
UNIVERSITY OF IOWA EMPLOYEE WELL-BEING SURVEY:

Time 1 (May-June 2020) Report

Overview

The COVID-19 pandemic has had a major impact on the way people live and work. Aside from illness, the pandemic has affected employee work arrangements, social lives, and psychological states. In March 2020, many non-essential employees at the University of Iowa began working remotely. UIHC and academic units varied in their approach to remote work, with many employees continuing to work on-site, while others worked—at least part time—remotely. To capture the magnitude of its effect and to offer potential solutions, we surveyed University of Iowa employees (faculty, staff, and postdocs) in May-June 2020 regarding their work arrangements, health, and well-being. Three additional follow-up surveys will examine changes in well-being over time (September 2020, November 2020, and February 2021). This report presents findings from the first survey conducted in May-June 2020.

Overall, we found that changes due to COVID-19 had a strong negative impact on employees' well-being. Participants reported that their post-COVID well-being was almost half a point lower (out of 5) than it was pre-COVID (post-COVID average=3.74 vs. pre-COVID average=4.18). This means that, in our sample, the overall effects of COVID-19 on reported well-being were similar to prior research on the negative effects of major adverse life events on well-being (such as losing a spouse/partner) but are actually several times worse than reported effects of divorce, robbery, and job loss.^{1,2,3}

This report summarizes well-being outcomes across worker groups, sex, age, and race/ethnicity. Subsequent short reports will focus on specific topics (e.g., work-family influences; remote supervision; wellness resource use; clinical worker burnout).

In the following sections, we describe the methods used to collect and analyze the data, present the distribution and representativeness of our sample, demonstrate our results by demographic group and point to potential options for amelioration, and outline the next steps for research and practice.

Methods

We conducted a web-based survey of University of Iowa employees (faculty, staff, and postdocs). Participants were recruited by an email invitation sent to 24,889 individuals on May 20, 2020. The email contained a public link that directed individuals to a voluntary, anonymous survey. A single reminder email was sent out two weeks later. Data collection was closed on June 27, 2020.

The survey, conducted in response to the Covid-19 pandemic, was designed to be completed in under 15 minutes. The 195-item questionnaire survey was designed by

subject matter experts and included validated scales for constructs where available and with the overall goal of evaluating self-assessed perceptions, attitudes, and behaviors in response to the COVID-19 pandemic. Demographic questions included age, race, ethnicity, gender, sex, as well as the

number of children and other adults living in the household. Questions pertaining to work addressed current work status as well as the work status of other adults in the household (e.g., working at home, designated essential worker, not working, clinical work). Those working in a clinical setting were asked if they had cared for patients with Covid-19. All participants were asked if they had been tested or diagnosed with Covid-19.

Well-being was assessed by questions asking about overall well-being, as well as financial, physical, mental, and social well-being. Changes in well-being were assessed by asking participants to rate their well-being prior to Covid-19 restrictions compared to their well-being today. Participants were also asked to rate their stress levels about childcare, home schooling, care for other relatives, having access to food and other supplies, being infected or having friends or family being affected, keeping their job, and their personal finances and their financial security in retirement.

Specific questions were used to assess conflict between work and family activities and the support employees receive from their supervisor. Employees working remotely were asked about their work environment at home (e.g., type of equipment available, whether they have a shared space) and the struggles and benefits of working remotely. All employees were asked if they have experienced any pain or discomfort (i.e., back/shoulder pain, neck pain, pain in their hand, elbow or wrist). Clinical employees working onsite were asked about burnout. The Depression, Anxiety and Stress Scale (DASS) was used to assess negative emotional states of depression, anxiety and stress among all employees.

Based on input from Human Resource representatives, items were added to the survey to assess the abilities of supervisors of remote workers to effectively manage remote workers, provide feedback, set expectations, and assess performance.

Participants were also asked about University of Iowa resources that they have used during this time. These include the Employee Assistance Program, a virtual visit with a medical provider, attending a financial wellness webinar, participating in web-based worksite challenge events to encourage healthy behaviors, one-to-one session with a health coach, mindfulness practice sessions, online fitness classes, web-based resources on resilience, mindfulness or other health related topics. UI Health care employees were also asked about their use of the 24/7 Mental Health Hotline from the UIHC Department of Psychiatry. All employees were also asked about changes in diet or exercise habits during the COVID-19 restrictions.

Statistical Analyses

Differences for demographic variables with two levels (e.g., sex) were calculated using t-tests, while variables with more than two levels (e.g., race/ethnicity) were calculated with a one-way ANOVA (significantly different means are underlined and bolded in the tables below).

To examine the degree to which potential predictors affected wellness outcomes differentially between demographic groups, we used a stepwise regression algorithm that included or excluded specific variables based on its statistically significant relationship with each outcome.

Sample

Our final sample consisted of 6,297 participants (25% response rate: 22 individuals did not provide responses to the well-being outcomes and 793 duplicate responses were omitted). Participants were equally drawn from various job types, schools, and age groups. Fifty percent of respondents were Professional and Scientific Staff (P&S) and 37% of participants indicated they worked in a clinical capacity. The only variables with a single majority group were race (88% White, 4% Asian, 1% Black, .28% American Indian, .1% Pacific Islander, 1.2% Other, 1.4% two or more races, and 2.89% no response) and sex (64% female, 22% male, .3% Intersex, 14% no response).

Well-being Related Outcomes by Work Type, Sex, and Race/Ethnicity

Onsite clinical workers were significantly worse off than their non-clinical and remote counterparts across many well-being outcomes. Onsite workers in general reported significantly lower responses on professional fulfillment scales than remote workers. Onsite clinical workers reported worse emotional states for depression, anxiety, and stress. Non-clinical onsite workers had the second highest scores, followed by remote workers. This same pattern was seen with overall well-being: onsite clinical workers reported lower well-being than onsite non-clinical workers, who reported lower well-being than remote workers. Clinical onsite workers also reported significantly higher emotional exhaustion, a key component of job burnout, than other workers.

Table 1. Mean values of wellness and health across work groups.

	*Overall Well-Being (Range: 1-5)	*Professional fulfillment (Range: 1-5)	**Emotional Exhaustion (Range: 1-5)	**Depression/Anxiety/Stress (Range: 1-4)
Onsite clinical	2.40	3.24	2.54	1.54
Onsite non-clinical	2.47	3.21	2.33	1.49
Remote	2.69	3.30	2.27	1.44

* Higher scores equal better wellness and professional fulfillment.

** Higher scores equal worse emotional exhaustion and depression/anxiety/stress

Men were somewhat overrepresented in onsite non-clinical roles, and women in onsite clinical roles compared to the actual numbers of faculty and staff in those roles. Younger workers were also more likely to be working in onsite clinical roles than in non-clinical or remote positions.

Males and Females

Women reported significantly worse emotional states (depression, anxiety, and stress) than men (1.50 vs. 1.46) and significantly higher emotional exhaustion (2.41 vs. 2.26), but there were no differences between men and women in overall well-being or professional fulfillment scores.

Race/Ethnicity

There were few significant differences among racial and ethnic groups at the university on well-being outcomes. To run comparisons, we looked at six subgroups with large enough samples to

examine: White Hispanic, multiracial Hispanic, White non-Hispanic, Asian non-Hispanic, Black non-Hispanic, and multiracial non-Hispanic. The only patterns observed among our participants were that Asian employees reported higher professional fulfillment than White non-Hispanic respondents, and lower emotional exhaustion than Black or multiracial non-Hispanic respondents. Asian employees also reported lower emotional states (depression, anxiety, and stress scores) than multiracial non-Hispanic employees.

Other demographic analyses: age and children in the home

When comparing age groups, the well-being-related impact of COVID-10 appears to be largely detached from the reported risk associated with contracting it. According to the CDC, those aged 55-64 were 41 times more likely to die from COVID-19 than those

aged 15-34 (CDC figures from January 22-May 30, 2020⁴). Yet, across nearly every indicator of health and wellness, the youngest age group reported significantly worse well-being-related scores than the oldest survey participants. Participants over 40 reported higher well-being and professional fulfillment, and lower emotional exhaustion and worse emotional states (depression, anxiety, and stress) than those under 40. The one exception to this pattern was that employees over age 70 reported worse emotional states (depression, anxiety, and stress) than their 40-69 year old counterparts.

Having children living at home did not have a broad effect on well-being outcomes when compared to individuals with no children or adult children. Those with children at home reported significantly higher emotional exhaustion, but not higher depression, anxiety, stress or lower well-being and professional fulfillment. In examining the age of youngest child <18 at home, we find that, the youngest child at home was <3 for 28% of respondents, preschool age for 13%, elementary school for 30%, middle school for 11%, and high school age for 18%. Though professional fulfillment was not affected by the age of one's children, those whose youngest children were high school aged reported significantly higher overall well-being. Having a high school aged child resulted in significantly better emotional states (depression, anxiety, and stress) for respondents compared to those with younger aged children. This effect was greatest when comparing those with the youngest child in high school to those with having a preschooler aged child at home. Additionally, the younger the youngest child, the greater emotional exhaustion that was reported.

Understanding potential causes

Using stepwise regression, we identified the degree to which certain variables contributed to respondents' overall well-being. We examined the potential effects of:

- Mental, physical, financial, and social well-being
- Healthy eating habits and exercise regimens
- Being happy at work
- Stress from childcare, missed work, homeschool
- Work-family conflict

Onsite clinical workers who came in contact with the greatest number of patients had the lowest overall well-being scores. Expectedly, a primary contributor to on-site clinical worker emotional exhaustion was contact with patients who have tested positive for COVID-19. These workers were also strongly affected by their work interfering with their family responsibilities. In fact, compared to the negative effect of coming in contact with patients who had tested positive for COVID-19, the effect of work-family conflict on emotional exhaustion was six times more negative (per linear regression effects). Onsite clinical workers also reported that their current work environment has resulted in less connection and less empathy with both patients and colleagues.

Among younger individuals (ages 20-29), specific evaluations of mental and physical well-being (and to a lesser extent social well-being) were significant contributors to their general self-assessment of “overall well-being”. On average, these respondents indicated that they were “somewhat worse” in terms of their mental and physical well-being as a result of COVID-19 compared to older age groups. Younger respondents’ decline in physical well-being was also associated with a reduction in self-reported healthy eating habits and regular exercise regimens since the start of the pandemic. Among younger respondents lowered mental well-being was also associated with being less happy at work.

Though those ages 30-39 suffered a comparable decrease in overall well-being due to the pandemic, probing revealed that, contrary to our youngest respondents, decreases in well-being among those ages 30-39 was primarily associated with increased stress in managing childcare. This is consistent with demographic differences between the groups: 62% percent of respondents aged 30-39 had children at home compared to only 14% of respondents aged 20-29.

Overall Impacts on Well-being

As with Time 1, we used stepwise regression to examine the degree to which certain variables contributed to participants’ overall well-being. We examined the potential effects of:

- Diet and exercise regimens
- Work-family conflict
- Fear of COVID infection
- Workload changes
- Financial stress and job security
- Care for elderly parents

Overall, we found that the strongest predictors of well-being were increased workload and conflict from work interfering with family. These effects were similar for predicting emotional states (depression, anxiety, and stress), but the effects were less strong. The strongest contributor to professional fulfillment and overall well-being was conflict from work interfering with family. Additionally, emotional exhaustion was also strongly associated with poorer diet and less exercise.

Among onsite clinical workers, replicating our Time 1 results, conflict from work interfering with family was the largest contributor to lower overall well-being, greater emotional exhaustion, and less professional fulfillment. Fear of infection was also a major contributor to greater emotional exhaustion. However, at Time 2 we found that the influence of the conflict from work interfering with family on emotional exhaustion was twice as great as the fear of infection. Workload increases also contributed to greater emotional exhaustion.

For remote workers, workload and conflict from work interfering with family contributed to worse overall well-being. Less exercise and a poorer diet were associated with greater emotional exhaustion and overall well-being for remote workers.

Finally, workers under 40 reported worse well-being than other age groups which is similar to Time 1. However, these age differences were less stark at Time 2 compared to Time 1. Conflict from work interfering with family was most strongly associated with greater emotional exhaustion among workers under 40, but increased workload was also critical. We also found that poor diet also contributed to more emotional exhaustion among these younger participants. This may also be a result of increased stress.

Practical Implications

Survey results indicate the negative impact the COVID pandemic has had on the well-being of University of Iowa employees. Certain demographic groups appear to be at higher risk: younger employees, parents of young children, and onsite clinical workers. Efforts should target the unique needs of these groups.

Future analyses

Additional surveys will track participants across three time periods (September, November, and February). We will continue to examine the prevalence and predictors of higher anxiety, depression, and burnout.

We are creating short topical reports for key stakeholders who are interested in the well-being of specific employee groups (e.g., work-family influences; remote supervision; wellness resource use; clinical worker burnout) and will host University-wide webinars on special topics related to our findings. You can find additional resources here <https://hwc.public-health.uiowa.edu/ui-employee-well-being-survey/>.

References

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