Population Health

Workforce Characteristics and Attitudes Regarding Participation in Worksite Wellness Programs

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Abstract

Purpose. *To estimate workforce participation characteristics and employees' attitudes regarding participation in workplace wellness programs.*

Design. *Data from a statewide stratified random sample were used to compare small (<50 employees) and larger (50+ employees) workplaces to estimate participation in screening programs and likelihood of participation in workplace wellness programs.*

Setting. *A telephone survey of employed Iowans registered to vote.*

Subjects. *Surveyed were 1171 employed Iowans registered to vote, ages 18 to 65.*

Measure. *Among questionnaire survey modules were items from the Wellness Council of America Employee Needs and Interest Survey, the U.S. Census Bureau for employment documentation, and the World Health Organization Health and Work Performance Questionnaire for assessment of sickness absenteeism and presenteeism.*

Analysis. *Prevalence of participation in screening and wellness programs was analyzed by employment size and levels of likeliness to participate, and multivariable analyses of employee baseline characteristics regarding participation in screening programs and likelihood of participation in wellness programs was presented as top and bottom quartiles.*

Results. *Those employed in smaller workplaces participated less often in screening programs. Multivariable models identified male gender and those with an abnormal body mass index were associated with nonparticipation, while having a primary care physician was associated with participation. Very few items showed significant statistical difference in willingness to participate.*

Conclusion. *Workforce characteristics and access to health care may influence participation in screening and wellness programs. Employment size is not a determining factor for willingness to participate in wellness programs.*

Key Words: Statewide Survey, Employee Participation, Workplace Wellness, Health Promotion, Prevention Research. Manuscript format: research; Research purpose: descriptive; Study design: quantitative, survey; Outcome measure: participation; Setting: state, workplace wellness programs; Target population age: adults; Target population circumstances: employed Iowans

INTRODUCTION

The workplace provides an important venue for promoting health, wellness, and safety to Americans who spend over a third (8.8 hours) of their day working and doing work-related activities.[1] Recognizing this, the American College of Occupational and Environmental Medicine[2] has identified the workplace as a critical location for achieving the goals of health care reform and for improving the overall health of employees and their families. On a global level, the World Health Organization[3] has declared the workplace as a priority setting for health promotion in the 21st century. Employees with poor health and lifestyle behaviors burden employers with increased health care costs and much larger costs from absenteeism, disability program use, turnover, and lost productivity, often referred to as presenteeism.[4] Individual health behaviors related to diet, physical activity, smoking, and body weight contribute to chronic diseases, including heart disease, cancer, and stroke, which are the leading causes of death in the

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United States.[5] Unfortunately, only about 10% of American adults have optimal lifestyle behaviors and other risk factor rates.[6]

Workplace wellness programs can play a valuable role by providing employees with tools and support for reducing their risk for chronic diseases and for improving their quality of life (QoL). Workplace wellness programs can positively alter risk factor profiles, ranging from those of workers with cardiovascular disease to workers who may appear healthy.[7] Employers who invest in comprehensive, well-run employee wellness programs based on evidence-based best practices may experience lower health care costs, lower absenteeism, less presenteeism, greater productivity, higher morale, and a positive return on investment (ROI).[8–10] In the most extensive and systematic review to date on the financial impact of workplace health promotion programs, Baxter and colleagues[11] found the mean weighted ROI of 51 studies with 61 intervention arms was 138% ± 197%. Overall, their analysis showed programs seem to pay for themselves, but it was affected by methodological quality; the better the quality of the study the lower the ROI. Financial gains, or ROI, often viewed as the most relevant metric among employers, is part of an ongoing debate on metrics for determining whether workplace wellness programs are effective.[12] Still, comprehensive workplace wellness programs have been recommended by the American Heart Association,[7] the Institute of Medicine,[9] the American Cancer Society,[13] the National Institute for Occupational Safety and Health,[14] the Centers for Disease Control and Prevention,[15] and in Title IV of the Patient Protection and Affordable Care Act (ACA).[16] Workplace health promotion is also an important component of several objectives in the national public health strategy, HealthyPeople 2020.[17]

Meta-analyses of four National Workplace Health Promotion Surveys (1985, 1992, 1995, and 2004)[18] documented steady expansion of workplace health promotion programs. Not unexpectedly, larger worksites were found to offer a broader and deeper array of programs, a finding also documented by Iowa Employer Benefits surveys, which also report a trend to expand wellness program activities among Iowa employers of all sizes.[19,20] In the 2012 Iowa Employer Benefits Study, only 51% of small employers with fewer than 50 employees reported offering health insurance, while 96% of employers with more than 50 employees reported providing coverage. Employers of all sizes consistently indicated they plan to offer new components to their current wellness program within the next year, most frequently planning to offer more health or medical information (7%).[20]

Having a better understanding of workforce characteristics and preferences is important for employers and workplace health promotion planners in designing their programs and in determining the types of incentives offered. Findings from a study with county government employees in a midwestern U.S. community found demographic and QoL characteristics may predict the type of employees who are more likely to participate in a health education or medical program.[21] More population-based data are needed to clarify this finding, particularly on how baseline characteristics of the workforce might influence participation and program impact.[22] A national study estimating employees' attitudes toward potential barriers to and incentives for using workplace health promotion services was completed in 2007.[23] The study focused on employee demographic variables (sex, age, education, income, race/ethnicity, physical activity level, body mass index [BMI]) and described perceived barriers (too tired, no interest, no time during workday, no time before or after work, already involved in other programs, do not want to do with coworkers) and incentives (employer encouraged, paid time off, convenient time, convenient location, coworkers joined in, could invite family and friends) in the workplace. Other than this national study, little population-based research has been published on employee interest in participation and actual participation in workplace wellness programs and screenings.

In most surveys, small employers (<50 employees) are typically included within a larger employment group, often up to 1000, which often is still considered small, and they may be classified differently; the U.S. Census Bureau categorizes workplace size by 1 to 19, 20 to 99, 100 to 499, and 500+ employees and further defines small businesses as workplaces with fewer than 500 employees.[24] Employers with fewer than 50 employees are also sometimes excluded from studies, such as in the 2004 National Worksite Health Promotion Survey, which did not report results because point estimates were reportedly unstable. These small employers (<50 employees) are particularly important to analyze because they are not required to provide health insurance but are provided prevention and wellness program incentives by the ACA.

Small employers (<50 employees) are also of particular importance to Iowa and other rural states, where workplaces are nearly all small employers. Nearly 90% of Iowa workplaces employ fewer than 9 workers and nearly 98% of employ fewer than 50 workers.[25,26] It is well documented that smaller employers less often offer workplace wellness programs and that when they do, they face a number of challenges and barriers to implementation and engaging their employees.

The University of Iowa Healthier Workforce Center for Excellence (HWCE), one of four National Institute for Occupational Safety and Health (NIOSH) Total Worker Health Centers of Excellence,[27] seeks to contribute to a better understanding of total worker health programs (integrated health protection and health promotion) and to provide program and policy guidance for small employers. In support of these efforts, the HWCE developed the Real Iowans Research Initiative, which included a statewide survey of 1602 Iowans. The survey included modules addressing health care, prevention, employment, and wellness. Data from this statewide survey were analyzed to characterize the extent of Iowan participation and attitudes concerning workplace wellness programs and incentives. It allowed us to address three questions among a statewide sample of Iowa employees: (1) Are there specific characteristics of employees who choose to participate in workplace wellness programs? (2) Is workplace

Table 1
Organizational Size and Demographics*

	No.	1–49, % (n = 594)	≥50, % (n = 577)	Total, %	*p*
Gender (% male)	1171	36.53	36.92	36.72	0.8919
Race/ethnicity (% white)	1171	97.64	95.84	96.75	0.4802
Age	1171				0.0010
18–30 y		8.75	11.09	9.91	
31–45 y		21.04	27.56	24.25	
46–55 y		35.86	36.74	36.29	
56–68 y		34.34	24.61	29.55	
Education	1170				
Less than GED		0.67	0.52	0.60	<0.0001
HS diploma or GED		30.64	17.33	24.08	
Some college		37.37	32.93	35.18	
College degree		22.56	32.06	27.24	
Postgraduate course work		8.75	16.98	12.81	
Marital status	1171				0.5424
Married		76.60	75.22	75.92	
Never married		11.45	10.23	10.85	
Income	1107				0.0007
Less than $24,999		11.63	6.93	9.30	
Between $25,000 and $49,999		29.70	25.36	27.55	
Between $50,000 and $74,999		27.37	25.91	26.65	
Greater than $75,000		31.31	41.79	36.50	

* GED indicates general equivalency diploma; and HS, high school.

size a factor for employees participating in workplace wellness programs? (3) Do the Wellness Council of America (WELCOA) Employee Needs and Interest Survey[28] questionnaire items provide meaningful measures of employees' interests in workplace wellness programs?

METHODS

Design

The Real Iowans Health Survey (RIHS)[29] used a stratified random sample of 1602 Iowan voters ages 18 to 65 from the 2010 Iowa Voter Registration database maintained in real time by the Iowa secretary of state. Iowa counties were divided into four strata, from rural to urban based on population density, and a simple random sample of voters with telephone numbers was drawn within each rural/urban stratum. The survey margin of error for statewide estimates was 2.86%. Interviews were conducted by survey research staff of the Department of Epidemiology of the University of Iowa College of Public Health from May through August 2010.

Sample

An adult voter in each household was randomly selected to respond (SAS SURVEYSELECT with stratification; SAS Institute Inc., Cary, North Carolina).[30] Of 3396 voters contacted, 1117 declined to be interviewed by phone, 166 declined to be interviewed by return letter, 11 completed only part of the interview, and 1603 completed the survey for an overall response rate of 47.2%. The data edit found 1 respondent had not completed the entire questionnaire, leaving a total of 1602 respondents for analysis. When compared to data available for all voters, there was no difference by age, but respondents were more often women and more often a member of a major political party, similarly distributed members of the Democratic and Republican parties. The proportion of respondents self-identifying as unemployed (4.7%) was somewhat lower than Iowa unemployment figures (6.7%–6.8%) for the months of the survey. Because this analysis is limited to the workforce, composed of those identifying themselves as self-employed or employed by an organization, respondents identifying themselves as currently unemployed (n = 76), homemakers (n = 101), retired (n = 146), or disabled (n = 54) were not included in the these analyses, nor were the 24 students and six others who did not provide an employment status. In addition, 24 respondents did provide information on the number of individuals employed at their workplace. Consequently, the sample size was 1171.

Table 2
Health Prevention and Work Productivity Measures*

	No.	1–49, %	≥50, %	Total, %	*p*
Normal body mass index	1144	28.40	30.37	29.37	0.4637
Never smoked cigarettes	1157	63.16	60.74	61.97	0.3969
High physical activity level	1146	23.75	24.60	24.17	0.7370
Health insurance	1170	89.21	97.23	93.16	<0.0001
Primary care doctor	1167	88.16	86.98	87.57	0.5424
Good sleep (≥8 h)	1167	27.12	25.13	26.14	0.4395
Work 40+ h/wk	1169	43.41	45.75	44.57	0.4206
No absenteeism	1171	85.02	82.15	83.60	0.1851
Presenteeism 90+*	1171	81.82	79.20	80.53	0.2585

* Presenteeism indicates self-rated overall job performance during the last 4 weeks, 0–10 scale.

Measures

The RIHS questionnaire was constructed from several published instruments including the WELCOA Needs and Interest Survey,[28] Centers for Disease Control and Prevention (CDC)

Table 3
Age-Adjusted Percentage of Respondents Who Had Screenings or Examinations in the Past 12 Months*,†

Screening or Examination, % Yes	No.	1–49, %	≥50, %	Total, %	*p*
Blood pressure check	1170	88.91	89.25	89.08	0.8530
Blood pressure check at work	1034	10.34	31.65	20.99	<0.0001
Blood sugar check	1147	48.91	55.40	52.15	0.0290
Blood sugar check at work	606	13.38	29.39	21.39	<0.0001
Cholesterol check	1160	55.22	62.00	58.61	0.0201
Cholesterol check at work	686	8.59	30.51	19.55	<0.0001
Hearing check	1167	13.53	19.83	16.68	0.0042
Hearing check at work	196	27.02	64.04	45.53	<0.0001
Lung function check	1163	18.72	21.35	20.04	0.2641
Lung function check at work	235	10.10	22.76	16.43	0.0074
Vision check	1170	57.61	60.66	59.14	0.2925
Vision check at work	649	5.28	7.14	6.21	0.3072
Cardiovascular exam or EKG	1163	15.72	16.20	15.96	0.8235
Colon/rectal exam	1170	15.12	16.81	15.97	0.4333
Prostate exam	429	24.33	29.25	26.79	0.2527
Stool check	1164	11.84	14.81	13.32	0.1384
Mammogram	739	55.70	52.20	53.95	0.3434

* Response-specific prevalence among the small business group was adjusted using the large business group for standardization.
† EKG indicates electrocardiogram.

Health-Related Quality-of-Life 14-Item Measure, the Agency for Healthcare Research and Quality Consumer Assessment of Healthcare Providers and Systems for Primary Care Coverage, the CDC Behavioral Risk Factor Surveillance System Survey for prevention behaviors, the U.S. Bureau of the Census for employment documentation, and the World Health Organization's Health and Work Performance Questionnaire (HPQ) for assessment of sickness absenteeism and presenteeism.[31–35]

Analysis

Statistical methods included χ^2 tests of differences in self-reported demographic, prevention, and wellness behaviors and attitudes by organization size. BMI was calculated from self-reported height and weight.[31] Prevalence rates for the "small business" group (Tables 3 and 4) were age adjusted using the age structure of the "large business" group, reported in Table 1, as the standard. Quartiles were calculated by summing the individual responses to questions presented in Table 3, Table 4, or the bottom of Table 5, then ranking, and finally dividing summed scores into four equal groups, the top quartile containing those individuals most likely to have examinations or to participate in programs and the bottom containing those least likely. The association between outcome variables and possible predictors thereof was estimated using stepwise logistic regression analysis. The list of potential risk factors was identified from the results of previous similar studies and from possible predictors identified by this study ($p < .10$). These potential risk factors included age, male gender, currently married, self-employed, have health insurance, have a primary care doctor, attended college, had a college degree, had never smoked cigarettes, was an ex-smoker, was a current smoker, had a normal BMI (less than 18 to less than 30), had an income of less than $24,999, had an income between $25,000 and $49,999, had an income between $50,000 and $74,999, had an income over $75,000, worked for an organization with fewer than 20 employees, exercise at least five times a week, get 8 or more hours of sleep per night, worked 40 hours in the past 7 days, had no absenteeism and presenteeism of at least 90%.

Sickness absenteeism (absenteeism = total hours of missed work due to illness in the last 28 days) and absolute presenteeism (presenteeism = self-rated overall job performance during the last 4 weeks, 0–100 scale) were calculated using the employment module of the HPQ questionnaire and the methods described by Brooks et al.[36] Higher presenteeism scores indicate lower presenteeism. All analyses were conducted with SAS software, version 9.2[30] (SAS Institute Inc.).

RESULTS

Demographic characteristics of the sampled employed Iowans classified by size of employer are summarized in Table 1. Because of age differences in age distribution, all analyses were age adjusted. Participants were more likely to be 46 years or older, a woman, white, and married. The majority had at least a high school diploma or general equivalency diploma, with 40.5% having a college degree or postgraduate work and over 60% reported earning a salary of over $50,000. Of those who responded, 594 worked for an organization with 1 to 49 employees, while 577 worked for an organization employing more than 50 employees. Table 2 summarizes health prevention, health behavior, and work productivity measures. Similar health behaviors were reported across both employer groups. Close to one in three reported a normal BMI (29.4%), and nearly two thirds stated they have never smoked cigarettes (62%). Not surprisingly, individuals in workplaces with more employees were significantly more likely to have health insurance.

Sixty percent of respondents reported participating in a wellness program at work. More specifically, respondents were asked about screenings or examinations in the past 12 months, either on their own or at their workplace (Table 3). Similar to the association with company size, having an established wellness program, and likeliness to have health insurance, employees working at larger companies were more likely to participate in screenings than those working at companies with

Table 4
Age-Adjusted Percentage of Respondents Who Indicated That They Were "Extremely Likely or Likely" to Participate in the Following Programs During the Next Year If They Were Offered at Work*

Program, % Extremely Likely or Likely to Participate	No.	1–49, %	≥50, %	Total, %	*p*
Musculoskeletal pain prevention or ergonomics	1140	48.77	52.17	50.47	0.2480
Cancer prevention	1140	65.17	64.47	64.82	0.8045
Heart disease prevention	1140	64.36	66.55	65.45	0.4330
Cholesterol reduction	1140	59.68	60.14	59.92	0.8736
Workplace safety and health	1139	62.87	58.68	60.77	0.1458
Substance abuse	1136	24.63	22.40	23.51	0.3721
Workplace hazard control, such as injury, noise, dust, or toxins	1132	48.97	47.21	48.09	0.5514
Cold/flu prevention and treatment	1140	51.76	53.03	52.40	0.6662
Workplace violence/bullying	1130	36.88	44.77	40.83	0.0065
Depression treatment	1137	33.23	34.90	34.07	0.5520
Job stress management	1139	54.43	54.07	54.25	0.9029
Managing chronic conditions, including diabetes, hypertension, etc.	1139	47.62	44.02	45.82	0.2195
Managing chronic pain, including neck and shoulder injuries, back injuries, etc.	1140	54.65	51.65	53.15	0.3067
Controlling anger/emotions	1139	38.63	37.67	38.15	0.7379
Fitness membership	1139	64.94	65.45	65.20	0.8568
On-site, low-impact exercise equipment	1138	57.28	62.91	60.09	0.0506
Prescribed exercise programs	1140	53.86	56.67	55.27	0.3372
Walk-fit programs	1140	60.64	63.95	62.30	0.2460
Flu shots	1138	58.43	66.03	62.23	0.0077
Tetanus shots	1138	61.18	69.50	65.34	0.0030
Healthy cooking	1139	60.12	61.70	60.91	0.5831
Eating to optimize health	1139	65.28	65.34	65.31	0.9849
Weight management cutting edge ideas	1140	63.55	63.26	63.40	0.9179
On-site vending machines with healthy choices	1132	47.08	51.56	49.32	0.1279
Eating out–exploring choices	1137	48.21	48.18	48.19	0.9922
Blood pressure check	1136	73.28	75.35	74.31	0.4224
Blood sugar check	1138	64.77	66.84	65.81	0.4950
Cholesterol check	1137	68.11	73.78	70.94	0.0338
Hearing check	1139	66.01	70.88	68.44	0.0746
Lung function check	1138	57.27	60.42	58.84	0.2776
Vision check	1139	67.99	70.71	69.35	0.3170
Smoking cessation programs	1104	18.49	15.86	17.18	0.2444
Stress reduction programs	1138	55.79	54.86	55.33	0.7503
Time management programs	1139	50.63	46.79	48.71	0.1920
Visiting on-site health care nurse	1133	47.20	49.22	48.21	0.4943

* Response-specific prevalence among the small business group was adjusted using the large business group for standardization.

49 or fewer employees. For all types of screenings, employees reported participating in screenings more often outside of work. Hearing checks had a significantly higher participation rate at work, particularly for companies employing more than 50 employees, who reported over a 64% participation rate compared to only 27% for employers with fewer than 50 employees. Much lower overall workplace participation was reported for blood pressure checks and blood sugar, cholesterol, and lung function screenings. However, in each instance, employees for larger companies were significantly more likely to receive screening at the workplace.

No significant differences were noted in presenteeism or sickness absenteeism when comparing companies with smaller numbers of employees to those with larger. However, significantly higher sickness absenteeism was noted among individuals involved in screening or examinations for chronic conditions (specifically, for blood pressure, lung function, and cardiovascular examinations—data not presented in the tables).

Since few Iowans are employed at a worksite that offers a comprehensive wellness program, survey participants were asked how likely they would be to participate in various types of wellness activities if they were made available at work (Table 4). In all, over 70% of respondents said they would be "likely" or "extremely likely" to participate in one or more programs. Program areas included education, medical screenings, employee assistance programs, fitness, and nutrition. Overall, the responses showed little statistically significant workplace size-related variation: Workplace violence/bullying (41%); on-site, low-impact exercise equipment (60.9%); flu shot (62.2%);

Table 5
Age-Adjusted Wellness Program Participation*

	No.	1–49, %	≥50, %	Total, %	*p*
Are wellness programs offered where you work? (% yes)	1120	14.61	51.15	32.88	<0.0001
Do you participate in a wellness program? (% yes)	367	57.33	67.25	65.29	0.0143
Percentage of respondents who indicated that they would be "extremely likely or likely" to participate in wellness programs in the workplace if offered during the following times.					
Before work	1140	32.29	28.13	30.21	0.1237
During lunch at work	1129	42.85	37.65	40.25	0.0736
After work	1141	47.42	46.97	47.19	0.8772
During work time	1141	45.00	48.09	46.55	0.2933

* Response-specific prevalence among the small business group was adjusted using the large business group for standardization.

tetanus shot (65.3%); and cholesterol check (70.94%) were the exceptions, but by only a small percentage. The most popular reported program areas were screenings, followed by fitness and nutrition programs. The majority of employed respondents reported they would take advantage of screenings if they were offered at work, most frequently stating blood pressure (74.3%), followed by cholesterol (70.9%), vision (69.4%), hearing (68.4%), and blood sugar (65.8%). Fitness programs were the second greatest interest area for employed Iowans. A fitness membership (65.2%) was most popular, followed by a walking program (62.3%) and on-site, low-impact exercise equipment (60.9%). A prescribed exercise program was least popular (55.3%). A similar level of interest in nutrition programs was reported. More Iowans were interested in eating right (65.3%), weight management (63.4%), and healthy cooking (60.9%) than having healthy vending machines available at work (49.3%) or eating healthy at restaurants (48.1%). Respondents were also open to participating in education programs, especially for heart disease (65.5%) and cancer prevention (64.8%). Workplace safety (60.8%) and cholesterol reduction (59.9%) were also areas of interest. Close to half were open to an ergonomics program (50.5%), while the program of least interest was workplace hazard control programs (48.1%). Flu shots (62.2%) were more popular than cold/flu prevention and treatment education (52.4%). Within employee assistance programs, respondents were more willing to participate in programs that address job stress (54.3%) or managing chronic conditions (45.8%) compared to managing depression (34.1%). Overall, substance abuse programs (23.5%) and smoking cessation programs (17.2%) were of least interest among respondents; however, lower percentages could indicate a higher level of interest relative to the number of participants who associate with the health behavior, particularly depression, substance abuse, and smoking.

Participants reported that nearly a third of their employers offered a wellness program where they work (32.9%). Not surprisingly, large companies were more likely to have an established wellness program (51.2%) than smaller companies with fewer than 50 employees (14.6%) (Table 5). Close to half of employed Iowans were open to participating in wellness programs during work time (46.6%) or after work (47.2%), and just over 40% indicated they would participate during lunch at work (40.3%) (Table 5). Before work was the least popular time to participate among all respondents (30.2%).

Since not all employed Iowans took advantage of available wellness programs, a subset of questions was asked those who chose not to participate (n = 125). These individuals were asked whether an incentive would motivate them and were provided a variety of incentive options to choose from. Nearly three in four respondents reported they would be motivated to participate in a workplace wellness program if paid their hourly or salary wage during program participation. A one-time $100 cash bonus or one-time $100 reduction in insurance premiums were also popular incentives for over half of respondents, with a $100 cash bonus being preferred by 6% more. Over half also reported they would be motivated to participate if given a free fitness center membership. Clearly, many employees would be more interested in participating in programs if they knew they would be compensated. Interestingly, nearly 40% of these nonparticipants reported that they would participate in a wellness program without an incentive, even when a wellness program was reportedly available at their workplace.

Stepwise logistic regression was used to explore associations between potential risk factors and program participation and levels of utilization or interest (top quartile vs. bottom quartile) as dependent variables (Table 6). Individuals utilizing the most services (compiled from responses in Table 3) were older, more likely to have attended college, more likely to exercise at least five times a week, and more likely to have health insurance and a primary care physician, but significantly less likely to be male, self-employed, and have a normal BMI. Respondents who have a primary care physician were more likely to express interest in participating in the wellness programs listed in Table 4; however, those self-employed, having attended college, and with incomes of $75,000 or more would be less likely to participate. Male gender and "never having smoked cigarettes" were negatively associated with employee engagement in the workplace wellness programs during any of the time options cited in Table 5.

DISCUSSION

Analysis of this statewide survey was distinctive because it compared the

Table 6
Multivariable Models

Odds Ratio Estimates				
Effect	Point Estimate	95% Wald Confidence Limits		*p*
Number of screenings or exams over the past 12 months (see Table 3)				
Modeling top quartile versus bottom quartile (n = 538). Probability modeled is "top quartile."				
Male gender	0.622	0.393	0.984	0.0425
Age	1.138	1.109	1.168	<0.0001
Self-employed	0.383	0.184	0.797	0.0103
Attended college	2.081	1.256	3.449	0.0045
Normal body mass index	0.451	0.272	0.750	0.0021
Exercises at least 5 times/wk	3.312	1.945	5.641	<0.0001
Has health insurance	4.876	1.729	13.747	0.0027
Has a primary care physician	3.826	1.883	7.774	0.0002
Number of wellness programs in which one is likely to participate (see Table 4)				
Modeling top quartile versus bottom quartile (n = 542). Probability modeled is "top quartile."				
Self-employed	0.466	0.253	0.858	0.0142
Attended college	0.564	0.373	0.852	0.0066
Income of $75,000 or more	0.567	0.392	0.821	0.0027
Has a primary care physician	1.985	1.179	3.341	0.0099
Participates in a wellness program offered at work (see Table 5)				
Probability modeled is "Yes" (n = 344).				
Male gender	0.540	0.345	0.845	0.0070
Likely to participate in wellness programs at work (see Table 5)				
Modeling top quartile versus bottom quartile (n = 555). Probability modeled is "top quartile."				
Male gender	0.490	0.338	0.710	0.0002
Never smoked cigarettes	0.652	0.456	0.933	0.0193

very small employers (<50 employees) with larger employers (50+ employees). Not surprisingly, very small employers generally offer fewer wellness programs than do larger employers. This may be related to the more rural nature of the program, availability of resources, and access to primary care. This may also be related to lack of insurance. However, based on employer size, very few items (screenings, programs, and health behaviors) showed statistical difference, and among those that did, the differences were small. No differences were shown in actual participation, motivation to participate, or current behaviors by company size. This finding supports the documented challenge of employee participation in workplace wellness programs and demonstrates participation as an obstacle for companies of all sizes, not just for smaller employers. Nevertheless, small employers need more resources and support so they can offer the types of comprehensive programs that larger employers offer.

Despite offering a variety of workplace wellness programs and activities, employers are still challenged by low participation and poor employee engagement. In the 2004 National Worksite Health Promotion Survey, the most cited barrier or challenge to a successful program was lack of employee interest (63.5%).[37] In a 2013/2014 Tower's Watson/National Business Group on Health Survey,[38] 77% employers reported lack of employee engagement as their biggest obstacle to changing behavior and reported that actual participation was low (average ~50% for health risk assessments and <20% for wellness programs). The RAND health report[22] found only about 20% of eligible employees participating in wellness interventions. To overcome this challenge, employers are increasingly offering incentives.[22,39] They may also be motivated to use incentives by provisions in Section 2705 of the ACA, also known as the "Wellness Incentive."[40] Specifically, the maximum permissible ACA award offered in connection with health insurance coverage increased from 20% to 30% of the cost of coverage and up to 50% for smoking cessation programs.[16] Although such incentives have shown increased participation and employee engagement levels, there is growing recognition that using extrinsic incentives may not be sufficient; consequently, the focus is shifting toward intrinsic values of health as a more sustainable health goal.[39]

Beginning in 2014, under the ACA, employers who employ fewer than 50 full-time employees are not required to offer health insurance to their employees. Incentives are often tied to an employee's health benefits; therefore, employers with fewer than 50 employees who do not offer group health benefits or who choose to stop providing health insurance will need to carefully consider how they choose to incentivize their employees. Incentives are useful and have been found to be effective for increasing participation among employees who feel they should be compensated for their participation and/or rewarded for their progress. This attitude corresponds with the majority of Iowa employees who reported being more likely to participate in a wellness program or screening if compensated. For sustainable behavior change, however, individuals should develop intrinsic values to maintain a healthy lifestyle. It is therefore relevant, as previously reported from this survey,[26] that self-employed employees demonstrated many better QoL measures and healthier behaviors than those employed by companies, despite more often working longer hours and having less health insurance and primary care coverage.[24] Consistent with this finding, over 40% all employee respondents stated they would participate in a wellness program without an incentive. These findings suggest that many Iowans already possess the intrinsic value(s) needed for improving their health and well-being.

Health care costs and costs associated with poor employee health continue to rise; therefore, employers need to consider strategies to contain costs. One such approach is to

expand their workplace wellness programs. Understanding the demographics and general health status of employees who participate in workplace wellness programs is important so employers can target specific activities and screenings to fit their needs. Employee characteristics are also important evaluation measures and can guide programs and communication strategies to better reach nonparticipants and may result in a better understanding of program success.[21] In Iowa, data may also help inform marketing strategies and programming for the Iowa Healthiest State Initiative; however, employers and other wellness professionals will still need to assess the characteristics of their own workforce.

Data from this statewide survey find that Iowa men, those with abnormal BMI, and those who are self-employed are the least likely to participate in workplace wellness programs. Similarly, Joslin and colleagues[21] found participation in workplace health education programs among county government employees was highest among married women over 44 years with poorer physical QoL, whereas single males under 44 years who experienced better physical QoL were least likely to participate. Overall, Iowans who reported having a primary care physician were linked to higher participation and likeliness to participate in workplace wellness programs and screenings. Starfield et al.[41] analyzed studies demonstrating impact of receiving care from a primary care source versus those who did not and consistently found that primary care benefits a variety of health-related outcomes. In addition, Iowans reporting having chronic disease were more likely to participate in medical screenings, which was also reported in Joslin's study.[21] This RIHS is the only known statewide employee survey that includes characteristics for participating in workplace wellness programs that adds practical knowledge regarding dimensions of participation in workplace wellness programs.

In addition to workforce characteristics of participation, asking employees what their interests are can help inform program design to better engage employees and increase participation. The HWCE used the WELCOA Needs and Interest Survey,[28] along with other publicly available tools in the Real Iowans Research Initiative questionnaire, to gauge working Iowans' interests in wellness programs and screenings. The survey is a free tool that employers can use and/or modify to fit their organization's culture. Smaller employers and employers with limited resources, in particular, may find this tool useful for assessing the wellness interests of their employees.

Like all surveys, this study has a number of limitations. In undertaking the Real Iowans Research Initiative, it was recognized that a survey based on a statewide registry of current voters would undersample immigrant and poorer Iowans who are less often registered to vote. To address this limitation, we undertook eight focus groups seeking the views of underrepresented Iowans. Because we were interested in the role of rurality, the survey was designed to provide random samples of equal size for three categories of rural counties ranked by population density. This effectively oversampled rural Iowans, where higher proportions of small employers are found, but this segment of the workforce is located in the vast majority of Iowa workplaces and is understudied. It is therefore a research priority for the Healthier Workforce Center for Excellence. The response rate of 47.2% is a limitation due to possible nonresponse bias. The survey was conducted in the summer of 2010 when the survey staff was available, but also at a time of Iowa Caucus candidate phone calling targeting especially more conservative rural counties. A higher proportion of women responded to this survey. Because of the large number of behaviors and tests compared (Table 5), chance alone could have contributed to the few significant differences observed. There may also be a problem with simultaneity in the logistic regression where respondents may have been more likely to self-select programs based on their perceived health status or health behaviors. Lastly, the possibility of overlap between the dependent and independent variables could limit the ability to clearly distinguish determinants. While all of these factors are limitations, the survey also had a number of unique strengths including statewide QoL, prevention behavior, work productivity-related sickness absenteeism and presenteeism data for three employment segments, good small employer representation, a large sample size, and a very acceptable statewide maximum margin of error.

CONCLUSIONS

This study provides a statewide population-based estimate of workforce characteristics among employees participating in workplace wellness programs and successfully addressed its three primary aims that form the following conclusions: (1) Employed males and those with an abnormal BMI were factors associated with nonparticipation, while having a primary care physician was associated with participation. Workforce characteristics as well as health care access may influence participation. Awareness of these characteristics will allow employers to better address the needs of their workforce. (2) While similar, those employed in smaller workplaces less often participated in screening programs. Workplace size is not a determining factor for employee's willingness to participate in screening and wellness programs offered at work. (3) Questionnaire items from the WELCOA Needs and Interest Survey provide baseline measures of employees' interests and is a free and useful tool employers of all sizes may use to assess their employees needs and interests in wellness programs and screenings.

For employers of all sizes, employee engagement in workplace wellness programs is an ongoing challenge. By examining dimensions of participation (workforce characteristics and employee interests), employers can better target programs and incentives to meet their employees' needs and interests, which in turn may lead to increased participation rates and improved program success.

SO WHAT? Implications for Health Promotion Practitioners and Researchers

What is already known on this topic?

Larger companies are more likely to offer comprehensive workplace wellness programs and offer employees health insurance. Employee engagement and participation in workplace wellness programs is a challenge. To overcome this challenge under provisions in the Affordable Care Act, employers are increasingly using incentives. Beyond the national level, little population-based data on workforce characteristics and interests in participating in workplace wellness programs and incentives are available. Small employers (<50 employees), which constitute the vast majority of employers, face unique challenges under ACA legislation and have often been underrepresented in national surveys.

What does this article add?

This statewide population-based survey provides baseline workforce characteristics for utilization of screenings and willingness to participate in workplace wellness programs. Results indicate that employees working for companies with fewer than 50 employees are less likely to participate in medical screenings than employees working at large companies. Results also indicate that workplace size is not a determining factor for employees' willingness to participate in screening and wellness programs offered at work.

What are implications for health promotion practice or research?

Workforce characteristics and employees' interests in participating in workplace health promotion are important factors of employee engagement and should be considered when designing programs and determining incentives. The use of the WELCOA Needs and Interest Survey is a useful tool for practitioners, especially those with limited resources, to gauge employee interest in workplace wellness programs and screenings. Research that categorizes small employers (<50 employees) is particularly important for better understanding their unique challenges.

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