Engaging Low-Wage Workers in Health and Well-Being Survey Research: Strategies From 5 Occupational Studies

Erika L. Sabbath, ScD, Meg Lovejoy, PhD, Daniel K. Schneider, PhD, Yaminette Diaz-Linhart, PhD, Grace DeHorn, MSW, and Susan E. Peters, PhD

Without perspectives of low-wage workers in studies of worker health and well-being, researchers cannot comprehensively assess occupational health and health equity impacts of workplace exposures and interventions. Researchers and practitioners have noted particular challenges in engaging low-wage workers in worksite-based health survey research, yet little scholarship has described strategies for improving their engagement and response rates.

To fill this gap, we present case examples from 5 occupational studies conducted between 2020 and 2024 in industries including health care, food service, and fulfillment centers. For each case, we describe how we identified barriers to worker engagement in surveys, explain specific strategies we used to address those barriers, and assess the effectiveness of these actions. Then, summarizing across case examples, we offer practical recommendations to researchers surveying low-wage populations, highlighting that high-touch recruitment, building trust with workers and managers, and obtaining manager support to take surveys during work time (for worksite-based studies) are critical for obtaining reliable, representative data.

Our work contributes to broader discussions on improving survey response rates in vulnerable worker populations and aims to support future researchers undertaking similar efforts. (*Am J Public Health*. 2025;115(2):201–208. https://doi.org/10.2105/AJPH.2024.307875)

Work is an established social determinant of health.[1–4] In the United States, low-wage workers—those in the bottom 30% of the income distribution[5]—have higher rates of occupational illness and injury, less access to workplace benefits such as health insurance, and greater economic precarity.[6,7] Additionally, low-wage work is more common among those minoritized by race, ethnicity, and immigration status. Exposures and experiences associated with low-wage work may also amplify other health risks.[8]

To identify and address work-related health hazards and associated health outcomes, occupational health practitioners and researchers often collect survey data directly from workers to learn about their work experiences, exposures, and health. Although chemical and physical hazards can be measured environmentally, self-report surveys are critical tools for assessing how workers perceive their psychosocial work environment and measuring health outcomes such as pain, injury, sleep quality, mental health, and well-being.

Given the central role of organizational policies and practices in shaping health and well-being,[9,10] it is particularly important to conduct research on working conditions and health among workers from specific workplaces or employers rather than the broad working population. However, researchers have long noted challenges in recruiting workers for occupational health surveys, including survey overload, lack of perceived autonomy to respond during work time, and time pressures.[11–13] These challenges occur amid a long-term trend of declining

survey response rates,[14,15] amplifying recruitment challenges.

In studies of mixed-wage or low-wage workforces, response rates may be disproportionately low among workers who have low literacy, high fears of retaliation, or unmanageable workloads—the very factors that may be associated with exposure to workplace health hazards.[16] The increasing use of e-mail–based survey recruitment for worksite-based studies may induce response bias by privileging white-collar workers (who regularly access work e-mail) over blue-, brown-, and pink-collar workers who do not have or use institutional e-mail accounts. To produce research that reflects the experiences of these vulnerable workers, researchers must carefully consider how to engage low-wage working populations in research.

Although some occupational health researchers describe innovative worker recruitment practices in their research articles,[17–19] a limited body of research focuses on strategies for improving response rates to occupational surveys specifically. Successful strategies, as reported in both occupational and nonoccupational surveys,[20] include monetary incentives, multiple response modality provision (e.g., paper, electronic), and prepaying monetary incentives at the time of recruitment (vs after completion).[11,12,21,22] Despite this concrete, data-driven guidance,[11,12,20–22] multiple knowledge gaps remain. Specifically, strategies may be most applicable to high- or moderate-wage workers with high literacy and jobs that involve regular e-mail access. Many strategies pertain to population-based, versus worksite-based, study designs. Finally, given rapidly changing technology norms, strategies from even 10 years ago (e.g., phone surveys) may be outdated.

Over the past 5 years, we have fielded multiple surveys of low-wage workers to assess determinants of worker health and well-being. These studies span multiple industries (e.g., fulfillment centers, health care, food service), encompass multiple employment and work arrangements, employ workers from diverse social and demographic groups, and include both employer–researcher partnerships and direct worker sampling. Through these studies, we have learned recruitment strategies that were particularly effective and those that were ineffective. Our goal in this analytic essay is to synthesize experiences from 5 research projects so that other researchers can apply our recommendations to more effectively recruit low-wage participants.

STRATEGIES TO IMPROVE RESPONSE RATES

We present the following case studies to improve response rates from low-wage workers in occupational health research:

1. High-touch recruitment: the Boston Hospital Workers Health Study (BHWHS),
2. Community-organizing approach: the Community Health Worker Study,
3. Social media engagement: the Shift Project,
4. Engaging workers in pressured environments: the Fulfillment Center Intervention Study, and
5. Overcoming low literacy and time constraints: the Work Organizational Health Study.

The Boston Hospital Workers Health Study

Study design and sample. The BHWHS is a longitudinal occupational cohort study of more than 27 000 hospital workers at 2 large academic medical centers in Boston, Massachusetts.[23] In periodic surveys of a random sample of workers, we measured working conditions, stressors, health, and well-being, with surveys directly linkable to administrative data.[24–26] In 2023, we expanded the cohort from our historical population of patient care workers (nurses, low-wage nursing assistants) to include low-wage service workers at the hospitals (environmental services, patient and materials transport).

Survey development and data collection. We conducted formative qualitative interviews with workers and managers from low-wage groups. Interviews informed survey content, built relationships and trust with managers, and identified potential barriers to participation (e.g., concerns with e-mailed surveys being mistaken for phishing).

We distributed the survey electronically to workers at their institutional e-mail address from June 2023 through January 2024. It was available in English, Spanish, Haitian Creole, and Portuguese and was designed to take 30 minutes or less. Respondents received a $20 Amazon claim code after completion, which was sent to their institutional e-mail address.

Challenges and strategies. The database linkage component of the BHWHS added methodological strength but presented barriers to survey response because a survey link unique to the workers' study identification number had to be sent by e-mail. Workers who did not regularly use work e-mail struggled to navigate their e-mail and the survey or did not understand certain questions, even in their preferred language. To address this, we reserved a

conference room with institutional laptops, mirroring processes for mandatory hospital trainings. Managers helped us determine optimal times for our team to sit in the room, explain the study, and help workers access their e-mail. This strategy increased the response rate among environmental services workers by 5 percentage points, from 18% to 23%. By contrast, our initial approach of scheduled reminder e-mails to this group without accompanying team visits or support yielded an increase of less than 1 percentage point per reminder.

For unit-based workers (i.e., nurses, nursing assistants), study team members visited inpatient units (n = 149 units across the 2 hospitals) with flyers and study-branded candy to leave in break rooms, asking unit nurse directors to promote the survey to workers. During informal interactions with nursing assistants at these visits, the study team identified several barriers to response, even among those who reported receiving the survey: discomfort with navigating an online survey, literacy challenges, concern about permissibility of taking the survey on "work time," and the belief that as (self-perceived) peripheral workers, their responses were not valued.

To address these challenges, the study team transitioned away from our initial approach of leaving materials in break rooms and speaking with nurse directors to a high-touch approach. During visits, we asked the charge nurse on each unit to pull the on-duty nursing assistant off the floor so a study team member could help them access the survey; this provided available workers with implicit manager permission to take the survey at work. After each visit, we sent e-mails to unit directors inviting them to tell nursing assistants about the importance of taking the survey so their voice could be heard. These approaches boosted the response rate among nursing assistants from 33% to 46%, compared with increases of 1 to 2 percentage points with e-mail reminders but no accompanying visit. Overall, the study had responses from 2023 workers out of 4618 sampled (44%), with response rates of 49% among nurses, 46% among nursing assistants, 23% among environmental services workers, and 50% among patient and materials transport workers.

Community Health Worker Study

Study design and sample. Community health workers (CHWs) improve care quality for socially and medically complex communities.[27] The goal of the Community Health Worker Study was to understand how worker voice (i.e., ways that workers attempt to influence their work to meet individual and collective interests) may be associated with CHW health and well-being.[28,29] The study took place in Massachusetts from March through November 2021.

Recruitment. We initially hoped to partner with organizations employing CHWs, but although organizations expressed enthusiasm, none opted to formally partner. Instead, we proactively used community-organizing strategies for recruitment,[30] including engaging with CHWs before the launch of the study to codevelop research questions, and building partnerships with CHWs, CHW professional associations, and the employing organizations.

Challenges and strategies. We initially sent recruitment e-mails to hospitals, health centers, and community partner organizations, using publicly available contact information; we asked organizations to forward the e-mail to their CHWs. We quickly found that we could not rely on these organizations, so we developed a more grassroots recruitment approach. The primary investigator built trust with CHWs by volunteering to give invited talks at community meetings at which she shared findings from previous research on CHWs and discussed social service professionals' well-being.

At survey launch, many CHWs were exhausted from navigating the COVID-19 pandemic, and many felt oversurveyed. We established multiple systems to engage and support them. We sent recruited participants personalized e-mails (vs mass e-mails)—first to send them a unique survey link and then to offer support for survey completion. These strategies resulted in minimal missing data (94% had complete responses). We offered respondents a wide range of $40 incentive options: a Visa gift card, a gift card from any store they wanted (sent by postal mail or e-mail), or electronic payment. Personalized communication helped build relationships between worker and researcher, increasing trust and willingness to participate.

Overall, the study had a sample of CHWs who demographically mirrored the known population of CHWs across Massachusetts.[31] Of the 314 interested and eligible individuals, 220 responded (70% response rate), in contrast to a previous study of Massachusetts CHWs with a response rate of 36%.[31]

The Shift Project

Study design and sample. The Shift Project[32] is a repeated cross-sectional survey of hourly workers employed at

150 of the largest US service sector firms (i.e., fast food, casual dining, grocery, pharmacy, big-box stores, hardware, other retail, delivery, and fulfillment). We run the survey twice per year and since 2016 have collected 16 waves of data and accumulated surveys from 250 000 hourly workers.

Using surveys, the Shift Project measures workers' self-reported wages, work schedule stability and predictability, access to paid leave, exposure to surveillance and automation, respect, harassment, job security, and economic security, health, and well-being. These data are employer–employee linked, with workers nested in identifiable firms.

Data collection methods. No accessible sampling frames of hourly workers at large US service sector firms exist. Given relational, legal, and logistical challenges to survey workers associated with creating multiple employer–research partnerships, there are formidable barriers to using employer partnerships to construct employer–employee-matched survey data at scale. Thus, we developed a method to directly recruit workers at specific firms. We constructed a sampling frame using targeted advertising tools available through Meta to reach Facebook and Instagram users. Using the audience creation tool, we constructed employer-specific Meta "audiences" of workers at specific firms and then ran paid advertisements to each of these audiences, inviting users to complete the survey. We entered respondents into a drawing to receive a $500 gift card. Over the last 14 waves of data collection, we averaged advertising and incentive costs of $13 per "sufficient" survey response, defined as progressing sufficiently through the survey before breaking off to report on basic dimensions of job quality.

Challenges and strategies. We have honed multiple recruitment strategies on Facebook and Instagram. First, recruitment advertisements perform best when the audience characteristic, advertising design, and advertisement message align (e.g., Facebook and Instagram advertisements targeting Walmart workers containing a picture of a Walmart worker and a recruitment message of "survey for Walmart workers"). Advertisements missing any of these elements were less effective for recruiting target worker populations. For example, in April 2021, a set of recruitment advertisements was erroneously run that did not include employer-specific targeting but did include employer-specific recruitment language in the advertisement text, so the advertisement was shown to the general population on Meta platforms. After discovering the error, we fixed targeting and restarted data collection. Using this "natural experiment" to compare efficacy of targeting, we found that untargeted advertisements produced 17 responses (0.3% of clicks) versus 473 responses (10.0% of clicks) when correctly targeted.

Second, fraudulent, low-quality data are a concern in online data collection.[33] We assessed Internet protocol addresses and included "honeypot" questions to guard against bots; we have found no evidence of fraudulent responses across 16 waves of data collection. We also included basic attention checks; 91% of respondents pass checks, in excess of rates reported in online opt-in survey panels.[33] We, like other researchers,[34] have found that guaranteed incentives (vs random prize draws) attract fraudulent responses.

Beyond imperfect coverage of the sampling frame and low response rates, Meta's algorithm delivers recruitment advertisements nonrandomly. Nonrandom selection is a common problem in modern survey research and is often managed by poststratification and weighting.[35] Asking about core demographics upfront allows maximum preservation of sample size when weighting. Although we used a nonprobability sampling method, we benchmarked Shift data to gold standard sources (e.g., National Longitudinal Survey of Youth-97, Current Population Survey) to gauge representativeness. Before weighting, the shift sample was biased on univariate measures of gender, education, and race/ethnicity but not age, wages, or job tenure. However, the sample accurately represented bivariate associations (e.g., between job tenure and wages) as estimated in the National Longitudinal Survey of Youth-97 and the Current Population Survey.[36]

The Fulfillment Center Intervention Study

Study design and sample. The Fulfillment Center Intervention Study is a group-randomized controlled trial that compares participants in worksites randomized to a participatory intervention (health and well-being committees) with participants working for the same firm in control sites.[37] Health and well-being committees serve as a formal voice channel in which a small group of frontline workers and supervisors solicit workers' concerns and ideas about safety, the psychosocial environment, and work organization and then develop and implement improvement initiatives. In the study, we used an established research partnership with the supply chain division of a midsized, nonunionized US-based retailer. We randomized 16 fulfillment centers after

matching on picking technology and building size.

Survey development and data collection. Survey measurement occurred at baseline, 6 months, and 12 months. At each time point, all current workers in each fulfillment center received a paper invitation to complete a Web-based survey. Survey packets included a survey ID number to track repeat participation and a treat (e.g., granola bars, fruit snacks). Letters contained a QR (quick response) code and link to the survey, allowing workers to take the survey electronically. We also sent hard copies to buildings if workers preferred. We distributed invitations at fulfillment centers during working hours; we encouraged building managers to provide workers with time off the floor to complete the survey. Upon survey completion, participants received a guaranteed incentive ($10–$15 as either a physical gift card sent to their home or an electronic card sent to their personal e-mail). We ran weekly raffles for each building during the 3-week–long survey periods, with prizes ranging from $25 to $150. During 3 waves of data collection, 4444 workers were eligible to participate; 63% participated in at least 1 survey (n = 2813). Response rates were 48% (wave 1), 47% (wave 2), and 55% (wave 3).

Challenges and strategies. Data collection coincided with COVID-19 pandemic–related restrictions (baseline recruitment started July 2021), which limited the research team's ability to be on-site to establish rapport and promote the survey. Instead, supervisors and managers announced the survey, which was a challenge, as they were managing COVID-19 pandemic challenges and regular work duties simultaneously. The research team designated a "survey point person" in each building to be an on-site contact to distribute and promote the survey. However, this reliance on management may have made workers skeptical, dampening participation. Once social-distancing rules were lifted, we encouraged town halls where everyone in the building was introduced to the study and given time to take surveys.

The organization of work and the incentive structure of the firm posed unique challenges. Time off the floor is frowned on in fulfillment centers, as managers perceive it as reducing productivity. Additionally, some sites use performance-based pay, which may have disincentivized workers from taking the survey while "on the clock" for fear of losing pay. Furthermore, the company launched their own engagement survey the same year as the study survey. The overlap created survey fatigue and difficulty for managers, who were recruiting workers for both surveys.

We adopted several strategies in response. First, regular updates on response rates were shared with our building contacts to create friendly competition for high participation; buildings that reached more than 50% participation received 3 additional $100 raffle prizes. To encourage participation and combat survey fatigue in the final survey wave, we increased guaranteed incentive amounts from $10 to $15. There were also 4 $25 to $150 raffles for participants in each site per wave. Finally, the research team extended survey timelines while in the field to maintain positive relationships with management, stagger with company-wide surveys, and avoid peak periods when time off the floor was especially challenging. We implemented all presented strategies between waves 1 and 3. The response rate increased by 6 percentage points between waves, from 48% (wave 1) to 54% (wave 3).

The Work Organizational Health Study

Study design and sample. The Work Organizational Health Study was a proof-of-concept cluster-randomized control trial among food service workers designed to test whether a multilevel participatory intervention targeting work organization and environment could be feasibly implemented and improve workers' safety, health, and well-being.[38,39] Collaborating with a large multinational food service organization, we worked with 10 cafeteria sites providing food service to contracted corporate clients in greater Boston. We randomized cafeterias to either intervention or control conditions. All food service workers were eligible to complete surveys. We collected baseline survey data July to August 2018, with follow-up in early 2020. Follow-up data collection was incomplete because of the COVID-19 pandemic.

Survey development and data collection. During intervention development, we conducted focus groups with workers and interviews with managers to learn about the worker population and work environment.[40] These data informed the intervention and alerted us to potential data collection barriers (e.g., literacy and language needs).

Because of managers' reports of low literacy among workers, surveys were conducted using an interviewer-administered protocol by 2 trained research assistants, 1 of whom was English–Spanish bilingual (16% of surveys were completed in Spanish). We hired experienced survey administrators

who understood the importance of quickly establishing trust and rapport. We designed the survey to take 30 minutes or less. Survey respondents received a $25 Amazon gift card after completion. There was a 92% response rate (120/130 eligible workers).

Challenges and strategies. Some workers had low to no reading or spoken English literacy, so in addition to hiring the bilingual survey administrator, we also created Spanish versions of all materials (e.g., recruitment posters). We were invited to attend standing morning huddles with employees; we delivered prepared huddle scripts about the survey in both languages, emphasizing privacy of responses and voluntary participation. We learned from our project champion that communication and trust between managers and staff was strained. Accordingly, presurvey recruitment and study launch were driven by the research team, rather than managers, to communicate our independence.

Company management allowed surveys to be completed on work time; many workers had second jobs, making completion otherwise unfeasible. Because of already high workloads, we had difficulty accessing workers at times that they were able to complete the survey. The research team needed to be flexible to work around peak times and unexpected catering jobs. We spent many hours waiting for employees to be available to survey. We also returned for a "cleanup" day to offer the survey to staff who had been unable to complete the survey initially.

LESSONS LEARNED AND RECOMMENDATIONS

These studies affirm the necessity of several standard practices in survey data collection: conducting formative research, offering surveys in multiple languages and modalities, and providing incentives. Beyond these, cases yield a set of shared recommendations that may be specifically useful in future studies of low-wage working populations.

Recommendation 1: Build Trust

The 3 employer-engaged studies all worked with managers both before survey launch and while the survey was in the field. These collaborations did help generate specific recruitment ideas; for example, in the BHWHS, using the conference room for survey administration was a manager's idea. Conversations also built trust between the study team and managers. Because managers are often key linkage points with workers, management trust in the research team is necessary for managers to see the value of the study and encourage their workers to participate.

However, in some teams or organizations, manager–worker relationships are strained. The appearance of the study team being aligned with management may dampen response rates or lead to inaccurate responses owing to worker fear of confidentiality breaches. In such cases, trust is most effectively built with workers. The Shift Project's targeting of workers with social media advertisements is an example of how research teams can circumvent potentially untrusted managers. The Community Health Worker Study's primary investigator established trust with respondents by providing free webinars to workers before survey recruitment; this helped workers feel that she cared about their well-being instead of primarily valuing their survey responses.

Determining the appropriate trust-building activities for a given worksite or work group requires identifying, before survey deployment, whether a worksite has a project champion who workers trust or, conversely, whether worker–manager trust is fractured. In the Workplace Organizational Health Study, some sites had trusting worker–manager relationships; in these cases, managers were effective champions. In other sites, the research team communicated their independence from managers by providing information about the survey and fielding worker concerns regarding privacy.

Recommendation 2: Surveys During Work Time

All employer-engaged studies demonstrated the necessity of allowing workers to complete the survey during work time—thus increasing workers' likelihood of survey completion. Manager support for using work time to complete the survey was thus essential. However, permission may not correlate with uptake if not accompanied by reduction in duties to allow time to take the survey. Workers at all sites were busy. Some had productivity targets for a given shift (i.e., the Fulfillment Center Intervention Study) or time-sensitive catering jobs (i.e., the Work Organizational Health Study), dampening participation during work time even with manager permission. Some managers in the BHWHS scheduled extra workers for shifts when the study team would be on-site assisting with survey administration so that workers could complete the survey without affecting the team's overall workload. In addition to providing time to complete the survey, such scheduling signaled to workers that their managers thought the study

was important. In multisite trials or observational studies, response rates might be higher at sites with managers who undertake these practices, with implications for bias.

Recommendation 3: High-Touch Recruitment

No worker groups in the studies regularly accessed e-mail as part of daily job duties. Therefore, even if workers had an institutional e-mail address as part of their employment (many do not), survey invitations may be missed. In study designs in which e-mail is unavoidable (e.g., the BHWHS), in-person wraparound recruitment helped overcome this barrier; researchers were on-site to help workers navigate their e-mail and find the survey. Non–e-mail modalities, such as social media recruitment (i.e., the Shift Project), QR codes to take the survey on participants' own devices (i.e., the Fulfillment Center Intervention Study), or interviewer-administered protocols (i.e., the Work Organizational Health Study) were all effective. Regardless of modality, a high-touch approach was essential for both recruitment and survey completion.

Recommendation 4: In-Person Data Collection

Two studies (the Fulfillment Center Study and the Community Health Worker Study) undertook some or all of their data collection early in the COVID-19 pandemic, when social-distancing rules prohibited nonessential personnel (e.g., study team members) from entering worksites. These studies navigated remote data collection through close partnerships with managers, who served as their proxies (see recommendation 1 for potential downsides of this relationship). In some cases (e.g., the BHWHS), remote recruitment was ineffective.

Across most studies, in-person recruitment occurred in the evenings, late at night, on weekends, early in the morning, and at other nonstandard times to reach workers during times that they might be available to complete the survey. Off-hour recruitment sessions were especially important for capturing the perspectives of workers on nonstandard shift schedules.

CONCLUSIONS

We hope that future research projects benefit from the strategies and principles described here. We also hope that this analytic essay augments broad scholarship on methods for promoting survey response by describing specific needs of low-wage worker research participants. Although many empirical articles provide general descriptions of recruitment methods, we encourage low-wage workforce researchers to use methods sections in their articles to additionally describe specific survey recruitment activities and strategies, as we have done in these case studies. Doing so will allow others to learn from data collection processes as well as scientific findings. AJPH

ABOUT THE AUTHORS

Erika L. Sabbath is with the Boston College School of Social Work, Chestnut Hill, MA. Meg Lovejoy is with the Harvard Center for Population and Development Studies, Harvard University, Cambridge, MA. Daniel K. Schneider is with the Harvard Kennedy School, Harvard University, Cambridge, MA. Yaminette Diaz-Linhart and Grace DeHorn are with the Institute for Work and Employment Research, Massachusetts Institute of Technology Sloan School of Management, Cambridge. Susan E. Peters is with the Department of Social and Behavioral Sciences, Harvard T. H. Chan School of Public Health, Boston, MA.

CORRESPONDENCE

Correspondence should be sent to Erika L. Sabbath, Boston College School of Social Work, 140 Commonwealth Ave, Chestnut Hill, MA 02467 (e-mail: erika.sabbath@bc.edu). Reprints can be ordered at https://www.ajph.org by clicking the "Reprints" link.

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ORCID iDs:

Erika L. Sabbath https://orcid.org/0000-0002-7866-7812

Meg Lovejoy https://orcid.org/0000-0002-6362-1520

Daniel K. Schneider https://orcid.org/0000-0001-6786-0302

Yaminette Diaz-Linhart https://orcid.org/0000-0003-1380-713X

Grace DeHorn https://orcid.org/0009-0006-6690-5736

Susan E. Peters https://orcid.org/0000-0002-2705-643X

CONTRIBUTORS

E. L. Sabbath drafted the overall article. E. L. Sabbath and S. E. Peters developed the concept for the article and convened the author group. All authors drafted narratives for the studies they led and edited the article.

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The authors have no conflicts of interest to declare.

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