

Findings From Health Promotion Research to Inform Intervention Design

Characterizing Employees' Preferences for Incentives for Healthy Behaviors: Examples to Improve Interest in Wellness Programs

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Background. Many employers now incentivize employees to engage in wellness programs, yet few studies have examined differences in preferences for incentivizing participation in healthy behaviors and wellness programs. **Method.** We surveyed 2,436 employees of a large university about their preferences for incentivizing participation in different types of healthy behaviors and then used multivariable logistic regression to estimate associations between employees' socioeconomic and demographic characteristics and their preferences for incentives for engaging in healthy behaviors. **Results.** Compared with nonunion members, union members had higher odds of wanting an incentive for eating healthily (adjusted odds ratio [AOR] = 1.60, 95% [CI; 1.21, 2.12]), managing weight (AOR = 1.53, 95% CI [1.14, 2.06]), avoiding drinking too much alcohol (AOR = 1.41, 95% CI [1.11, 1.78]), quitting tobacco (AOR = 1.37, 95% CI [1.06, 1.77]), managing stress (AOR = 1.37, 95% CI [1.08, 1.75]), and managing back pain (AOR = 1.64, 95% CI [1.28, 2.10]). Compared with staff, faculty employees reported higher odds for wanting an incentive for reducing alcohol intake (AOR = 1.34, 95% CI [1.00, 1.78]) and quitting tobacco (AOR = 1.43, 95% CI [1.04, 1.96]). Women had lower odds than men (AOR = 0.80, 95% CI [0.64, 0.99]) of wanting an incentive for managing back pain. **Conclusions.** Preferences for incentives to engage in different types

of healthy behaviors differed by employees' socioeconomic and demographic characteristics. Organizations may consider using survey data on employee preferences for incentives to more effectively engage higher risk populations in wellness programs.

Keywords: incentives for wellness program participation; worksite health and wellness; incentivizing healthy behaviors; employee preferences for incentives; employee demographics

► INTRODUCTION

Incentives to encourage behavior change are now offered widely within employee wellness programs (Giles, Robalino, McColl, Sniehotta, & Adams, 2014; Gneezy, Meier, & Rey-Biel, 2011; Loewenstein, Brennan, & Volpp, 2007), yet little is known about employees'

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preferences regarding incentives. Such preferences could have important implications for differing responses to incentives for participating in healthy behaviors. To the extent that such responses differ among higher risk populations, understanding and responding to these differences could help increase participation in wellness programs among diverse populations. These analyses seek to link research to practice by (1) understanding differences in preferences for health incentives among employees and (2) providing examples to health promotion practitioners regarding how such surveys may be used to inform strategies to improve wellness program participation among higher risk employees.

► BACKGROUND

In order to understand what employees want from wellness programs, it is important to explore their preferences. This may assist wellness programs in better serving the needs of diverse employees. To the extent that employees' needs and preferences for wellness programs vary, this could contribute to the socioeconomic and demographic differences in health behaviors and wellness program participation that have been identified in previous research. For example, male, non-White and unionized employees are some of the least likely groups to participate in wellness programs (Beck, Hirth, Jenkins, Sleeman, & Zhang, 2016). Individuals with lower socioeconomic status are at greater risk than their more affluent counterparts for unhealthy behaviors such as smoking (Hiscock, Bauld, Amos, Fidler, & Manafò, 2012), being sedentary (Centers for Disease Control and Prevention, 2008; Pampel, Krueger, & Denney, 2010;), and excessive alcohol consumption (Grittner, Kuntzsch, Graham, & Bloomfield, 2012; Keyes & Hasin, 2008). Furthermore, men have higher rates of tobacco use (World Health Organization, 2010) and excessive alcohol consumption (Erol & Karpyak, 2015) than women. Compared with men, women are more likely to be obese (Kanter & Caballero, 2012; Puhl & Heuer, 2009). Employees who earn lower wages or are in poorer health may be less likely than higher income or healthier employees to engage in employee wellness programs (Jones, Molitor, & Reif, 2018).

Understanding and responding to differences in employees' preferences around wellness programs also has important implications for business outcomes. For example, higher risk employees have higher rates of illness-related absenteeism (van den Brand et al., 2016). Altogether, the costs associated with higher risk and underserved employees in the United States are estimated to reach \$337 billion by the end of 2018 (Waidmann, 2009).

The adverse health outcomes and costs of higher risk employees could potentially be reduced by increas-

ing initial interest in wellness programs among diverse groups of employees, particularly individuals who are less engaged in employee wellness programs. One way this could be achieved is by using financial incentives for healthy behaviors or participation in wellness programs (Cahill & Perera, 2011; Troxel & Volpp, 2012; Volpp et al., 2009) that are responsive to employees' preferences. The incentive theory of motivation offers a helpful framework to understand why incentives assist in engaging employees in wellness program participation or in the process of behavior change. This theory posits that people are motivated to engage in certain behaviors that foster an external positive reward (Cherry, 2017; Hockenbury & Hockenbury, 2011). Consequently, if employees prefer and are able to receive an incentive for wellness program participation, these employees could be more likely to start engaging in activities to improve their health behaviors (Jochelson, 2007; Mantzari et al., 2015). While there is little evidence to suggest that financial incentives can lead to long-term behavior change, they could help motivate greater interest in wellness program participation and thus stimulate initial engagement in the behavior change process (John et al., 2011; Kullgren, Williams, & An, 2013). The wellness programs themselves could then focus on building the autonomous motivation that is more likely to yield long-term behavior change (Deci & Ryan, 2009). Furthermore, financial incentives could be offered via different incentive payment modes (e.g., money in an employees' paycheck, gift certificates, etc.), each of which could be more or less attractive to different types of employees.

Such incentives could be particularly effective in reducing differences in healthy behaviors and wellness program participation when they are designed in ways that respond to employees' preferences for them. Yet, the extent to which employee preferences for incentives may vary is unknown. Accordingly, the main objective of our research was to examine if employees' opinions regarding different types of incentives for healthy behaviors differs by employee characteristics. With a better understanding of those differences, our article showcases how this type of organization-specific investigation might be leveraged by other employers to develop more empirically based incentive systems as well as tailored communications and program offerings to improve access to, and participation in, wellness programs among employees who are at highest risk.

► DATA AND METHODS

This study was conducted by a large public university's employee wellness program, which aims to foster a culture of health at the university through a comprehensive

population health strategy. This employee wellness program has an integrated organizational structure, including wellness and risk reduction services, employee assistance programs, and occupational health services that serve the university's approximately 40,000 employees.

In order to gain a better understanding of employee perceptions about incentives that could be offered to encourage participation in different types of healthy behaviors, in December 2015 the university wellness program e-mailed a 10-item survey to a random sample of 10,000 faculty and staff employees. Of the 10,000 employees that were randomly sampled, 2,436 employees responded to the survey, for a response rate 24.4%.

Measures

Socioeconomic and Demographic Characteristics. In order to assess the association between employee characteristics and their perspectives on incentivizing participation in healthy behaviors, socioeconomic and demographic characteristics from university administrative data were linked to survey responses. The main demographic characteristics were operationalized in mutually exclusive categories: gender (female and male), age in years (<30, 30-39, 40-49, 50-59, 60+), and race and ethnicity (White; non-Hispanic, Black; non-Hispanic, Asian Pacific Islander; Hispanic; and two or more races/ethnicities). Three socioeconomic characteristics were analyzed: annualized wage in US\$ (<50,000, 50,000- <100,000, and 100,000+), Faculty and staff status, and union and nonunion membership.

Main Dependent Variables. To assess preferences for incentives for healthy behaviors, survey participants were provided a list of healthy behaviors and asked to indicate which, if any, of the behaviors should be incentivized by the university wellness program. The list of healthy behaviors included being physically active, managing stress, getting enough sleep, quitting tobacco, avoiding drinking too much alcohol, managing back pain, managing chronic diseases, taking prescribed medications, getting preventive screenings, eating healthy, getting a check up with a primary care provider, managing weight or "something else" (in which case a free text response could be provided). Participants could select as many healthy behaviors as they wanted. Preferences for type of incentive payment mode was assessed in the survey by asking respondents: What type of incentive would you most prefer as a reward for participating in a healthy activity? Respondents could select one choice from the following responses: money included in your paycheck, money

sent to you directly in the mail (i.e., separately from your paycheck), gift certificates or vouchers for university facilities and events (e.g., performances, athletic events, etc.), points toward the purchase of goods and services from local businesses, points toward the purchase of goods from an online store with wellness products (e.g., pedometers, fitness clothing, etc.), or "something else" (in which case a free text response could be provided).

Analysis

The statistical package used for these analyses was SAS (Release 9.4). The analytic sample included all respondents with complete data on the independent and dependent variables. Chi-square tests were used to identify statistically significant bivariate associations between employee characteristics and incentive preferences. For the multivariable analyses, we used logistic regression to measure associations between gender, age, race/ethnicity, annualized wage, and faculty and union statuses and the type of health behaviors that the wellness program should provide employees an incentive for participating in.

► RESULTS

Table 1 shows the sample characteristics. Study participants were largely female (75.3%) employees who were 30 to 59 years of age (<30 = 12.3%, 30-39 = 23.8%, 40-49 = 23.4%, 50-59 = 28.8%, and 60 years and older = 11.7%), White (81.9%), nonunion (83.9%) staff (87.7%) members with an annualized wage of less than \$100,000 (<\$50,000 = 39.3%, \$50,000- <\$100,000 = 47.0%, and \$100,000+ = 13.7%). These sample characteristics were similar to the overall population of university faculty and staff (in the appendix).

Table 2 shows bivariate associations between each of the socioeconomic and demographic characteristics and incentive preferences. Across all 12 of the health behaviors, women, compared with men, preferred being incentivized for being physically active, eating healthily and managing stress. For most of the health behaviors there was a significant negative association between age categories and preferences for incentives. Quitting tobacco and getting a check up with a health care provider, however, did not follow this pattern. There were also racial and ethnic differences in preferences for incentives for managing weight and quitting tobacco. Seven of the 12 health behaviors had statistically significant associations with annualized wage. There were also significant associations between union and faculty statuses and incentive preferences.

TABLE 1
Characteristics of Study Participants (N = 2,435)

| <i>Characteristic</i> | <i>n (%)</i> |
|------------------------|--------------|
| Current legal sex | |
| Female | 1,834 (75.3) |
| Age, years | |
| <30 | 300 (12.3) |
| 30-39 | 579 (23.8) |
| 40-49 | 570 (23.4) |
| 50-59 | 701 (28.8) |
| 60+ | 285 (11.7) |
| Race/ethnicity | |
| White | 1,955 (81.9) |
| Black | 139 (5.8) |
| Asian Pacific Islander | 165 (6.9) |
| Hispanic | 74 (3.1) |
| Two or more | 55 (2.3) |
| Annualized wage, US\$ | |
| <50,000 | 957 (39.3) |
| 50,000-<100,000 | 1,144 (47.0) |
| 100,000+ | 334 (13.7) |
| Union status | |
| Union | 391 (16.1) |
| Faculty status | |
| Staff | 2,136 (87.7) |

Table 3 shows the odds of employees' preferring an incentive for each healthy behavior. The only difference across behaviors by gender was that women had lower odds than men (adjusted odds ratio [AOR] = 0.80, 95% confidence interval [CI; 0.64, 0.99]) of wanting an incentive for managing back pain.

Compared with employees younger than 30 years, older age employees (50-59 and 60+ years of age) had lower odds of reporting that an incentive should be provided for being physically active, eating healthily, getting enough sleep each night, getting preventive screenings, getting a check up with a primary care provider, and taking prescribed medications.

There were three statistically significant differences in incentive preferences by race and ethnicity. Compared to White employees, Black employees had greater odds (AOR = 1.61, 95% CI [1.06, 2.45]) and Asian employees had lower odds (AOR = 0.58, 95% CI [0.41, 0.81]) of wanting an incentive for quitting tobacco. Compared to White employees, Asian employees had fewer odds (AOR = 0.70, 95% CI [0.49, 0.98]) of wanting an incentive for managing chronic conditions.

Compared to employees with an annualized wage of less than \$50,000, employees with annualized wages of \$50,000 to less than \$100,000 had lower odds of reporting an incentive should be provided for eating healthily. Compared to employees with an annualized wage of less than \$50,000, employees with annualized wages of \$50,000 to less than \$100,000 had lower odds of reporting an incentive should be provided for managing back pain. Similarly, compared to employees with an annualized wage of less than \$50,000, employees with annualized wages of \$50,000 to less than \$100,000 and \$100,000+ had lower odds of reporting an incentive should be provided for managing stress. Compared to employees with an annualized wage of less than \$50,000, employees with annualized wages of \$50,000 to less than \$100,000 and \$100,000+ had lower odds of reporting an incentive should be provided for getting enough sleep each night. Avoiding excessive alcohol consumption had a slightly different pattern than those mentioned above. Compared to employees with an annualized wage of less than \$50,000, employees with annualized wages of \$50,000 to less than \$100,000 had lower odds of reporting an incentive should be provided for avoiding drinking too much alcohol.

Union status had a consistent pattern regarding preferences for incentives. Compared with nonunion members, union members had higher odds of wanting an incentive for eating healthily (AOR = 1.60, 95% CI [1.21, 2.12]), managing weight (AOR = 1.53, 95% CI [1.14, 2.06]), avoiding drinking too much alcohol (AOR = 1.41, 95% CI [1.11, 1.78]), quitting tobacco (AOR = 1.37, 95% CI [1.06, 1.77]), managing stress (AOR = 1.37, 95% CI [1.08, 1.75]), getting enough sleep each night (AOR = 1.29, 95% CI [1.02, 1.65]), and managing back pain (AOR = 1.64, 95% CI [1.28, 2.10]).

Faculty status had mixed associations regarding preferences for incentives. Compared to staff, faculty employees had lower odds of wanting an incentive to help eat healthier (AOR = 0.73, 95% CI [0.54, 0.98]), manage weight (AOR = 0.71, 95% CI [0.52, 0.98]), and manage back pain (AOR = 0.67, 95% CI [0.48, 0.93]). In contrast, compared to staff, faculty employees reported higher odds for wanting an incentive for reducing alcohol intake (AOR = 1.34, 95% CI [1.00, 1.78]) and quitting tobacco (AOR = 1.43, 95% CI [1.04, 1.96]).

Table 4 shows bivariate associations between employee characteristics and preferences for mode of incentive payments. Across all demographic categories, employees most commonly preferred money over other forms of payment (e.g., gift certificates or vouchers). Compared to other employees, women ($p = .001$) and individuals with lower wages ($p < .001$) preferred money in their paycheck or in the mail over other payment

TABLE 2
Chi-Square Results for Incentivizing for Various Health Behaviors

| Characteristic | Physical, Mental, and Emotional Health Behaviors | | | | | Self-Care Behaviors | | | | | | |
|-----------------------|--|----------------|-----------------|------------------------------------|------------------|---------------------|---------------------------------|---------------------------|--------------------|-------------------------------|---|-------------------------------|
| | Being Physically Active | Eating Healthy | Managing Weight | Avoiding Drinking Too Much Alcohol | Quitting Tobacco | Managing Stress | Getting Enough Sleep Each Night | Managing Chronic Diseases | Managing Back Pain | Getting Preventive Screenings | Getting a Check Up With a Primary Care Provider | Taking Prescribed Medications |
| Female | 91.65 (1559)* | 73.96 (1258)** | 75.78 (1289) | 41.09 (699) | 66.61 (1133) | 56.26 (957)* | 36.39 (619) | 56.91 (968) | 29.22 (497) | 64.37 (1095) | 53.91 (917) | 20.93 (356) |
| Age, years | | | | | | | | | | | | |
| <30 | 95.09 (252) | 85.28 (226) | 78.49 (208) | 45.66 (121) | 67.55 (179) | 61.51 (163) | 47.17 (125) | 59.25 (157) | 32.45 (86) | 76.98 (204) | 65.66 (174) | 29.43 (78) |
| 30-39 | 93.66 (502) | 77.43 (415) | 74.25 (398) | 40.86 (219) | 62.50 (335) | 57.09 (308) | 41.04 (220) | 55.78 (299) | 31.72 (170) | 68.66 (368) | 60.82 (326) | 23.69 (127) |
| 40-49 | 90.91 (480) | 70.64 (373) | 75.19 (397) | 37.69 (199) | 63.26 (334) | 57.01 (301) | 35.42 (187) | 56.63 (299) | 27.84 (147) | 63.07 (333) | 52.84 (279) | 19.13 (101) |
| 50-59 | 89.86 (585) | 68.66 (447) | 77.27 (503) | 43.16 (281) | 70.05 (456) | 52.07 (339) | 33.79 (220) | 57.45 (374) | 30.26 (197) | 60.52 (394) | 47.93 (312) | 17.20 (112) |
| 60+ | 83.52 (218) | 62.84 (164) | 70.11 (183) | 42.53 (111) | 68.20 (178) | 45.98 (120) | 29.50 (77) | 50.57 (132) | 27.97 (73) | 53.64 (140) | 49.81 (130) | 17.24 (45) |
| Race/ethnicity | | | | | | | | | | | | |
| White | 90.17 (1632) | 71.22 (1289) | 75.36 (1364) | 41.10 (744) | 66.35 (1201) | 53.76 (973) | 35.69 (646) | 56.46 (1022) | 29.45 (533) | 63.48 (1149) | 54.03 (978) | 19.78 (358) |
| Black | 92.86 (117) | 80.95 (102) | 78.57 (99) | 47.62 (60) | 75.40 (95) | 57.14 (72) | 38.89 (49) | 57.94 (73) | 31.75 (40) | 70.63 (89) | 61.11 (77) | 24.60 (31) |
| Asian | 95.14 (137) | 75.00 (108) | 68.06 (98) | 40.97 (59) | 52.78 (76) | 59.03 (85) | 44.44 (64) | 47.92 (69) | 36.11 (52) | 63.89 (92) | 52.78 (76) | 22.92 (33) |
| Hispanic | 94.20 (65) | 76.81 (53) | 85.51 (59) | 42.03 (29) | 68.12 (47) | 62.32 (43) | 47.83 (33) | 57.97 (40) | 29.09 (18) | 65.22 (45) | 50.72 (35) | 27.54 (19) |
| Two or more | 92.16 (47) | 78.43 (40) | 68.63 (35) | 37.25 (19) | 68.63 (35) | 68.63 (35) | 35.29 (18) | 64.71 (33) | 29.41 (15) | 74.51 (38) | 60.78 (31) | 21.57 (11) |
| Annualized wage, US\$ | | | | | | | | | | | | |
| <50,000 | 92.89 (810) | 78.78 (687) | 76.49 (667) | 43.81 (382) | 66.28 (578) | 59.52 (519) | 42.55 (371) | 57.00 (497) | 33.83 (295) | 65.80 (572) | 58.60 (511) | 22.82 (199) |
| 50,000- <100,000 | 90.51 (963) | 69.83 (743) | 74.53 (793) | 39.47 (420) | 64.10 (682) | 54.23 (577) | 34.21 (364) | 55.08 (586) | 28.85 (307) | 62.69 (667) | 52.73 (561) | 19.08 (203) |
| 100,000+ membership | 86.56 (264) | 63.93 (195) | 75.08 (229) | 42.30 (129) | 72.79 (222) | 43.61 (133) | 30.82 (94) | 58.36 (178) | 23.28 (71) | 65.57 (200) | 48.85 (149) | 20.00 (61) |
| Union | 90.17 (321) | 78.93 (281)** | 80.90 (288)** | 47.75 (170)** | 71.07 (253)* | 59.83 (213)* | 40.73 (145) | 59.55 (212) | 37.64 (134)** | 63.76 (227) | 57.30 (204) | 25.56 (91)* |
| Faculty status | 87.64 (241)* | 62.91 (173)** | 69.82 (192)* | 46.55 (128) | 72.73 (200)* | 47.27 (130)** | 32.73 (90) | 57.45 (158) | 22.18 (61)* | 64.00 (176) | 49.82 (137) | 18.91 (52) |

* $p < .05$. ** $p < .01$. *** $p < .001$.

TABLE 3
Logistic Regression Results (Odds Ratios and [95% Confidence Intervals]) for Incentivizing for Various Behaviors

| Characteristic | Physical, Mental, and Emotional Health Behaviors | | | | | | | | | | | |
|-----------------------|--|--------------------------|--------------------------|------------------------------------|--------------------------|--------------------------|---------------------------------|---------------------------|--------------------------|-------------------------------|---|-------------------------------|
| | Being Physically Active | Eating Healthy | Managing Weight | Avoiding Drinking Too Much Alcohol | Quitting Tobacco | Managing Stress | Getting Enough Sleep Each Night | Managing Chronic Diseases | Managing Back Pain | Getting Preventive Screenings | Getting a Check up With a Primary Care Provider | Taking Prescribed Medications |
| Female | 1.29 [0.93, 1.81] | 1.22 [0.97, 1.52] | 1.05 [0.83, 1.33] | 0.95 [0.77, 1.17] | 1.17 [0.94, 1.45] | 1.18 [0.96, 1.45] | 0.84 [0.68, 1.04] | 1.15 [0.94, 1.41] | 0.80 [0.64, 0.99] | 1.03 [0.83, 1.28] | 0.87 [0.71, 1.07] | 1.09 [0.85, 1.41] |
| Age, years | | | | | | | | | | | | |
| <30 | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference |
| 30-39 | 0.85 [0.44, 1.66] | 0.68 [0.46, 1.03] | 0.85 [0.60, 1.22] | 0.85 [0.62, 1.15] | 0.82 [0.59, 1.13] | 0.92 [0.68, 1.26] | 0.82 [0.60, 1.11] | 0.90 [0.66, 1.23] | 1.07 [0.77, 1.48] | 0.64 [0.45, 0.90] | 0.86 [0.63, 1.18] | 0.74 [0.52, 1.04] |
| 40-49 | 0.60 [0.32, 1.15] | 0.51 [0.34, 0.77] | 0.90 [0.63, 1.31] | 0.78 [0.57, 1.07] | 0.82 [0.59, 1.14] | 0.99 [0.72, 1.35] | 0.69 [0.51, 0.95] | 0.94 [0.69, 1.28] | 0.97 [0.70, 1.36] | 0.48 [0.34, 0.68] | 0.64 [0.46, 0.88] | 0.58 [0.40, 0.82] |
| 50-59 | 0.53 [0.28, 0.99] | 0.47 [0.32, 0.70] | 0.96 [0.67, 1.37] | 0.99 [0.73, 1.34] | 1.11 [0.81, 1.54] | 0.80 [0.59, 1.09] | 0.65 [0.48, 0.88] | 0.94 [0.69, 1.27] | 1.07 [0.78, 1.48] | 0.43 [0.30, 0.60] | 0.52 [0.38, 0.71] | 0.50 [0.35, 0.71] |
| 60+ | 0.34 [0.17, 0.66] | 0.40 [0.25, 0.62] | 0.71 [0.47, 1.08] | 0.94 [0.65, 1.35] | 1.00 [0.68, 1.48] | 0.70 [0.48, 1.01] | 0.56 [0.38, 0.81] | 0.73 [0.51, 1.05] | 1.06 [0.72, 1.58] | 0.32 [0.21, 0.48] | 0.57 [0.39, 0.82] | 0.53 [0.34, 0.82] |
| Race/ethnicity | | | | | | | | | | | | |
| White | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference |
| Black | 1.21 [0.60, 2.44] | 1.51 [0.95, 2.40] | 1.17 [0.75, 1.82] | 1.31 [0.91, 1.89] | 1.61 [1.06, 2.45] | 1.05 [0.72, 1.51] | 1.06 [0.72, 1.54] | 1.04 [0.72, 1.51] | 1.07 [0.72, 1.58] | 1.33 [0.89, 1.99] | 1.25 [0.86, 1.82] | 1.26 [0.82, 1.93] |
| Asian | 1.95 [0.88, 4.24] | 1.16 [0.78, 1.74] | 0.72 [0.49, 1.04] | 0.99 [0.70, 1.40] | 0.58 [0.41, 0.81] | 1.22 [0.86, 1.74] | 1.36 [0.96, 1.93] | 0.70 [0.49, 0.98] | 1.40 [0.97, 2.01] | 0.91 [0.63, 1.30] | 0.87 [0.61, 1.23] | 1.14 [0.75, 1.72] |
| Hispanic | 1.63 [0.58, 4.56] | 1.27 [0.71, 2.28] | 1.98 [1.00, 3.92] | 1.00 [0.61, 1.63] | 1.08 [0.64, 1.81] | 1.35 [0.82, 2.23] | 1.57 [0.96, 2.56] | 1.03 [0.63, 1.69] | 0.84 [0.48, 1.46] | 1.02 [0.61, 1.70] | 0.82 [0.50, 1.33] | 1.48 [0.85, 2.56] |
| Two or more | 1.04 [0.37, 2.96] | 1.22 [0.61, 2.43] | 0.70 [0.38, 1.29] | 0.83 [0.47, 1.49] | 1.15 [0.63, 2.10] | 1.74 [0.95, 3.20] | 0.86 [0.48, 1.55] | 1.39 [0.78, 2.50] | 0.96 [0.52, 1.78] | 1.46 [0.77, 2.78] | 1.15 [0.64, 2.04] | 0.99 [0.50, 1.97] |
| Annualized wage, US\$ | | | | | | | | | | | | |
| <50,000 | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference | Reference |
| 50,000-<100,000 | 0.85 [0.60, 1.20] | 0.69 [0.55, 0.86] | 0.91 [0.73, 1.13] | 0.79 [0.65, 0.96] | 0.87 [0.71, 1.06] | 0.81 [0.67, 0.99] | 0.72 [0.59, 0.88] | 0.92 [0.76, 1.11] | 0.75 [0.61, 0.92] | 1.04 [0.85, 1.26] | 0.85 [0.70, 1.02] | 0.85 [0.67, 1.07] |
| 100,000+ | 0.71 [0.44, 1.15] | 0.71 [0.51, 0.99] | 1.15 [0.81, 1.64] | 0.84 [0.62, 1.14] | 1.22 [0.88, 1.70] | 0.82 [0.46, 0.84] | 0.67 [0.49, 0.92] | 1.11 [0.82, 1.50] | 0.63 [0.45, 0.89] | 1.32 [0.96, 1.81] | 0.82 [0.61, 1.10] | 1.12 [0.78, 1.62] |
| Union membership | 0.92 [0.62, 1.38] | 1.60 [1.21, 2.12] | 1.53 [1.14, 2.06] | 1.41 [1.11, 1.78] | 1.37 [1.06, 1.77] | 1.37 [1.08, 1.75] | 1.29 [1.02, 1.65] | 1.23 [0.97, 1.56] | 1.64 [1.28, 2.10] | 0.95 [0.74, 1.21] | 1.18 [0.93, 1.50] | 1.46 [1.11, 1.83] |
| Faculty status | 0.87 [0.56, 1.37] | 0.73 [0.54, 0.98] | 0.71 [0.52, 0.98] | 1.34 [1.00, 1.78] | 1.43 [1.04, 1.96] | 0.86 [0.64, 1.14] | 0.90 [0.67, 1.22] | 1.10 [0.83, 1.47] | 0.67 [0.48, 0.93] | 1.06 [0.78, 1.42] | 0.89 [0.67, 1.18] | 0.90 [0.63, 1.29] |

NOTE: Relationships in bold font are statistically significant. Dependent variable = for which of the following healthy activities should MHealthy provide an incentive? Response choices are as follows: 1 = participation mode was checked; 0 = participation mode was not checked.

TABLE 4
Chi-Square Results for Various Incentive Payment Modes

| <i>Characteristic</i> | <i>Money Included in Your Paycheck</i> | <i>Money Sent to You Directly in the Mail</i> | <i>Points Toward the Purchase of Goods and Services From Local Businesses</i> | <i>Points Toward the Purchase of Goods From an Online Store With Wellness Products</i> | <i>Gift Certificates or Vouchers for University Facilities and Events (e.g., Performances, Athletic Events, etc.)</i> |
|--------------------------|--|---|---|--|---|
| Gender** | | | | | |
| Female | 60.96 (993) | 29.47 (480) | 2.52 (41) | 1.96 (32) | 5.10 (83) |
| Male | 59.00 (295) | 25.20 (126) | 5.40 (27) | 3.40 (17) | 7.00 (35) |
| Age, years*** | | | | | |
| <30 | 73.86 (195) | 20.83 (55) | 1.89 (5) | 1.52 (4) | 1.89 (5) |
| 30-39 | 69.25 (358) | 22.05 (114) | 2.71 (14) | 1.93 (10) | 4.06 (21) |
| 40-49 | 55.97 (286) | 30.33 (155) | 3.91 (20) | 2.54 (13) | 7.24 (37) |
| 50-59 | 53.71 (326) | 33.61 (204) | 2.64 (16) | 2.97 (18) | 7.08 (43) |
| 60+ | 53.48 (123) | 33.91 (78) | 5.65 (13) | 1.74 (4) | 5.22 (12) |
| Annualized wage, US\$*** | | | | | |
| <50,000 | 62.23 (519) | 30.82 (257) | 2.04 (17) | 1.20 (10) | 3.72 (31) |
| 50,000-<100,000 | 61.00 (621) | 28.09 (286) | 2.75 (28) | 2.36 (24) | 5.80 (59) |
| 100,000+ | 53.43 (148) | 22.74 (63) | 8.30 (23) | 5.42 (15) | 10.11 (28) |
| Union membership** | | | | | |
| Union | 51.45 (178) | 37.28 (129) | 2.89 (10) | 2.60 (9) | 5.78 (20) |
| Nonunion | 62.25 (1110) | 26.75 (477) | 3.25 (58) | 2.24 (40) | 5.50 (98) |
| Faculty status*** | | | | | |
| Faculty | 54.69 (140) | 23.83 (61) | 8.98 (23) | 4.69 (12) | 7.81 (20) |
| Staff | 61.29 (1148) | 29.10 (545) | 2.40 (45) | 1.98 (37) | 5.23 (98) |

* $p < .05$. ** $p < .01$. *** $p < .001$.

modes. Compared to staff, faculty were more likely to prefer forms of payment other than money (e.g., gift certificates or vouchers) ($p < .001$). Nonunion members ($p = .002$) and younger employees ($p < .001$) preferred money in their paycheck than money sent to them directly in the mail. Race and ethnic classifications did not have any statistically significant associations with preferences for incentive payment modes and are not shown in the Table 4 due to very small cell sizes for certain racial and ethnic categories.

► DISCUSSION

One promising strategy to engage lower participating populations in wellness programs may be to use a type of financial incentive that these individuals prefer. To the extent that there are differences in preferences for incentives among different employee subgroups, employers could refine their strategies to encourage more participation in their wellness programs, particularly

among employees with greater health risks and lower participation rates. In this present study, we examined associations between employee characteristics and their preferences for incentives for health behaviors. The results of our study suggest that key employee characteristics, such as faculty and union statuses and annualized wage, are associated with preferences for different types of incentives.

There are several ways in which employers could use these results to improve health promotion practice within their organizations. Since there are important legal and equity considerations that can limit the degree to which employers could offer different types of incentives to different employees, employers could instead leverage tailored messaging and partnerships with organizational units to better reach high-priority employee subgroups. For example, after controlling for socioeconomic status and demographic characteristics the results suggest differences in preferences for incentives by union membership, with unionized employees

being more likely than nonunionized employees to report that the wellness program should provide an incentive for quitting tobacco. Because these employees may be at higher risk for tobacco use and less likely than nonunionized employees to participate in the wellness program (Beck et al., 2016), health promotion practitioners might consider developing marketing materials specifically tailored to these employees. Though an incentive for participating in a tobacco cessation program would be offered to all employees, these tailored communications would aim to facilitate program participation among these higher risk employees who have indicated a preference for such an incentive. Administrative data could also be used to determine what university units have the highest percentage of unionized employees and offer on-site tobacco cessation programs and counseling within those units, in addition to offering those same tobacco cessation programs across other areas of the organization. Organizations could use similar tailored marketing and program implementation approaches for other health behaviors for which higher risk employees prefer an incentive. Money was the preferred incentive payment mode. Since incentive payment mode differed across employee subgroups, wellness programs could potentially encourage participation by allowing employees to self-select their incentive payment mode (e.g., by allowing employees to receive a \$50 incentive either in their paycheck or mailed to them).

Another potential way in which these results may be used by employers to improve health outcomes for employees is to partner with other units in the organization to develop multifaceted strategies to boost access to health promotion programs. For example, employees who were in the lowest wage category had greater odds of wanting an incentive for managing stress and back pain. Because such preferences may be driven in part by financial barriers to addressing these health issues, an organization could partner with their benefits office to ensure that copays for health services to treat these issues are affordable for lower wage employees. Additionally, access to applicable wellness programs could be improved by concomitantly identifying and addressing structural barriers to wellness program participation. Such efforts might include offering programs before or after typical business hours, in easily assessable locations, and in a format (in-person, online, or telephonic) that is desirable for that population of employees.

These results could also serve as a guide for collection of other data on why certain groups of employees do or do not prefer an incentive for wellness programs

that focus on different behaviors. For example, the results showed that younger employees were more likely than older employees to prefer incentives for a range of healthy behaviors. To better understand the reasons for differences in preferences by age, an employer could conduct more in-depth research (e.g., focus groups) especially among younger and older employees to better understand and respond to these preferences. This strategy could be used where there was an association between employee characteristics and incentive preferences.

Our study has limitations. First, individuals were not asked to rank or constrain (e.g., “pick your top 3”) their choices, and thus individuals were not forced to consider trade offs, which could provide deeper insight into their incentive preferences. Second, although the survey sample had similar observable characteristics as the broader university employee population, because the study data are from a voluntary survey there could have been differences between respondents and nonrespondents in their preferences for incentives. Third, another approach to learning about employees’ preferences for incentives might be to develop a survey on what health behaviors employees are currently not engaging in, and then have them select which of those they would like to work on and get incentivized for. Such short-term incentives may provoke initial interest and participation in wellness programs. Participation in wellness programs have the potential to translate into sustained behavior change, (Kullgren et al., 2013; Kullgren et al., 2016). They do so if after incentivizing initial participation, they help participants shift from this initial external motivation to an internal motivation by offering health behavior programming and synergistic cultural supports that effectively enhance feeling states, meaning, autonomy, competence, and social interaction (John et al., 2011; Kanowitz, 2017; Segar & Richardson, 2014; Segar, Taber, Patrick, Thai, & Oh, 2017).

On the other hand, it is also possible that employees may want to receive an incentive for behavior(s) they would sustain regardless if they received an incentive or not. Clearly, this would not contribute to organizational goals. Fourth, because our study was cross-sectional our results should be interpreted as associations that may not necessarily represent causal relationships. Last, we used a traditional threshold for statistical significance ($p < .05$) so as not to miss potential associations in this exploratory study. However, using multiple statistical tests, without adjusting the threshold for statistical significance, could have resulted in associations that arose due to chance alone.

► CONCLUSIONS

This study illustrates differences in preferences for incentives for distinct healthy behaviors among different types of employees. These findings could be used to refine health promotion strategies to better engage higher risk and less engaged employees in wellness

programs and the initial process of making a new behavior change. Such an approach of measuring preferences for incentives and then using results of these measurements to tailor communications and programs might help increase initial interest and participation in healthy behaviors among an increasingly diverse workforce.

► APPENDIX

TABLE A1
Demographic Comparison of the University Population With the Survey Participants

| Population Characteristic | Benefits Eligible University Population (N = 41,681) | Survey Participants (N = 2,459) |
|---------------------------|--|---------------------------------|
| Faculty, % | 17.45 | 12.25 |
| Staff, % | 82.55 | 87.75 |
| Male, % | 35.94 | 24.69 |
| Female, % | 64.06 | 75.31 |
| Campus 1, % | 95.49 | 95.85 |
| Campus 2, % | 2.31 | 1.99 |
| Campus 3, % | 2.20 | 2.16 |
| Average age, years | 44 | 45 |
| Average salary, US\$ | 74460.15 | 68645.06 |

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