Tailored E-mails in the Workplace
A Focus Group Analysis

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RESEARCH ABSTRACT

Employee wellness programs can potentially contribute to a stronger and healthier work force, with increased dexterity and positive mental health. Programs that keep the work force physically active can reduce heart disease, type 2 diabetes, hypertension, hyperlipidemia, cerebrovascular accident, and workplace injury. The occupational health nurse provides information to motivate employees to take the first step toward an active lifestyle. The purpose of this article is to present the qualitative evaluation results of an intervention study that tested the effectiveness of tailored e-mail communications designed to increase intentional physical activity in a group of manufacturing workers. The increase in overall physical activity demonstrates the effectiveness of the workplace interventions. Research will now strengthen theoretical concepts, refine messages, and increase both the dose and the power of the interventions.

Regular physical activity is essential to improving health in U.S. society. Research has shown many benefits to regular physical activity (Warburton, Nicol, & Bredin, 2006), including improved weight control (Irwin et al., 2003), reduced lipid profiles, increased high-density lipoproteins, and lowered low-density lipoproteins (Dattilo & Kris-Etherton, 1992). Regular physical activity also improves musculoskeletal fitness, leading to fewer functional limitations, improved mobility, and overall improved quality of life (Warburton, Geldhill, & Quinney, 2001). An inverse relationship between frequency and intensity of exercise and risk of disease was established; thereby, highly physically active individuals are at the lowest risk for disease (Warburton et al., 2006). A physically inactive population is at risk for several chronic diseases, including cardiovascular disease, diabetes, cancer, hypertension, obesity, depression, and osteoporosis (U.S. Department of Health and Human Services, 2002; Warburton et al., 2006).

Along with the increased incidence of disease in a physically inactive population are economic consequences of increased morbidity and mortality among those with chronic disease. The economic costs of chronic disease are two-pronged; direct costs include those associated with prevention, diagnosis, and treatment of chronic conditions (U.S. Department of Health and Human Services, 2002) and indirect costs include the value of lost wages to the individual who is unable to work and the value of future earnings that may be lost due to premature death (U.S. Department of Health and Human Services, 2002). In 2000, the National Institutes of Health estimated the total cost for the following selected diseases: $183 billion for heart disease; $153 billion for cancer; and $100 billion for diabetes (U.S. Department of Health and Human Services, 2002).

Ultimately, individuals, employees and taxpayers, bear the economic burden of chronic disease costs

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Applying Research to Practice

Overall, this focus group evaluation of a previous intervention study using tailored e-mail messages and accelerometers to measure activity suggests that, although designing a tailored message intervention program requires a significant amount of initial effort, tailored messages are an intervention that could effectively reach many individuals at a low cost. Focus group members indicated they liked the accelerometers for quantifying their on-the-job and leisure-time activity. Also, they desired the tailored e-mail messages for information. Those who were already active or beginning to be active desired a friendly competitive spirit in the workplace and a sense that they were united in their efforts to improve health. It is important to develop health programs with a multifaceted approach.

through the trickle-down effect. The effects are evident in increased insurance premiums and increased government allocations to Medicare and Medicaid programs. Employees are asked to assume more health insurance premiums. As premiums rise, more employees who earn marginal incomes forego or cancel health insurance. Employers also bear a substantial burden for the costs of health insurance. The Bureau of Labor Statistics (2009) reports that employers pay between 71% and 82% of the premiums for employee health care benefits depending on family versus single coverage. In 1991, for private industry employers, the total cost for employee compensation was $15.40 per hour worked, with $1.01 (6.5%) per hour worked allocated to insurance benefits (Bureau of Labor Statistics, 2001). By 2010, the total employee compensation per hour worked in private industry had risen to $27.73, with $2.22 (8.0%) allocated to insurance benefits (Bureau of Labor Statistics, 2010). The Kaiser/HERT Survey of Employer Sponsored Health Benefits (2009) noted an average annual firm and worker premium contribution of $13,375.00 for a family plan and $4,824.00 for a single plan. Since 1999, the Kaiser report estimates the premiums for a family plan have risen 131% (The Kaiser Family Foundation & Health Research & Education Trust, 2009).

One answer to reducing the burden of health insurance costs may be the combined efforts of the public and the private sectors to promote health through awareness campaigns focused on the need for regular physical activity. These campaigns benefit individual health, lower individual health-related expense, and lower employers' costs related to occupational injuries, sick time, and insurance premiums. Workplace programs present an opportunity to improve employee health. Health promotion is both an art and a science that uses a systematic approach to improve lifestyle behaviors and foster optimal health. One current strategy for promoting individual physical activity is tailored educational information. Although little supporting evidence exists for tailoring educational content to promote physical activity, some support for tailored interventions can be found in a 2007 systematic review of tailored health interventions delivered via the Internet (Lustria, Cortese, Noar, & Glueckauf, 2009). Thirty studies, completed between 1996 and 2007, fit the criteria for inclusion in the Lustria et al. (2009) analysis. Unfortunately, the interventions varied so much that no definitive trend could be found among the studies. The authors noted that potentially these programs could improve health in populations, but further research was needed to evaluate the effects of web-based tailored versus non-tailored interventions on health outcomes (Lustria et al., 2009). Similarly, Van Den Berg, Schoones, and Vlieland (2007) reported on a systematic review of studies published through 2006 involving web- or e-mail-based delivery of health information to promote physical activity. Of the 10 studies qualifying for inclusion, six used theoretical models to guide the interventions, but only one study used objective measures to assess the resulting physical activity. The reviewers concluded that although it appeared some of the Internet-based physical activity interventions were effective, studies varied so much in terms of outcome measures, program content, intervention length, and lack of baseline activity level that it was difficult to assess the effectiveness of the interventions (Van den Berg et al., 2007).

Noar, Benac, and Harris (2007) published a meta-analytic review of 57 studies from between 1989 and 2005 that involved the use of tailored printed health messages. Of these, 40 studies found that tailored messages outperformed non-tailored messages in causing health behavior change. However, this analysis eliminated all web-based interventions (Noar et al., 2007). A recent study by Sternfeld et al. (2009) used a 16-week individually tailored e-mail program with 797 respondents to assess the results of an intervention designed to increase consumption of fruits and vegetables, increase physical activity, and decrease consumption of saturated fats, trans fats, and sugars. The messages were specifically tailored to each individual's lifestyle, physical activity preferences, stage of change, and current diet. The messages were delivered to the individual's e-mail box with several small goals from which the participant could chose one or two. The modules for the goals included articles, simulation tools, a progress-tracking tool, review of barriers, a discussion board, and links to additional resources. The intervention group showed significant increases in total activity (Sternfeld et al., 2009). Overall, the aforementioned study's evaluation suggested that although designing a tailored intervention program requires a significant amount of initial effort, tailored messages can effectively reach significant numbers of individuals at a low cost.

THEORETICAL FRAMEWORK

The original intervention study investigated the process of intentional physical activity change. The

researchers created a theoretical framework by synthesizing concepts from two theories, Maslow's Hierarchy of Needs and the Transtheoretical Model (TTM). The process of behavior change is mediated by motivation, which, according to Maslow, is based on each individual's level of need (Maslow, 1954). Once the level of need is determined, meeting that need becomes the motivation for the behavior change (Maslow, 1954). The TTM is a behavioral theory that assumes individuals move through five stages of change: precontemplation (no intention to change behavior), contemplation (aware problem exists but have taken no steps to correct behavior), preparation (intending to take action within next month), action (attempting to modify behavior), and maintenance (actions to prevent relapse to previous behaviors) (Prochaska, DiClemente, & Norcross, 1992). The TTM hypothesizes a decisional balance in which the individual must consciously weigh the pros (advantages) and cons (disadvantages) of behavior change (Prochaska et al., 1992). When readiness is understood, the decisional balance can be influenced by addressing and meeting the level of need, which should then tip the decision in favor of engaging in behavior change (in this case, increasing physical activity) (Yap & Davis, 2007). In short, knowing the needs and motivations of employees should enable the occupational health nurse to influence their readiness to change.

ORIGINAL STUDY

This article describes the evaluation of an intervention study that used a quasi-experimental design (two groups, repeated measures) in which the participants were assigned to either the contemplation or the preparation stage of change (Yap, Davis, Gates, Hemmings, & Pan, 2009a, 2009b). Seventy-three participants, 23 to 59 years old, were recruited from two manufacturing distribution plants in Kentucky. The plants were owned by the same corporation, but were located in different parts of the state. One plant served as the intervention site and the other the comparison site. The purpose of the intervention study was to test the effectiveness of tailored e-mail communications designed to increase intentional physical activity in a group of employees. The specific aims of the study were to examine the messages' effect on stage progression for participants in either the contemplation or the preparation stage of change and to examine the messages' effect on increasing workers' physical activity. The positive direction of the behavioral change process, combined with the increase in overall physical movement, showed promise for future workplace interventions.

In October 2007, the intervention group received tailored e-mail messages for a total of 6 weeks based on their identified stage of change. Participants also had access to a comprehensive website with both physical activity and nutritional information (Yap et al., 2009a). The comparison group was sent weekly, non-tailored, general health e-mail messages without physical activity information or website access. Every other week, participants wore the accelerometer for 24 hours (except when sleeping). The accelerometer avoided potential bias when participants recorded and reported their own data.

The study began with 15 participants in the contemplation stage of change and 22 participants in the preparation stage of change ($n = 37$) for the intervention group. The comparison group began with 10 participants in the contemplation stage of change and 26 in the preparation stage of change ($n = 36$). In the intervention group, 48.6% ($n = 18$) of the participants remained at baseline, 10.8% ($n = 4$) moved backward one stage, 18.9% ($n = 7$) moved forward one stage, and 18.9% ($n = 7$) moved forward two stages. One participant left the study ($n = 1$). In contrast, in the comparison group, 41.7% ($n = 15$) remained at baseline stage, 19.4% ($n = 7$) moved backward one stage, 27.8% ($n = 10$) moved forward one stage, and 0% ($n = 0$) moved forward two stages. Four participants left the study before completion of data collection ($n = 4$). Thus, the results were promising and set the stage for further study.

Design, Participants, and Setting

The final step in the aforementioned study was to conduct focus groups after the 6-week e-mail intervention (Yap et al., 2009a, 2009b). The purpose of this article is to provide a summative evaluation based on data obtained from the study's participants in both the comparison and the intervention sites. All focus group interviews were conducted in mid-December 2007. The original study data were collected for 6 weeks beginning the first week of October 2007. Thus, the focus groups were conducted approximately 4 weeks after the intervention phase concluded.

This retrospective descriptive research design used a qualitative method, interviews, with small groups of participants. The interviews were conducted at the workplace for the convenience of the participants and were voluntary. A total of 16 participants agreed to be interviewed, 11 from the intervention group and 5 from the comparison group. Voluntary participation may have accounted for the limited number of participants willing to be interviewed. The criterion used for inclusion of participants was merely that the participant had completed the original e-mail intervention study.

The focus group method has traditionally been used to validate data obtained in research (Morgan, 1996) because interviewing focus groups allows interaction between participants and the generation and confirmation of ideas and motivations. It is hoped that the focus group sessions create a relaxed forum with peer support for the participants. The researcher can examine responses for clarity, pinpointing areas of agreement and disagreement. The researcher reinforces the notion that all opinions will be respected and that truthful and forthright responses are important to understanding individual perceptions (Krueger & Casey, 2000; Morgan, 1988). Evaluative focus group assessment can be used to identify barriers to behavior change, determine strategies for future intervention, and identify beliefs regarding existing health promotion programs (Gates, Brehm, Hutton, Singler, & Poeppelman, 2006). The

Table

Participants' Stage of Change by Group

Focus Group	Contemplation Stage	Preparation Stage	Action Stage	Total
Group 1—Intervention site	2	2	2	6
Group 2—intervention site	2	2	1	5
Group 3—comparison site	4	1	0	5
Total in stage	8	5	3	16

original study used both formative and summative evaluative strategies.

Participants

Three focus groups convened postintervention; two focus groups were held at the intervention site and one focus group at the comparison site. The intervention site focus groups consisted of six participants in one group and five participants in another. The comparison site group consisted of five participants. The group members were in various stages of change poststudy (Table); each group included both genders.

Procedures

The focus groups were held in a private room in the facility during paid company time. Once consent forms were signed, the researcher began each meeting by describing the overall study and preliminary results from the physical activity wellness program. Following this 10-minute presentation, a 50-minute focus group session began that was audiotaped and later transcribed verbatim for data analysis. The University of Cincinnati Institutional Review Board (IRB) approved the study. Upon completion of each focus group session, each participant received a $25 gift certificate to Wal-Mart.

Focus Group Questions

Focus group questions related to website use, tailored e-mails, and motivational and cognitive aspects of the program and then individual opinions on variations (Sidebar). An open-ended approach was used to collect narrative information from the participants. Open-ended questions allowed the interviewer to further probe and recognize when saturation of major themes had occurred.

Data Analysis

On completion of each interview session, the tapes were transcribed verbatim for analysis by a certified medical transcriptionist who had acquired IRB training. Data from all the focus groups were reviewed to capture viewpoints and identify common themes. The transcripts were thoroughly read, line by line, by two researchers who listened to the audiotape to decipher voice inflections. Key sentences and concepts were highlighted and coded. Initial themes were identified and grouped. Rereading was then completed with themes added, deleted, and merged. Main themes were developed and reviewed by the researchers for agreement or disagreement prior to reaching a final consensus.

RESULTS OF EVALUATION FOCUS GROUP SESSIONS

Eight themes were present in both facilities' focus group sessions.

Theme 1: Personal Preferences for Program and Program Aspects

The employees involved in this study were accommodating and genuinely interested in wellness interventions; however, they were not wholly supportive of all aspects of the program. They had a history of using other interventional programs, including WeightWatchers and an insurance provider-sponsored program. The majority, with one exception, enjoyed using the piezoelectric accelerometer and did not mind the e-mails. All three focus groups identified the accelerometer as the most motivating factor. The employees noted the accelerometers were fun, were easy to use, and provided them with informational numbers that could be compared with other employees or with numbers provided in the e-mails.

> The day we wore it, we walked more . . . that motivated me more than anything else. It just kept me active. I kept looking at my meter and I just wanted to keep going.

Another participant noted:

> I know a lot of people . . . when I was [picking the accelerometers] back up [asked], "Can I keep it?" I saw it more in females than in males . . . they were wanting to keep it to calculate how many steps [they were taking] . . . . I think they realized they weren't walking enough steps during the day.

Theme 2: Content of E-mails—Tailoring, Fun Facts, Quick Assessments, and Self-Help Tools

What was striking in the focus group discussion was the employee consensus in the comparison group that they could not relate to any of the information in the nontailored, general health e-mail messages, unless a mes-

Focus Group Interview Questions Posed by the Researcher

Website access	Did you access the website?
Website content	What things did you like the most about the website?
	What things did you not like about the website?
E-mail personal relevancy	Did you find the messages in the e-mails personally relevant?
E-mail content	What would have made it more helpful or meaningful to you?
	Did you find the messages irritating or negative in any way?
E-mail motivation	Did the messages help you think of ways to change your activity?
	Did you find the messages or information demotivating?
Accelerometer motivation	How motivating did you find the accelerometer?
Information usefulness	Did you use the calorie information?
Information motivation	Did you like the fun facts?

sage contained content that an employee found personally relevant. Although not annoyed by the e-mails, the overall opinion was that the e-mails were given a quick glance and then deleted.

> I recall getting the note . . . but I can't recall anything that was in [it] . . . . We get a lot of other notes . . . I just looked at it to see what it was about and moved on.

> I didn't think it had a lot of impact . . . and at the end of the day, I don't exactly recall what it said.

Although participants in the comparison site group indicated the non-tailored messages lacked interesting content, this perception was not supported in discussions with the tailored e-mail groups. Employee perceptions in the tailored e-mail groups became evident as the researcher documented discussion with open-ended questions. All participants in both tailored e-mail groups reported visiting the website, even if just for a quick glance, and could relate some of the personal information from the e-mail. The stages of individual change also became evident within some of the employees' responses (three stages of change—contemplation, preparation, and now, action). All employees, including those in the contemplation stage, could remember fun facts (i.e., the number of steps needed to walk off a Big Mac).

> [How much it is to walk off those types of thing] . . . that's crazy . . . it really demonstrates what you're up against . . . . I think you put it in real terms like that and it's pretty eye opening. You think about what you had for lunch and everything that you had [that day] . . . [and all] the steps to walk it off.

All participants in this group used information from the e-mails to do a quick assessment and compare their steps per day to the usual number for those on the job. Some would use the link to quickly browse additional websites. Those in the contemplation stage of change found the information to be a motivational tool. They sought information to calculate calories related to the foods they consumed during the day. They related a desire for more information about the calorie content of foods and nutritional value. They were more aware of how to calculate steps needed to walk off calories consumed. Thus, need-level language and personal content did appear to capture the attention of the employees and provided a positive educational component. Overall, the technique of tailoring the e-mails did increase the relevance of the message. Traditional generic health education materials did not provide the information or motivation needed to increase physical activity because the information was not generally read or remembered.

Theme 3: Friendly Workplace Competition

For those in the preparation stage, one theme that appeared repeatedly was the desire to have friendly competition. The groups interviewed all compared the results on their accelerometers with those of coworkers. The employees were motivated by the efforts of fellow employees.

> To have some sort of a buddy to compare yourself, kind of I did 20,000 and they did 1,000 . . . I would try to outdo the other guy . . . that's . . . what helps a lot of people. Not necessarily competition, but somebody else is going through the same thing . . . you are not exercising alone.

Theme 4: Barriers to Use—Not Enough Time

The greatest barrier to employees' reviewing e-mails was time. The employees did not feel they had time to view the e-mails in depth at work. They suggested that this barrier could be resolved by sending the e-mails to both the work and the home e-mail addresses. The major-

ity felt they would have more time at home to browse the e-mails and link to other health information within.

> I get so many e-mails in the course of a day . . . I'm playing defense . . . I'm not lingering . . . [and] it's the same with the website. I clicked in and I went in there and kind of looked around a bit, jumped out, and life went on from there. . . . maybe it would have been better if I had given you my home e-mail address . . . . At home I tend to linger a little bit more . . . and you have a little more time.

Theme 5: Tailoring E-mails Specifically to Personal and Work Life

Employees expressed several suggestions for tailoring the e-mails. Those with families, particularly those with young children, did not want suggestions such as "work out at the gym." They preferred suggestions that included activities geared toward involvement with their children. This may be the result of the overall need working men and women feel to spend quality time with their children.

> It would be nice to join a club . . . if you didn't have kids that you have to go to all those baseball and softball games . . . . [But], if you were single . . . you probably could go to the gym or if you had a sitter who would keep your kid while you went . . . . It's just hard [with kids] . . . maybe if you had said, "Take your child for a walk" . . . anything to get your kids involved.

Some employees expressed a desire to have multitasking activities that could be tailored to their jobs, including exercises that could be used while at the workstation between work cycles or while completing other required tasks.

> Focus more on physical activity [in the workplace] . . . [for example] I have 5 minutes. I'm going to walk around.

Theme 6: Be Positive and Do Not Continually Remind Me of Shortcomings

Employees in the focus groups did find the individual health information provided, such as body mass index, useful initially. However, they found it discouraging when presented repeatedly in subsequent e-mails, particularly if it reminded them of their personal shortcomings.

> I like the idea of knowing where you should be, like with your body mass . . . but don't keep beating me up with that information.

The employees wanted variety with each new e-mail and messages that did not repeat information they had seen in the past. They also did not want excessive information on the computer screen. If the information did not fit on the initial screen, the viewing employee would not scroll down the page to find more information.

> I kept getting the same kind of thing in every e-mail . . . like, "Go mow the lawn." . . . we want more ideas . . . more variety.

Theme 7: How Does the Employee Compare With Others?

All groups agreed that they would enjoy entering their results into a computer-based program each day, allowing comparison of their results with coworkers' averages at their own plant or at other company-owned plants or against national averages.

> If you said, "Okay, now you need to go to the website and put your numbers in the website [such as] put in your cholesterol and your weight, and it [gives] your predicted lifespan" . . . that [would] generate a half-hour of lunchroom conversation.

Theme 8: Rewards

The employees also wanted rewards. Not excessively expensive rewards, just acknowledgment of their accomplishments.

> Maybe if you need[ed] to go to the website and put your [accelerometer] numbers in the website . . . and you're given immediate feedback . . . . People in the plant would enjoy that type of program . . . especially if you gave away prizes . . . a large percentage of the plant would participate.

DISCUSSION

The American Association of Occupational Health Nurses, Inc. (AAOHN, 2007) defines health promotion as the development of educational programs that encourage workers to take responsibility for their health. The essential components of successful health promotion programs in the workplace have yet to be clearly delineated by previous studies. Johnson and Denham (2008) provided a review of characteristics of successful health promotion programs. After reviewing 14 intervention studies published between 2001 and 2007, continuous education and close monitoring of participants' behaviors were found to be two of the most important factors for success (Johnson & Denham, 2008). Team-based interventions provided better results than did interventions delivered individually, and single disease- or health behavior-focused interventions were better than multifocused interventions (Johnson & Denham, 2008). Sternfeld et al. (2009) noted important strategies included setting goals, increasing knowledge, self-monitoring, having consistent reminders, addressing barriers, and rewarding accomplishments.

The results of the focus group study are consistent with previous research findings and findings in the previous study by Yap et al. (2009a). Tailored e-mail messages support efforts to engage workers in intentional physical activity. The participants in the focus groups used e-mails to increase their awareness of factors that improve

health. The participants demonstrated an increase in their overall knowledge of health facts and information. The e-mails influenced participants in every stage of change, although the participants were not always aware of the influences. The continuous need for education and motivational influences is evident in the participants' preferences for personalized information (i.e., name and need-level language, fun facts that can be remembered and used to choose healthy behaviors, and an ever-changing variety of information). Those in the preparation stage of change benefited from motivational elements such as friendly competition and game participation to progress to the next stage. Those in the contemplation stage benefited more from health information (e.g., calorie values and caloric energy expenditures with exercise, body mass index, cholesterol, and blood pressure goals, and healthy lifestyle information).

The focus groups identified other factors that should be considered by the occupational health nurse in tailoring e-mails. Consideration should be given to not only stage of change and level of need, but also family dynamics, nature of the job performed, personal interests, familial health history, and overall health knowledge. These factors could be assessed in initial surveys administered along with the demographic, stage of change, and need-level questionnaires.

Health promotion programs should have a multifaceted approach. The focus groups related that they liked the accelerometers to quantify their on-the-job and leisure-time activity. They enjoyed friendly competition in the workplace and the sense that they were united in their efforts to improve their health. They like an interactive website, allowing comparison of their accomplishments to those of their coworkers. Website use could facilitate the tracking of program data and provide immediate feedback to participants.

The final component of every worksite intervention is rewards. Rewards demonstrate employee commitment and employer appreciation. They have been identified by the National Institute for Occupational Safety and Health (2009) as an essential component of health promotion programs.

LIMITATIONS AND OTHER CONSIDERATIONS

During the course of this study, unknown to the primary researcher, a WeightWatchers program was instituted at both sites. It is possible that these programs had an effect on the results of this study; however, both sites experienced the same WeightWatchers program and none of the participants in the focus groups related joining the WeightWatchers program. Second, the small dose and limited exposure (time) to the intervention may have limited the intervention's potential for impacting health behavior change. Third, focus group participation can have positive or negative effects on the participants, and the researcher may not have detected these. Communication is not an exact science and includes both verbal and nonverbal elements. The researcher cannot detect all of the nonverbal elements of communication and may even inject bias as the focus group interviewer (Onwuegbuzie, Leech, & Collins, 2010). Further, participants may not have accurately articulated preferences due to peer pressure, the complex nature of feelings, or the desire to enhance personal image. Fourth, an exploration of specific motivators and barriers as well as environmental, psychological, and social mediators that may have impacted behaviors is needed. This analysis could enhance the design of effective physical activity promotion programs using tailored e-mail messages.

CONCLUSION

The goal of this study was to provide an evaluation of tailored e-mail messages and an accelerometer component of a workplace health promotion program to increase physical activity. The focus groups confirmed the positive aspects of the tailored e-mails and accelerometer, particularly in providing information and as a tool for friendly competition and peer motivation. The groups revealed preferences for personalized information tailored to their lifestyles and family structure. The groups preferred a variety of information and fun facts to increase overall knowledge of health and nutrition. The groups wanted information that did not accentuate the negative, could be accessed during leisure time, and could fit into one screen on the computer.

Future research should be geared toward development of expert knowledge-based computer systems that include the analytical skills of a health coach. The websites should be interactive and should provide benchmarking, immediate feedback, and competitive workplace concepts. Programs should provide rewards and acknowledgment of efforts. The occupational health nurse should have guidelines and program evaluations because each workplace has a unique population of employees.

IMPLICATIONS FOR OCCUPATIONAL HEALTH NURSES

Physically inactive employees are at risk for several chronic diseases, including cardiovascular disease, diabetes, cancer, hypertension, obesity, depression, and osteoporosis. These diseases translate to considerable economic consequences for employers.

Occupational health nurses can intervene to affect the health of employees and the profitability of organizations through tailored e-mail information. Furthermore, providing encouragement and a competitive component (e.g., an accelerometer) for employees who are already active should be considered. Those employees who are inactive but willing to try will need tailored information.

Occupational health nurses promote healthy work environments and positive health behavior change to ensure workplace safety for all. The positive direction of the process of behavioral change, combined with the increase in overall physical movement, shows promise for future workplace interventions.

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