A Simple Framework to Describe What Works Best: Improving Awareness, Enhancing Motivation, Building Skills, and Providing Opportunity

Michael P. O’Donnell, PhD, MBA, MPH

Setting the Stage

The evolution of the science of health promotion in the past three decades has been quite remarkable. When I started my health promotion career in the late 1970s, there was really very little science to guide practitioners in the art of lifestyle behavior change. There was certainly a well-developed science of psychology, but most of that science was relevant to working with people with mental disabilities, or was highly theoretical. The field of health education was emerging, but most of the work in that area focused on understanding why people did and did not participate in health screenings and other medical regimes. The fields of nutrition and exercise science were well developed, but were just beginning to explore how to motivate people to change behaviors. The practices of stress management and organizational development were in full bloom, but the science base supporting them was still evolving, as was the science of addiction management. In speeches to health promotion professionals on health behavior change strategies during the decade of the 1980s, I often started presentations with the question: “What principles of behavior change guide your health promotion work?” The response was always the same: embarrassed silence. Occasionally someone would mention the Health Belief Model, but would quickly admit to never really using it. Whatever science was emerging to support the art of lifestyle behavior change was in the purview of scientists, and had not filtered down to practitioners.

In the last three decades we have seen the emergence and refinement of such concepts as social cognitive theory, self-efficacy, social networks, social support, stages of change, incentives, goal setting, measuring and harnessing social norms, culture change strategies, tailored messaging, motivational interviewing, coaching, mentoring, and others. Equally important, most health promotion profes-
tionals are aware of at least some of these concepts, and some know how to apply them. The biggest gap in our knowledge now seems to be understanding what works best to stimulate lasting change. The good news is that there are a handful of experts who really know how to measure the norms, health risks, priorities and resources of a person, family, organization, or community and develop a strategy to work toward optimal health. Unfortunately, few health promotion professionals, communities and organizations have all the skills to do this.

On a regular basis, professionals, employers, community health leaders, and policy makers ask me, “What works best? What do I need to include in my program to make sure it works?” I enjoy sharing the complete answer, complete with an in-depth review of all the scientific principles, critiques of the rigors of our science, and limitations on our knowledge of application in various settings, but they usually want the simple 2-minute answer in lay terms...so I have finally come up with one.

To be successful in helping people practice healthy lifestyles, four things are needed: Awareness, Skills, Motivation, and Opportunity. This simple framework can guide the development and evaluation of any program.

**Awareness is Just the Beginning**

The origins of health promotion are in health education, and as the term implies, health education focuses on making people aware of the risks of unhealthy behaviors such as eating an unhealthy diet, drinking excessively and smoking, as well as the benefits of positive behaviors such as regular health screenings, exercise, stress management, etc. Our belief was that people would make the right choices if they just had the right information, the right education. Most health promotion programs in the 1970s and 1980s were based on an educational model, and many still are. Over time, we have learned that education is not enough to change behavior for most people. Most people know that they SHOULD exercise. Most smokers know that smoking causes many forms of cancer, respiratory problems, and heart disease, and that it is likely to contribute to their early demise. If knowledge were enough, no one would smoke, and everyone would exercise.

This is not to say that education is not important. Education plays at least two important roles. First, effective education campaigns do make people aware of health risks and health improvement opportunities. For people who are considering making a behavior change, education can help them weigh the pros and cons of making the change, and lead them to the resources they need to support their change efforts. Second, education campaigns can be critical in mobilizing organization or community-wide change efforts by building group support for an idea or plan. For example, when people realized that second-hand smoke is not just irritating, but a class A carcinogen, efforts to create smoke-free workplaces were perceived as strategies to protect workers instead of strategies to punish smokers.

Despite the limited impact of education on behavior change, it is still very important to improve the effectiveness of our education efforts, and we have certainly seen many improvements in the past decade. These have included learning how to tailor messages to address people’s individual needs, providing multiple formats in which to convey content (lecture, print, audiotape, Internet, e-mail, etc), and harnessing data management and communication capabilities to store, manage, retrieve, and deliver data. Despite these developments, education simply is not enough to change behavior for most people, and managers need to realize this in designing and evaluating programs.

**Little Happens Without Motivation**

When a person is motivated to make a behavior change, he or she will work to gain the knowledge and skills necessary to make that change, and will create the opportunity to make it possible. If a person is not motivated to change, all the knowledge and skills in the world will not cause change. For example, testing of the Theory of Planned Behavior developed by Fishbien and Aizen has shown that attitudes and norms have little effect on behavior unless a person has intentions to change.

We have made some excellent progress in understanding the importance of motivation and measuring motivation. One of the most important developments in this area has been articulation of the concept of motivational readiness to change, as articulated in the Transtheoretical Model by Prochaska and DiClemente. This model shows us that different strategies are important to motivate people to change at different levels of readiness to change. For example, it shows us that people who are not thinking about change in the near future (precontemplation) have no interest in hearing about how to change their behavior, but those thinking about changes (contempla-
smoking was clearly not the issue with these physicians, was over 60%. Lack of knowledge of the health risks of was close to the smoking rate of men in general, which departments of preventive medicine in Korea as a whole smoke, the smoking rate among physician professors in along-term goals, and current priorities. For example, I ple, we need to first understand their passions in life, basic values. If we want to be effective in motivating people who are less committed to making a change into programs, we would expect fewer of those people to succeed. Second, financial incentive programs are based on the assumption that money is important to everyone. To a certain extent, money is important to everyone. To those with modest incomes, a few hundred dollars can make a big difference in helping to meet basic needs in any given week or possibly month, but over the course of a year, this translates to only a few dollars a week, and will not make much difference in any budget. Millions of people with limited incomes find a way to spend $20 to $50 dollars a week, or $1000 to $2600 a year, on cigarettes. If money were a sufficient motivator, no one would smoke, For a wealthy person, a financial incentive of a few hundred dollars is more of a pleasant gift that makes no impact on other spending decisions. To be effective in producing significant change, a financial reward would need to be large enough to impact someone’s financial well-being, and this is just not feasible for most health promotion programs. One form of incentive that shows great promise in work settings is to increase the medical insurance premium for all employees and waive the increase for those who participate in a health promotion program.

The biggest shortcomings in our efforts to motivate people have been our focus on extrinsic rewards, such as money and small gifts, that capture short-term attention, rather than intrinsic rewards that are part of a person's basic values. If we want to be effective in motivating people, we need to first understand their passions in life, long-term goals, and current priorities. For example, I spent a year in Seoul, Korea, as a visiting professor in the department of preventive medicine of a university. Although most of the faculty in my department did not smoke, the smoking rate among physician professors in departments of preventive medicine in Korea as a whole was close to the smoking rate of men in general, which was over 60%. Lack of knowledge of the health risks of smoking was clearly not the issue with these physicians, and I quickly learned that discussions of the health risks of smoking were fruitless. After a few months of observing the culture, I realized the importance within this culture of being a good role model, especially among physician educators. When I asked my smoking colleagues about the message their smoking behavior was sending to their medical students, their patients, and their own children, they were far more receptive to thinking about quitting. Discussing smoking in this context shifted them from precontemplation to contemplation. This strategy could probably work with anyone. For example, I once met an older woman who was sedentary and overweight. She had no interest in exercise, and had become content with the belief that she always had been and always would be overweight. The priority in her life was spending time with her grandchildren. When she realized that playing with her grandchildren for a few hours exhausted her, and that she might not live long enough to attend her granddaughter's wedding, she decided to start a regular exercise program ... in the form of playing with her grandchildren. A friend in college started smoking when he was in high school and continued smoking when he went to college. He was strong and energetic and felt impervious to any health risks smoking might cause to adults in their 40s. He did not stop smoking until he got a serious crush on a beautiful young woman he met at school. She made him leave the room whenever he smoked, her feelings were hurt when he said the food she cooked for him was bland, and she hated kissing him because it tasted so bad. He decided to quit because he thought he would lose her. He was sure he had made the right decision when he saw how much money he was saving and now had available to take her out on dates. I share these examples to illustrate that improving health is often not the motivation for many behavior changes, even thought most health professionals think it is. If we are to be successful in helping people change their health behaviors, we must understand their passions, long-term goals, and current priorities. The challenge, of course, is the high cost of taking the time to do this on a one-to-one basis. It may be possible to develop computer-based strategies for this work. Some health promotion providers have developed online tailoring programs that do much of this. The process of Motivational Interviewing developed by Miller and Rollnick provides an excellent framework for this process. Some health promotion professionals are beginning to apply this important process in their programming efforts.

Enhancing self-efficacy is another way to enhance motivation. Self-efficacy is the belief that one can do something like exercise regularly, quit smoking, give a speech, etc. Behavioral efficacy is the belief that a specific behavior will produce a specific outcome, for example, that quitting smoking will reduce the likelihood of developing lung cancer. The higher the self-efficacy and the behavioral efficacy, the greater the motivation.
Our overall understanding of how to motivate people in the context of a health promotion program is probably the biggest gap in our health promotion knowledge. If we can fill this gap, we are likely to see the participation and success rates soar.

**Skill-building Transforms Motivation Into Action**

The biggest shortcoming of awareness programs is that they tell people WHAT to do, but not HOW to do it. Skill-building programs show people HOW—how to perform the actual behaviors they should perform, how to integrate these behaviors into their lives, and how to change their environment and surroundings to create opportunities to practice the behaviors they need to practice.

For example, a skill-building program on nutritious eating would demonstrate how to shop for nutritious foods, how to prepare them to taste great without adding unhealthy ingredients, how to select healthy meals from a restaurant menu, and how to handle challenging social situations such as being a guest in someone’s home or eating at a party. A skill-building program for exercise would demonstrate how to perform each of the recommended exercises and help to figure out when, where, and with whom to perform them, as well as how to juggle schedules to make time to exercise. A skill-building program for quitting smoking would schedule the change, explain the physical, social, emotional, situational, and other challenges to expect during the withdrawal process, and how to overcome them; how to utilize patches, gum, and other aids, how to draw on others for support, how to create new routines and behaviors to replace the smoking behaviors, and how to self-reward for various progress milestones.

A skill-building program on stress management would demonstrate how to measure and monitor the amount and sources of stress in a person’s life, identify the positive and the destructive stresses, outline plans to eliminate those that can be eliminated or reduced, and coping strategies to manage or offset those that cannot. A skill-building program in medical self-care would give people the opportunity to practice finding solutions to a health problem through a self-care guide, computer program, or nurse call line, and provide role-playing opportunities to simulate engaging a physician in a meaningful discussion.

Active engagement, or experiential learning, not just book learning, in the process of change is very important in a successful skill-building program. One of the most elegant processes I have encountered was articulated by the StayWell program offered to the employees of Control Data Corporation in the early 1980s. It is a repeating process, starting with assessment, then feedback and goal-setting, followed by skill-building opportunities, engagement in support and activity groups, working into leadership roles in support and activity groups, and then repeating the process. In a review of 35 multi-component workplace health promotion programs, Heaney and Goetzel found that programs that included a goal-setting component had success rates almost double those that did not.

The most successful skill-building programs will teach strategies to overcome barriers that usually cause people trouble in making behavior changes, including time, social influences, lack of knowledge, limited financial resources, poor access to exercise facilities or healthy food, and other barriers. These will be part of a process of setting goals, building skills, practicing the new behaviors, getting feedback, revising goals, and gaining and implementing new skills. Developing an effective skill-building program is not difficult; it is just overlooked by most program managers, many of whom continue to focus on awareness/education efforts.

**Opportunity is Often the Missing Ingredient**

A person who is highly motivated to practice a healthy lifestyle and has well-developed skills to integrate these practices into his or her life can do a lot to create the opportunities necessary to make this a reality. However, sometimes a person’s life situation is so demanding, or his or her physical surroundings so limited, that creating the necessary opportunities is very difficult, even for a highly motivated and skilled person. Most people are moderately motivated and moderately skilled and need a little more support to make a behavior change, including convenient access to affordable, delicious, nutritious foods; safe and fun places to be physically active; smoke-free air to breathe at home, work, and play; exposure to supportive friends and family, and to a culture that values and rewards good health; freedom from media, advertising, and other marketing influences that are peddling risky behaviors; time to devote to healthy endeavors that are difficult to integrate into daily routines; and sufficient protection from the stresses of finances, overly demanding work, abusive social situations, and safety threats to be able to focus on good health practices.

At the other extreme, an abundantly supportive environment can cause an unmotivated, unskilled person to practice very healthy habits. When I go to a health spa, it’s easy to eat delicious, low-calorie, nutritious food at every meal, because that’s all that is served. I can go for a swim when I wake up, go for a long hike before lunch, do yoga before I take a late afternoon nap, and take time to reflect on priorities in my life in the evening, because there are talented and charming experts to guide me, interesting, motivated people to accompany me, and all the time I need to do whatever I want. The biggest shortcoming of a spa experience is that the wonderful supports don’t come with me when I leave. Most people revert to
their former unhealthy behaviors when they leave a spa setting. For some people, the experience of eating well, exercising regularly, and relaxing in a spa setting shows them that it is possible to do these things, and gives them a sense of the physical and emotional rewards these things provide. This enhances their self-efficacy, which is their knowledge and belief that they can perform these behaviors. It also increases their behavioral efficacy, which is their belief that performing the behaviors leads to a desirable outcome. This sense of enhanced self-efficacy and behavioral efficacy increases motivation to continue performing these behaviors. If the spa can also teach people the skills to integrate the new behaviors into their lives and continue them as part of a normal life, successful maintenance is much more likely. The other great shortcoming of a spa situation is that most people do not have the financial resources to spend the $1000-a-day fees charged by the best spas.

It is possible to create supportive environments in any workplace or community setting if there is sufficient will. The cost is on the order of $200 to $400 per person per year for a comprehensive program, including the awareness, skill-building, motivational, and supportive environment components. In a workplace setting, supportive environments will include physical environments, organizational policies, organizational culture, and ongoing programs and structures that encourage healthy lifestyle, and strategies to ensure that employees feel a sense of ownership for the program (see Table 1).

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Elements of a Supportive Environment</th>
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<td><strong>Physical environments</strong></td>
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<td>Healthy food in cafeteria</td>
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<tr>
<td>Smoke-free environment</td>
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<td>Ergonomically sound furniture</td>
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<td>Protection from injury hazards</td>
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<td>Opportunities to be physically active</td>
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<td><strong>Organization policies</strong></td>
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<tr>
<td>Medical coverage of preventive services</td>
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<td>Consumer-driven healthy plan</td>
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<td>Absenteeism policy that rewards being healthy</td>
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<tr>
<td>Smoke-free environment</td>
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<tr>
<td>Flexible benefits and flextime</td>
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<td>Management policies that moderate stress</td>
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<td><strong>Organization culture</strong></td>
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<td>Healthy role models</td>
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<td>Incentive systems</td>
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<td>Communication systems</td>
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<td>Peer support</td>
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<td><strong>Ongoing programs and structures</strong></td>
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<td>Health promotion department</td>
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<td>Coaching and mentoring</td>
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<td>Employee assistance program</td>
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<td>Child care programs</td>
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<td>Recreation programs</td>
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<td><strong>Employee ownership and involvement</strong></td>
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<td>Program design</td>
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<td>Program leadership</td>
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<td>Program evaluation</td>
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**Table 2: Likelihood of Successful Behavior Change**

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<th>Element</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
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<tbody>
<tr>
<td>Awareness</td>
<td>0</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Motivation</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Skills</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Opportunity</td>
<td>0</td>
<td>1</td>
<td>3</td>
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<table>
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<tr>
<th>Likelihood of success</th>
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<tr>
<td>5 or more points</td>
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<tr>
<td>4 to 5 points</td>
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<tr>
<td>Less than 4 points</td>
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**Conclusion and Implications**

The purpose of this article is to articulate a simple framework to explain what works best—what is most likely to stimulate successful behavior change efforts and enhance long-term healthy behavior change practices. Programs that do not include efforts to motivate, build skills, and provide opportunities for healthy behavior are not likely to succeed; those that do are. This framework can be used proactively to design a program or retroactively to provide a framework for evaluating one. I am not aware of empirical studies that demonstrate the relative importance of these four basic factors, but my experience tells me that awareness is the least important, opportunities are the most important, and motivation and skills are probably equally important. Table 2 illustrates a point system for determining the likelihood of successful behavior change. I postulate that 5 or more points are needed for behavior change to be likely. For example, a person who is highly motivated (2 points) and highly skilled (2 points), with a medium level of opportunities (1 point) would have 5 total points and would be likely to succeed. Someone with high awareness (1 point), medium motivation (1 point), medium skills (1 point), and low opportunities would have 3 total points and be unlikely to succeed.

The implications of this simple framework are far from simple or inconsequential. Successful efforts at health behavior change will have a much greater chance of occurring if all four of these components are formally ad-
dressed in the program’s design. Another key implication is that the framework can be used as a starting point for the development of best practices and as reasonable expectations for evaluation efforts in health promotion. Finally, the framework will ultimately need to be adapted to the passions, long-term goals, and current priorities of each individual if we truly want to help people achieve sustainable long-term behavior change that enhances their health and well-being.

Michael P. O’Donnell, PhD, MRA, MPH, is Editor in Chief, American Journal of Health Promotion, and Director of Wellness and Health Promotion, Cleveland Clinic Health System, Cleveland, Ohio.

AWARENESS

Team awareness, problem drinking, and drinking climate: workplace social health promotion in a policy context.

Bennett JB, Patterson CR, Reynolds GS, Wiitala WL, Lehman WE.

PURPOSE: (1) To determine the effectiveness of classroom health promotion/prevention training designed to improve work climate and alcohol outcomes; (2) to assess whether such training contributes to improvements in problem drinking beyond standard workplace alcohol policies. DESIGN: A cross-sectional survey assessed employee problem drinking across three time periods. This was followed by a prevention intervention study; work groups were randomly assigned to an 8-hour training course in workplace social health promotion (Team Awareness), a 4-hour informational training course, or a control group. Surveys were administered 2 to 4 weeks before and after training and 6 months after posttest. SETTING AND SUBJECTS: Employees were surveyed from work departments in a large municipality of 3000 workers at three points in time (year, sample, and response rates are shown): (1) 1992, n = 1081, 95%; (2) 1995, n = 856, 97%; and (3) 1999, n = 587, 73%. Employees in the 1999 survey were recruited from safety-sensitive departments and were randomly assigned to receive the psychosocial (n = 201), informational (n = 192), or control (n = 194) condition. INTERVENTION: The psychosocial program (Team Awareness) provided skills training in peer referral, team building, and stress management. Informational training used a didactic review of policy, employee assistance, and drug testing. MEASURES: Self-reports measured alcohol use (frequency, drunkenness, hangovers, and problems) and work drinking climate (enabling, responsiveness, drinking norms, stigma, and drink with co-workers). RESULTS: Employees receiving Team Awareness reduced problem drinking from 20% to 11% and working with or missing work because of a hangover from 16% to 6%. Information-trained workers also reduced problem drinking from 18% to 10%. These rates of change contrast with changes in problem drinking seen from 1992 (24%) to 1999 (17%). Team Awareness improvements differed significantly from control subjects, which showed no change at 13%. Employees receiving Team Awareness also showed significant improvements in drinking climate. For example, scores on the measure of coworker enabling decreased from pretest (mean = 2.19) to posttest (mean = 2.05) and follow-up (mean = 1.94). Posttest measures of drinking climate also predicted alcohol outcomes at 6 months. CONCLUSION: Employers should consider the use of prevention programming as an enhancement to standard drug-free workplace efforts. Team Awareness training targets work group social health, aligns with employee assistance efforts, and contributes to reductions in problem drinking.


Strategies for improvement of awareness, treatment and control of hypertension: results of a panel discussion.

Whelton PK, Beesley DG, Sonkodi S.

High blood pressure (BP) is a major risk factor for coronary heart disease, heart failure, stroke, chronic kidney disease, end stage renal disease, and a variety of other clinically important outcomes. Results from the surveys described in this issue and elsewhere underscore a com-
mon finding that hypertension is both highly prevalent and insufficiently treated and controlled. Recognizing the differences in sampling and survey measurement techniques, the reported prevalence of hypertension (SBP/DBP ≥ 140/90 mmHg or treatment with antihypertensive medication) in adults exceeded 25% in all of the surveys reported in this issue. In Latvia, the prevalence of hypertension for 25- to 64-year-old adults in the general population was 46.1%. Control of hypertension with medication exceeded 25% in all of the surveys. In 2004;1:A09.

The Epidemiology of Hypertension—Regional Differences in Treatment and Control. Panel participants included Drs P Whelton, S Sonkodi, DG Beever, JG Fodor, PA Elliott, R Gifkova, A Nisinen, A Javor, and there was active participation of other symposium attendees. The following summarizes key elements of the discussion and recommendations of the panel.


Georgia’s Cancer Awareness and Education Campaign: combining public health models and private sector communications strategies.

Parker DM.

The Georgia Cancer Awareness and Education Campaign was launched in September 2002 with the goals of supporting cancer prevention and early detection efforts, heightening awareness of and understanding about the five leading cancers among Georgia residents, and enhancing awareness and education about the importance of proper nutrition, exercise, and healthy lifestyles. The inaugural year of the campaign is outlined, beginning with adherence to the public health principles of surveillance, risk factor identification, intervention evaluation, and implementation. A strategic and integrated communications campaign, using tactics such as paid advertising, public service announcements, local community relations, media releases, a documentary film, special events, and other components, is described in detail with links to multimedia samples. With an estimated budget of $3.1 million dollars, the first year of the campaign focuses on breast and cervical cancer screening and early detection.


Intensive and prolonged health promotion strategy may increase awareness of osteoporosis among postmenopausal women.

Tellier V, De Maeseneer J, De Prins L, Sedrine WB, Gosset C, Reginster JY.

The aim of the study was to measure the results of a 15-year health promotion strategy towards osteoporosis, in an urban community of subjects over 45 years old, in terms of osteoporosis awareness and handling. To this end an ancillary study to a large survey of the Belgian population’s self-perceived health status was carried out. A rectangular sample of 4800 individuals over 45 years old was randomly selected in two Belgian cities, among the affiliates of the two main health insurance providers. One of the cities (Liege) had been, since the early 1980s, the target of a constant health promotion strategy, directed to both the medical community and the general population, aimed at increasing osteoporosis awareness in women after the menopause. During the same period, no particular steps were taken in the other city (Aalst) to increase osteoporosis awareness in the community. In our study, the participants were asked to spontaneously report any chronic, serious and/or severe disorders that they had been suffering from, for at least 6 months, during the previous 12 months. They also provided a list of drugs they were taking at the time of the survey. Osteoporosis was reported to be a disease affecting 1.5% of men in Aalst and 1.3% of men in Liege (p = 0.61). For women, osteoporosis was reported to be present in 4.8% in Aalst and 10.8% in Liege (p < 0.001). Self-reporting of osteoporosis prevalence in Liege was statistically significantly higher in women aged 45–64 years, 65–74 years or over 75 years (p < 0.001). Obesity, alcohol consumption or physical activity were equally distributed between women from Liege and Aalst. Prescription drugs used for osteoporosis had been delivered to a similar proportion of men in Aalst and Liege. In women, a statistically significant difference in these prescription drugs was observed between Liege and Aalst, both for the overall population (p < 0.001) and in each of the age classes (p < 0.001 for 45–64 years and 65–74 years; p < 0.009 for over 75 years). A continuous long-term health promotion strategy, directed toward both physicians and the general population, thus appears to increase awareness about osteoporosis in women over 45 years and/or in the medical community. This is reflected by an increase in self-reported prevalence of osteoporosis and in the prescription of drugs aimed at prevention and treatment of this disorder. Whether these observations reflect an appropriate diagnosis and a proper handling of the disease remains to be evaluated by objective diagnostic tools such as bone densitometry and by an evaluation of the effectiveness of prescription practices in postmenopausal women.

MOTIVATION

Motivational strategies with alcohol-involved older adults: implications for social work practice.

Hanson M, Gutheil IA.

Social workers and other health care professionals address problem drinking by older adults inconsistently. Reasons include client-related variables (for example, denial and poor information), practitioner-related factors (for example, inadequate knowledge about addictive behaviors, underdeveloped assessment tools, and limited empirically validated treatment options), and societal factors associated with “ageism.” This article explores the nature and extent of problem drinking among older adults and barriers to assistance. The article outlines practice strategies that draw on motivational interviewing principles and a client’s motivational readiness to change for reaching out to older adults, assessing their needs, and encouraging them to seek assistance.


Health motivation: a determinant of older adults’ attendance at health promotion programs.

Loeb SJ, O’Neill J, Gueldner SH.

The primary purpose of conducting this study was to determine if there is a significant relation between health motivation and participation in health promotion programs in a sample of community-dwelling older adults (n = 106). Health motivation was measured using Cox’s (1985) Health Self-Determinism Index, and participation in health promotion programs was measured by tallying the self-reported number of programs attended within the past year by each individual. The effects of selected demographic variables on these two variables were also examined. The conceptual framework guiding the study was the Health-Promoting Self-Care System Model (Simmons, 1990). Intrinsically motivated older persons attended fewer programs (p < .01) than those who were more extrinsically motivated. Higher educational level (p < .001) and fewer health problems (p < .01) emerged as significant predictor variables for intrinsic health motivation, and those with less formal education attended more health promotion programs (p < .05).


Motivational strategies used by dietitians to counsel individuals with diabetes.

Brown SL, Pope JF, Hunt AE, Tolman NM.

The purposes of this study were to determine the use and perceived effectiveness of motivational strategies used by dietitians and to evaluate dietitians’ perceptions of barriers to client compliance. A three-part questionnaire with 32 motivational strategies, 16 barriers to adherence, and demographic information was designed and mailed to 862 members of the American Dietetic Association’s Diabetes Care and Education Dietetic Practice Group. Statistical analyses included frequency distributions, chi-square analysis, and factor analysis. Only 13 of the 32 motivational strategies were used frequently by 50% or more of the dietitians. The main strategy based on perceived effectiveness was “Tailor the diet to the client’s lifestyle.” Strategies perceived as effective also were used frequently by a majority of the dietitians. There were differences in use of strategies based on practice setting, CDE certification, and education level. The most significant barrier to adherence was “Complications with lifestyle/competing demands.” Factor analysis revealed nine factors for motivational strategies and five factors for barriers to adherence.


SKILL BUILDING

Pilot test of a behavioral skill-building intervention to improve overall diet quality.

Carpenter RA, Finley C, Barlow CE.

OBJECTIVE: To determine the effect of a cognitive and behavioral skills building intervention delivered via a small group or correspondence on improvement in total diet quality. DESIGN: Randomized, controlled trial comparing 2 intervention groups with a usual care (UC) group. PARTICIPANTS: Generally healthy men (n = 35) and women (n = 63); mean age = 49.6 years (range = 29 to 71 years). INTERVENTION: 20-session behavioral and cognitive skills curriculum to train participants to improve personal dietary habits that were inconsistent with public health guidelines. One group (weekly meeting [WM]) met in small groups with 2 cofacilitators. A correspondence (CR) group received the curriculum via mail and an interactive study Web site. The UC group received a copy of a consumer nutrition book. MAIN OUTCOME MEASURE: Modified Healthy Eating Index (MHEI) score derived from 9 components of the US Department of Agriculture’s Healthy Eating Index. RESULTS: The WM group significantly improved their
MHEI score compared with the CR (P = .04) and UC (P = .002) groups. The CR group’s improvement in MHEI score was not significantly different from that of the UC group (P = .19). CONCLUSIONS AND IMPLICATIONS: A behaviorally focused intervention can improve overall diet quality, especially if delivered through small-group meetings.


_Penedo FJ, Dahn JR, Molton I, Gonzalez JS, Kinsinger D, Roos BA, Carver CS, Schneiderman N, Antoni MH._

BACKGROUND: The current study evaluated the efficacy of a 10-week, group-based, cognitive-behavioral stress management (CBSM) intervention relative to a half-day seminar in improving quality of life (QoL) among men who were treated for localized prostate carcinoma (PC) with either radical prostatectomy (RP) or radiation therapy. METHODS: Ninety-two men were assigned randomly to either the 10-week CBSM group intervention or a 1-day seminar (control group). The intervention was designed to improve QoL by helping participants to identify and effectively manage stressful experiences and was focused on the treatment-related sequelae of PC. RESULTS: A hierarchical regression model was used to predict postintervention QoL. The final model, including all predictors and relevant covariates (i.e., income, baseline QoL, ethnicity, and group condition), explained 62.1% of the variance in QoL scores. Group assignment was a significant predictor (beta = −0.14; P = 0.03) of QoL after the 10-week intervention period, even after controlling for ethnicity, income, and baseline QoL. Post-hoc analyses revealed that individuals in the CBSM intervention condition showed significant improvements in QoL relative to men in the 1-day control seminar. Improved QoL was mediated by greater perceived stress-management skill. CONCLUSIONS: A 10-week cognitive-behavioral group intervention was effective in improving the QoL in men treated for PC, and these changes were associated significantly with intervention-associated increases in perceived stress-management skills.


Reorienting health services with capacity building: a case study of the Core Skills in Health Promotion Project.

_Yeatman HR, Nove T._

This paper presents a case study of the application of a framework for capacity building [Hawe, P., King, L., Noort, M., Jordens, C. and Lloyd, B. (2000) Indicators to Help with Capacity Building in Health Promotion. NSW Health, Sydney] to describe actions aimed at building organizational support for health promotion within an area health service in New South Wales, Australia. The Core Skills in Health Promotion Project (CSHPP) arose from an investigation which reported that participants of a health promotion training course had increased health promotion skills but that they lacked the support to apply their skills in the workplace. The project was action-research based. It investigated and facilitated the implementation of a range of initiatives to support community health staff to apply a more preventive approach in their practice and it contributed to the establishment of new organizational structures for health promotion. An evaluation was undertaken 4 years after the CSHPP was established, and 2 years after it had submitted its final report. Interviews with senior managers, document analysis of written reports, and focus groups with middle managers and service delivery staff were undertaken. Change was achieved in the three dimensions of health infrastructure, program maintenance and problem solving capacity of the organization. It was identified that the critically important elements in achieving the aims of the project—partnership, leadership and commitment—were also key elements of the capacity building framework. This case study provides a practical example of the usefulness of the capacity building framework in orienting health services to be supportive of health promotion.


PRACTICE

Impact of a worksite behavioral skills intervention.

_Nichols JF, Wellman E, Caparosa S, Sallis JF, Calfas KJ, Rowe R._

Sixty-four male and female sedentary employees were randomly assigned to an intervention group or control group to determine the effects of behavioral skill training on adoption and maintenance of exercise. Both received a 9-month membership at a local fitness facility. The control group received a 12-week semistructured course, which included a facility orientation and three meetings with a personal trainer. The intervention group received
a 12-week behavioral skills course and were encouraged to participate in a 12-week semistructured exercise course followed by a 3-month problem-solving support intervention. Both groups improved their daily energy expenditure, the amount of moderate and vigorous activity they performed, and their strength and flexibility. The study sample was too small to show substantial differences between the intervention and control group. Changes in mediator variables were mixed.

_Am J Health Promot._ 2000;14:218–221.

**RELATED ARTICLES AND LINKS**

**The case for integrating behavior change, client-centered practice and other evidence-based models into geriatric care management.**

**Hackstaff L, Davis C, Katz L.**

This paper describes the complexities of engaging a frail, elderly population in the process of behavior change to improve daily functioning. Implementation of a brief Purchase of Services (POS) benefit supplementing usual geriatric care management in an integrated, not-for-profit HMO environment is used to illustrate these complexities. Findings from the first two years of the four-year study of the intervention showed that one-third of the group of 541 study participants who were randomized as eligible to participate refused these free, enhanced services. The reasons for these refusals are examined, and a case is made for incorporating behavior change theory into traditional geriatric care management practice for cognitively intact clients in order to facilitate acceptance of needed services and increased patient autonomy.


**Promoting the maintenance of health behavior change: recommendations for the next generation of research and practice.**

**Orleans CT.**

This article highlights several broad themes that emerged from the series of papers presented at the National Heart, Lung, and Blood Institute conference, “Maintenance of Behavior Change in Cardiorespiratory Risk Reduction,” with a view to generating recommendations for the next generation of research and practice. Major recommendations center around the need for (a) new models of population health behavior change and maintenance that integrate individual-level with broader environmental and macro-level policy influences; (b) a fuller model of the maintenance process, which views maintenance more as a journey than as a destination; and (c) more theory-based and interdisciplinary research on the maintenance process and on strategies for assisting special populations and addressing more than one behavioral risk at a time.


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**Closing Thoughts**

_By Larry S. Chapman, MPH_

Many ancient cultures, such as the Chinese, have always held that true brilliance is often expressed by making the complex appear simple, while yet remaining true to the reality of the situation. I believe Michael has achieved this by providing a simple framework for assessing what is likely to work in the context of health promotion behavior change. Population characteristics and individual characteristics will continue to be vital in finding the right “mix” of awareness, motivation, skill-building and opportunities for practicing the new behavior, but we now have a solid starting place.

In addition, I believe that this simple framework can function as a “Rosetta stone” to help us understand and devise health promotion behavior change interventions that have a decidedly higher probability of leading to successful long-term behavior change.

“Awareness” can translate into the scope of the risk or behavior issue, the means of information transfer, the depth of information or its complexity, the role of the individual in controlling the flow or direction and the de-
gree of utility or practicality subsumed in the informational content. The operative question is, “Are you aware of . . . ?”

“Motivation” can translate into issues of intrinsic and extrinsic balance, strength, modifiers, reminders, span, individual vs. group, formal vs. informal, progressively changing vs. fixed, short term vs. long term, as well as “refresh rates” along the way. The operative question is, “Are you ready to . . . or do you want to . . . ; ?”

“Skill-building” can translate into tailored vs. standard, in-depth vs. superficial, self-directed vs. other-directed, open access vs. controlled access, no expectations vs. specific expectations for participants, stand-alone vs. sequentially linked, performance moderated vs. open, single vs. multiple skills, minimums vs. maximums, self-focused vs. a role that is linked to serving others with the skills. The operative question is, “Do you know how you . . . ?”

“Opportunity for practice” can translate into unstructured vs. structured, short vs. long duration, solo vs. group, time of day, day of week, time span length of practice, no feedback vs. feedback, critique-free or critique required, refinements expected vs. standard approach, environmentally supported vs. environmentally neutral, trigger-free vs. trigger-based, graded vs. nongraded, and fun-prone vs. fun-neutral. The operative question is, “Are you able . . . ?”

I have had the good fortune to see first hand the actual Rosetta stone in the British Museum. Just as the Rosetta stone enabled archaeologists, anthropologists and linguists of the early 19th century to discover the meaning of Egyptian hieroglyphics by comparing them with the Greek and Demotic (early Arabic) scripts, the simple framework presented in this edition of The Art of Health Promotion may give health promotion professionals, employers/purchasers, and consumers/participants some common language for considering what is likely to work when it comes to health promotion programming. Why not try this framework next time someone asks you, “What works best?”

Larry Chapman, MPH, is Editor of The Art of Health Promotion.