individuals participating made the communication process time-consuming and unwieldy for the Delphi panel facilitator. Rather than a process lasting weeks, this Delphi lasted months. The facilitator spent approximately 200 hours involved in e-communication processes, individually tailoring communications to the diverse groups involved. The duration of the process could limit efficacy.

Potential for bias in designing a Delphi product is strong, although it is hoped that the diversity of invited participants added a richness and balance of perspective. The chief biases affecting Delphi product design were probably those of the facilitator and the seed panelists responsible for final formatting of the product.
The Delphi process is designed to create consensus-based products and develop buy-in and a sense of ownership among its participants. The process works by creating formal mechanisms for consensus, while allowing participants to have a voice in the process. It appears that this process functioned very aptly in the context of developing a walking-based health promotion module. Slide approval ratings were quite high, well above the requisite 75% level established by the Delphi panel facilitator.

**Conclusion and Future Directions:**

The Delphi process is a potentially powerful tool for creating consensus solutions to complex problems. Just Start Walking, an activity module created and refined through this Delphi process, holds considerable promise. Many individuals/organizations helped to develop this grass-roots, cost-free, shareware module. Many of these partnering organizations are now using Just Start Walking to promote activity and the public’s health. The need to increase activity in developed and developing countries is becoming critical.

A link to the slides for the “Just Start Walking Program” can be found at the World Federation of Chiropractic website.

**References**


7. United States Department of Health and Human Services. *Healthy People 2020* [Full-Text Link]


