

# SIGDOC: G: “Eating Right” and User Experience with an Employee Wellness Program

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## ABSTRACT

This project investigates how employees experience eating-related health communications and technologies in an Employee Wellness Program (EWP) at a large midwestern university. This paper presents results from a UX-informed survey of employees in order to argue that users are predominantly dissatisfied with EWP diet-related programming, and that the EWP would be well served by implementing a more user-engaged design process in order to better meet the wants and needs of its users.

## CCS CONCEPTS

• Human-centered computing ~ Human computer interaction (HCI) ~ HCI design and evaluation methods ~ User studies

## KEYWORDS

User experience, employee wellness, health communication, health disparities

## 1 Introduction

My project examines how users experience diet-related programming and digital technologies in an Employee Wellness Program (EWP) at a large midwestern university (U-EWP). In the last forty years, organizations have widely implemented EWPs, which are typically aimed at health promotion and preventive activities rather than healing illness or disease. One key component in many EWPs is programming designed to reduce weight-related health risks in the employee population, which often includes use of mobile digital tracking technologies. EWPs are a salient site for user experience (UX) studies of institutional health communications and technologies outside medical settings.

## 2 Problem and Motivation

In this paper, I report on the results of a survey of U-EWP-eligible employees designed to examine people’s experience with the U-EWP and its diet-related programming, and why they do or do not participate. The university under study was one of the largest employers in its state, with approximately 19,000 U-EWP-eligible employees. The U-EWP incorporated a variety of eating-related programming, from healthy cooking classes to Weight Watchers. Both the U-EWP and Weight Watchers utilized mobile apps and website portals for users to track their progress.

Weight/obesity had been the second highest employee population health risk for over a decade, despite the U-EWP heavily incenting weight-loss programs. Weight Watchers and dietary coaching were among the highest-value activities on a list of about 30 options for earning points toward significant health insurance premium reductions. The university had done little to provide healthy food options in the workplace, despite employee requests in university-run EWP satisfaction surveys. Instead, the U-EWP framed weight-related health risks as rooted in personal choice. Importantly, regardless of efforts over the years to boost participation, only about 40% of eligible employees participate fully and earn the \$500 insurance premium reduction, a participation rate that has remained stagnant for about a decade.

If financial incentives are good, and being well and eating well are laudable goals, then why have employees not taken greater advantage of the U-EWP? Specifically, this paper addresses the following research questions: (1) How do people experience the U-EWP’s eating-related discourse and programming? (2) How does the U-EWP facilitate and/or restrict access to wellness for people within marginalized groups?

## 3 Background and Related Work

This study is situated at the intersection of the rhetoric of health and medicine (RHM), UX, and technical communication. It responds to calls for RHM research that foregrounds broader health practices outside medical institutions [1, 2], and for centering social justice in RHM research in order to intervene in health disparities and to ameliorate the lived experiences of those subject to systemic oppression and disparity [3–6]. Studying EWPs through a social justice lens is crucial because the wellness movement in the U.S. has its roots in the mid-twentieth-century identification of health disparities and the conceptualization of public health programs aimed at addressing those inequities.

Health disparities—including disparities in health risks—are driven by a complex, entangled set of factors including racism, sexism, classism, ableism, health literacy, employment status, health insurance coverage, and geographic location [5, 7–11]. While health disparities have been documented in the U.S. for at least a century [10], it is only recently that it has become widely accepted that systemic social issues are among the fundamental causes of those health disparities [11]. Healthy People 2030, a U.S. Department of Health and Human Services health promotion program, explains that “people who don’t have access to grocery

stores with healthy foods are less likely to have good nutrition. ... [which] raises their risk of health conditions like heart disease, diabetes, and obesity” [11].

Healthy People 2030 grew out of mid-twentieth century public health efforts that also inspired the wellness movement and the proliferation of EWPs. In the late 1950s, Dr. Halbert L. Dunn, chief of the U.S. National Office of Vital Statistics (the same office that provides data for Healthy People 2030 today), noticed troubling statistical trends. In Dunn’s view, the majority of people in the U.S. who were not ill were borderline unwell and at high risk for illness [12]. Promoting health through wellness programs, Dunn argued, was the way to improve people’s overall condition, especially African Americans which had a high level of health disparity in his data [13]. The wellness movement exploded, and by the early 1980s EWPs were firmly established in U.S. workplaces, with news reports numbering programs in the thousands and growing [14]. By 2010, the ACA encouraged EWPs and allowed for health-contingent plans that charged employees different insurance rates based on achieving health goals, an exception to the nondiscrimination provisions of the Health Insurance Portability and Accountability Act (HIPAA) [15]. Through the ACA, wellness pivoted from its roots in addressing health disparities [12, 13] to potentially perpetuating broader social issues contributing to health disparities.

## 4 Methods

I draw on theories of UX and patient experience design in order to capture and analyze user experience with EWP programming and mobile technologies in real-life contexts [16, 17]. My 38-question survey included a mix of quantitative questions (e.g., yes/no “Do you use apps on your smartphone to track your eating (for example, through a diet app)?”), and qualitative questions (e.g., short answer “What does ‘wellness’ mean to you?”). Enjoyability and meaningfulness are key ways to measure experience, especially with interactive technologies [18]. Thus, the survey also had a mix of questions aimed at understanding whether use of the U-EWP was enjoyable (e.g., Likert scale agree-disagree with “Using the Wellness Program website and/or app is easy”) and whether users felt the U-EWP made a meaningful difference in their lives (e.g., Likert scale agree-disagree with “I feel like I have a better relationship with food and eating because of the Wellness Program”). Display logic routed participants through questions based on previous answers. For example, if a participant answered the question “Do you own a smartphone?” with “no” then they were not asked about their usage of apps. Lastly, most questions did not force a response; thus, not all respondents answered all questions displayed to them.

### 4.1 Data Collection

My survey was administered online via Qualtrics. Survey participants were recruited from among the total U-EWP-eligible employee population. Email invitations to participate were sent to 18,954 benefits-eligible employees. I received 1,717 survey responses for a 9.1% response rate. While inviting the total population was an effective strategy for obtaining a random

sample, my sample was not truly randomized, nor can it be assumed that it is representative of the population. As it was not my goal to have findings generalizable to all EWPs, this sampling strategy balanced manageability and randomization in recruitment. Though this study involved human participants, the IRB determined that it was exempt from oversight.

### 4.2 Data Analysis

Quantitative survey data was analyzed primarily by examining the distribution of responses. Because this was not an experimental study and there were no variables or groups being compared, most statistical analyses were not appropriate. Likewise, because there was not a predetermined sample, analysis of nonrespondents was not needed [19]. Median response rates on attitude scales such as the Likert enable helpful aggregation of respondent sentiment, though direct frequency of response to particular categories and clustering of “agree” and “disagree” categories can also provide a helpful picture of user attitudes [20].

Qualitative data (short-answer survey questions) were coded for discussion of six barriers to participation (geographic, cultural, financial, privacy, time, and usability) and three conceptualizations of food/eating (as a wellness practice, as a cure for weight-related disease/risk, and as a means to save money) identified in my previous research on the U-EWP [21].

## 5 Uniqueness of Approach

No research to date in RHM or technical communication has examined UX with EWPs. While significant research on EWPs exists in public health and medical journals, it is predominantly focused on evaluations of efficacy and methods for increasing employee participation and compliance, especially when evaluating user experience with digital technologies [e.g., 22]. Only a few studies theorize the employee experience [e.g., 23]. Thus, my research fills an important gap in understanding how employees experience EWPs and why they do or do not participate. Likewise, my focus on ways the U-EWP perpetuates systemic inequities and health disparities brings a crucial social justice lens to ongoing conversations and work around EWPs.

## 6 Results and Contributions

Overall, most of the employees who responded to my survey participated to some extent in the U-EWP (74%), and most indicated neutral to positive reactions to the program, however, employees also reported serious concerns about barriers to access. In this section, I report key results with a focus on perceived barriers to employee participation, and discuss how those barriers perpetuate systemic inequities that people marginalized along axes of race, ethnicity, class, and ability may also face in terms of broader access to food sources and healthcare.

### 6.1 Quantitative Results

As noted above, not all respondents answered all questions; I include total  $n$  for each question or question set. Respondents ( $n=1,659$ ) were well distributed across age categories: 2.9% were

18-24 years old; 25.5% were 25-34; 26.3% were 35-44; 21.7% were 45-54; 19.5% were 55-64; 3.6% were 65-74; 0.1% were 75-84; and 0.4% preferred not to answer. Gender ( $n=1,659$ ) was skewed toward female: 76.8% identified as female; 21.6% identified as male; 0.3% identified as transgender male; 0.6% identified as genderqueer/nonbinary; and 0.7% preferred not to answer. Highest education level ( $n=1,659$ ) was skewed toward advanced degrees: 0.6% reported completing high school/GED; 5.0% completed some college but not a degree; 3.9% earned an associate’s degree; 1.1% completed vocational/trade school; 31.2% completed a bachelor’s degree; 32.2% completed a master’s degree; 25.1% completed a doctorate or advanced terminal degree; and 0.5% preferred not to answer. Race and ethnicity results are shown in Table 1.

Respondents ( $n=1,707$ ) came from all four U-EWP-eligible job categories: 16.8% were Faculty (tenure- and non-tenure-track); 39.9% were Professional & Administrative (includes academic administrators, sports coaches, student services, researchers, lecturers); 33.1% were Civil Service (includes clerical, financial, IT); and 10.2% were Labor Represented (includes categories also in Civil Service, plus police, food services, and facilities). The main difference between Civil Service and Labor Represented is that the latter are in unions.

The survey also asked a series of questions about technology use ( $n=1,717$ ). Over 90% of respondents were regular technology users, felt very comfortable using the internet, and reported using online health resources at some point in the last year. 97.9% of participants said they owned a smartphone. Of those ( $n=1,674$ ),

**Table 1: Race and Ethnicity as Reported by Participants**

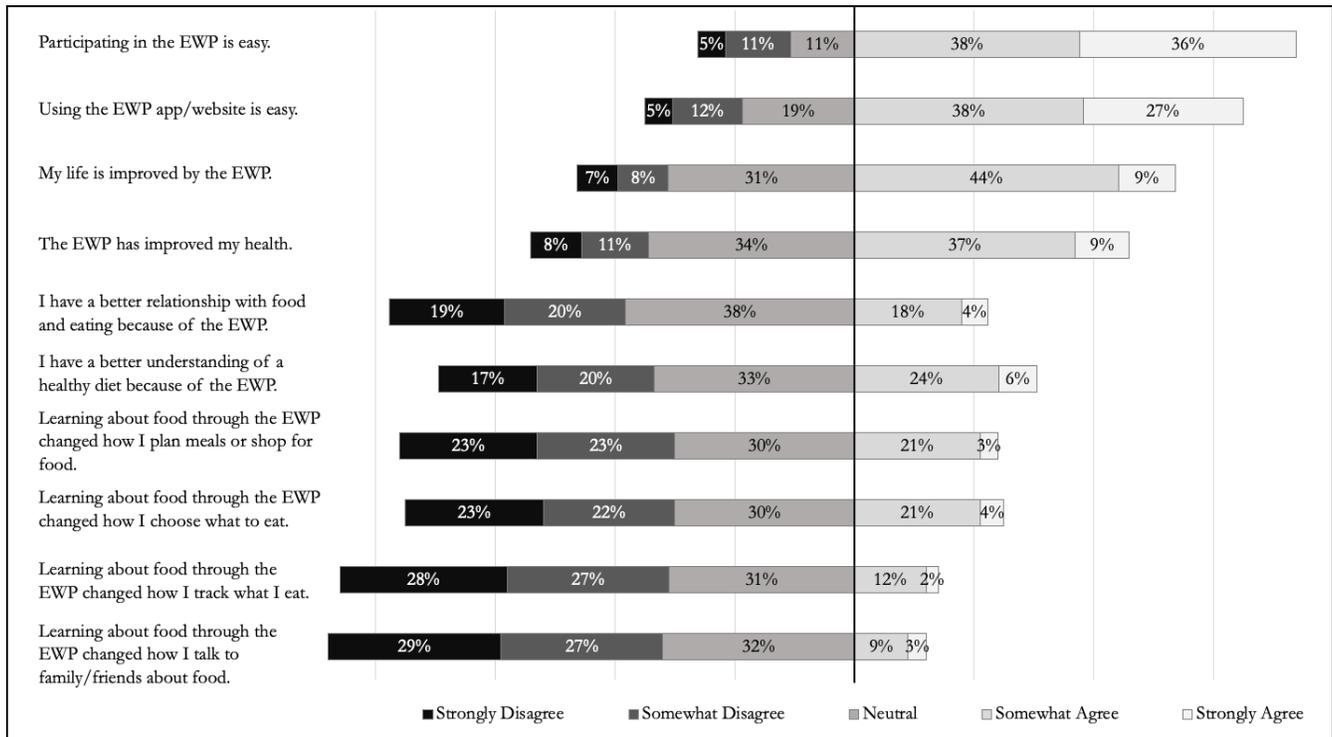
Race	Hispanic or Latino/a	Not Hispanic or Latino/a	Prefer Not to Answer (Hispanic or Latino/a)
American Indian or Alaska Native	3	14	0
Asian	1	79	0
Black or African American	5	24	0
Native Hawaiian or Other Pacific Islander	0	2	0
White	37	1449	24
Prefer Not to Answer	11	7	29

*Note.* Total  $n=1,661$ . Respondents were able to choose all racial categories that applied; one respondent may be represented in more than one racial category.

82.4% said they visited websites on their smartphones daily, 90.3% said they used apps on a daily basis, 59.9% said they use apps to monitor non-eating health data (e.g., exercise, glucose), and 28.6% said they used apps specifically to track diet.

A matrix question gathered user sentiment by asking participants to indicate on a Likert scale their agreement or disagreement with a series of statements. Results are shown in Figure 1 ( $n=1,433$ ); the stacked bars are aligned at the mark between strongly and somewhat agree, and neutral to disagree answers, in order to visually emphasize the divergence of opinion. Most people felt using the EWP was easy and felt positive or neutral about whether the U-EWP improved their lives and health. As statements shifted toward food-related programming, however,

**Figure 1: Distribution of Responses to Likert-scale Sentiment Questions**



sentiment shifted toward the negative. Most participants did not feel the U-EWP had a positive influence on their relationship with food, or that it impacted their eating habits or discourse.

## 6.2 Qualitative Results

The survey included two key short-answer questions for qualitative analysis: “What does wellness mean to you?”; and “What does healthy eating mean to you?” These questions were positioned early in the survey, before the sentiment questions, in order to reduce priming participant answers as much as possible.

Overall, the majority of participants described wellness ( $n=1,606$ ) as positive and holistic, using phrases like “physically, mentally, emotionally, spiritually, interpersonally, and financially,” “healthy lifestyle,” and “feeling good.” Many included comments about being “free from disease” or “free from illness.” Some participants noted issues with the term wellness, with one saying “wellness can be a privileged term,” and another noting, “Wellness, to me, is an industry with roots in the weight loss industry, primarily accessible by wealthy white people.”

In terms of healthy eating ( $n=1,608$ ), participants frequently used the word “balanced,” and described food in ways that aligned with the USDA Dietary Guidelines for Americans (DGA), with comments like “eating plenty of fruits and vegetables,” “whole grains,” and “lean proteins,” and avoiding things like sugar, salt, fats, and junk food. As one participant said, “foods from Mother Nature—not Nabisco.” Macronutrients, vitamins, and calories—also components of the DGA and biomedical nutrition models—were frequently mentioned as well. Overall, many employees’ views on food blend wellness with biomedicine through references to both holism (references to mental, spiritual, financial, and relationship health) and biomedical nutrition models (focus on calories and/or macronutrients).

## 6.3 Barriers to Participation

Respondents who reported previously participating in the EWP but not currently participating, and those who said they never participated, were prompted with an open text box follow-up asking them to say a little bit about why. In this section, I focus on analysis and discussion of responses about non-participation based on my coding for six key barriers. While I am breaking apart my discussion of results into six sections, it is important to note that most people wrote about multiple barriers; in other words, in people’s lived experience, the barriers are deeply entangled. One participant wrote in the follow-up about why they do not participate in the U-EWP:

It feels like an intrusion into my private health information by my EMPLOYER. And I feel like if the U honestly cared about my "wellness" as a person, they would PAY ME a salary that did not require me to have extra jobs on the side, working more than 40+ hours a week most weeks of the year, and to figure out how to train unit leaders and dept chairs to create healthy workplace cultures instead of the toxic cesspools that are characteristic of most units in [my college]. Perhaps if the U tackled those HUGE issues first, THEN I might believe they gave a shit about my "wellness" - instead,

the U's wellness program always comes across like a ploy to lower the cost of healthcare (which, again, no proof that it does), or to keep the "cogs" just healthy enough to keep squeezing more work out of us.

In this single response, different chunks of text were coded as “time barriers,” “financial barriers,” and “privacy barriers;” however, it is a salient example of how interconnected barriers are this participant contextualized their experience with the U-EWP within their lived experience as an employee more broadly.

*6.3.1 Geographic Barriers.* While the university has satellite campuses and centers statewide, the main campus is the largest and is located in the biggest metropolitan area in the state. Participants from non-metropolitan locations frequently commented on the difficulty of accessing U-EWP programming, such as, “I work off campus at one of the 10 Research & Outreach Centers located throughout the State. The Well Being program is very well adapted to those working on a central campus but not entirely helpful for those of us who do not work on a central campus.” Some participants also noted distance from campus as a barrier because biometric screenings and classes (e.g., cooking, fitness, mindfulness) take place on-campus. One commented that “I live 100 miles away from the workplace I commute to work 4 - 5 days a week ... I ride a bus to work daily it is too much to bring ... if I participate [sic] Wellbeing program at work other than a workbag (laptop, sweater, classnotes [sic] plus lunch bag.”

*6.3.2 Cultural Barriers.* Survey participants felt frustration with a lack of programming that fit their culture or demographics. One participant noted that there is nothing in the U-EWP “targeted at my demographic” while another said they “trust the expertise I get outside of the program to match my values.” One participant noted that “these programs seem to focus on ‘Western lifestyle and assumptions about food’ and food cultures rather than mine.” Another reported that they had concerns about diet programming being “culturally appropriate for non-white populations. As a person of color, I have struggled to find resources to help me eat healthier that are also culturally relevant.” One respondent who self-reported as white also expressed concern about U-EWP eating-related programming being inclusive culturally, “ex: halal if I were Muslim.”

*6.3.3 Financial Barriers.* One of the most frequently invoked barriers was financial. Many participants reported non-participation was related to direct costs, noting that the “points are hard to obtain and/or cost money” and that “feels inappropriate for people trying to earn points to lower their health insurance premiums.” Many participants noted the irony of an employer-sponsored wellness program that offers financial rewards including up-front fees for some programs, as in one comment that “the U does not pay me enough to afford classes” or another noting broad difficulty for “many of us in the [Labor Represented] unit [who] can't afford to pay up front for some of these great programs.” One participant summed it up as “not enough money in the budget to participate in [wellness] programming.”

*6.3.4 Privacy Barriers.* Many non-participants reported serious privacy concerns as a barrier for their participation. Employees are concerned both about their employer having access to the data,

with one noting they worried about how it might affect future health insurance premiums, and about how their employer might use the data, with another participant reporting, “Participation in a Wellbeing Program is not protected by HIPAA...information like biometric health screens, answers to surveys, whatever, can be shared with people like insurers and marketers ... [the] wellbeing program hasn’t addressed privacy in this regard.” Participants also used words like “coercive,” “unethical,” and, frequently, “intrusive.” As one respondent commented, “They own my 8 hours a day, they don’t earn access to my eating and exercise habits because of that. I find it frankly kind of dystopic.”

**6.3.5 Time Barriers.** One of the other frequently invoked barriers was time, or as one participant argued, the U-EWP was “yet another worthless time-sucking thing to do.” Many commented on how time-intensive their work is, leaving little time for wellness. One called it a “catch 22 where because I work so hard for the U, I never have time to log in and work on my wellness markers, leave late so there is no time to walk or do outdoor activities and my payment for that is that I must pull full price for my insurance. Thanks for that!” Some participants described barriers related to the timing of programming, such as one who reported they were “working primarily overnights and was sleeping during the hours the screening was available.” For some, both the amount of time and timing were a problem, with one participant noting, the “time didn’t work when on campus, I work multiple jobs and just couldn’t fit it in.”

**6.3.6 Usability Barriers.** Another common barrier was the usability of the program. Some participants commented on the overall organization of the program, with a handful of new employees saying they had not heard about it yet, and others reporting general confusion. As one commented, “To be perfectly honest, on my campus it’s been a shitshow. No resources, little coordination and HUGE confusion as to who to go to for questions and answers.” Another said they “do use [U-EWP vendor] to earn points for money off of health insurance. I think this is different from the Wellbeing program but I’m not entirely sure.” The U-EWP uses an external vendor to provide services, and though marketing materials link the two, this participant is indicating they think the U-EWP and the vendor are different programs. Additionally, a number of people reported issues with technology. One participant said, “the website is byzantine,” and another argued “I believe I created an account with [U-EWP vendor name], but there were so many clicks to find it, I have a hard time in understanding how to find it again, and how to use it -- and I’m an avid technology user.”

## 7 Conclusion

My project extends conversations around wellness, workplace health communications, and mobile health technologies by shedding light on how and why people engage, or do not, with EWPs and their food-related programming. Despite increasing incentives to participate, the U-EWP has made little headway in reducing weight as a population health risk. My survey data shows serious and widespread barriers to participation. Further,

some of these barriers (time, money, usability) disproportionately affect lower-income employees who may be working multiple jobs to make ends meet, may not have the money for up-front fees, and may have less access to and literacy with digital technologies. While the U-EWP administers regular employee satisfaction surveys, I found in prior research that they have taken little action on suggestions they received [21]. Adoption of a socially just participatory design model, wherein employees (especially those in marginalized populations) directly shaped the U-EWP during program development, would potentially increase positive UX, participation levels, and employee health.

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