

# *Rapid Transition to Remote Work*



# **Rapid Transition to Remote Work during COVID-19:** **A Study of Predictors of Employee Well- Being and Productivity**

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## **Executive Summary**

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## Background

The COVID-19 pandemic forced much of the country's workforce into remote work arrangements, but science-based evidence regarding what makes remote work productive and sustainable is limited. In this executive report, we summarize key findings based on data from 498 full-time employees across a number of different jobs and industries who were working remotely during the response to COVID-19 but were not doing so previously.

Questions that drove our research:

1. Generally speaking, which variables are most predictive of people's adjustment to remote work, perceived stress during remote work, and job performance during remote work?
2. Which daily experiences, attitudes, emotions, and behaviors are the most predictive of daily well-being and performance?
3. What role do specific technologies play in remote work effectiveness?

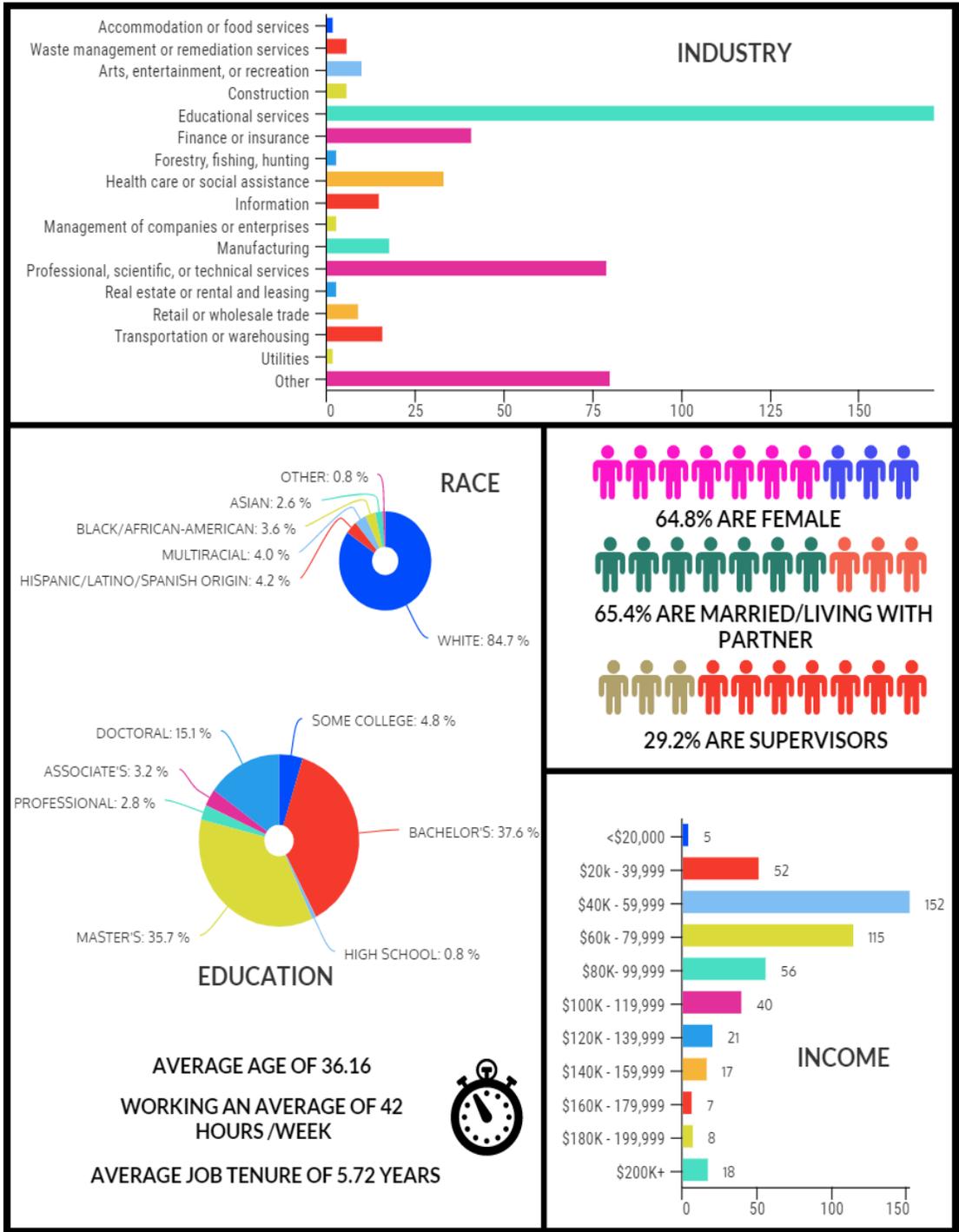
## About Our Methodology

Eligible participants were employees in the U.S. who worked at least 32 hours per week and had transitioned to 100% remote work from a job that was primarily (>90% of hours) not remote before COVID-19. After determining eligibility, 498 participants completed the one-time Phase 1 survey.

The Phase 2 part of the study then began the following week and lasted 4 weeks. The 498 participants received a daily survey everyday Monday through Friday, which asked them specific questions about that day. They received a weekly survey on Saturday, which asked them to reflect on the full week's events. The final Saturday of the study participants completed an "end of study" survey that asked them to reflect on the full study period.

The study took place between 4/27/20 and 6/13/20. In context, the majority of workplaces shifted to remote work around mid-March when a national emergency was declared.

# ABOUT OUR STUDY PARTICIPANTS



## Brief Summary of Overall Findings

Overall, workers adjusted well to remote work during COVID-19.

Consistent predictors of remote work adjustment were feelings of social isolation at work and the nature of one's home workspace (i.e. whether it was comfortable and conducive to productivity).

Workers reported experiencing a good deal of ergonomic strain (neck, back, and wrist pain).

Specific aspects of the remote workspace that seemed to matter most for job performance were having an external keyboard, a quiet space, a true desk, and an adequately-sized monitor.

The most consistent predictors of daily performance and well-being were technology, daily job-related information sharing, feelings of social isolation at work, and length of lunch breaks.

Workers reported an increase in the use of virtual meeting platforms, virtual private networks (VPN), and external equipment (e.g., webcam). Findings indicate that the same technology can be both conducive to productivity and a source of frustration (e.g., Zoom).

# QUESTION ONE

## Highlights of Findings for Question 1:

*Which variables are most predictive of employees' adjustment to remote work, stress levels during remote work, and job performance during remote work?*

The table below shows all variables that were included in the Phase I baseline survey of the study. An “x” in the first column signifies a significant predictor of adjustment to remote work, those with an “x” in the second column were significant predictors of stress levels during remote work, and those with an “x” in the third column were significant predictors of job performance during remote work. Those with no “x”'s were not significant predictors of any of the three outcomes.

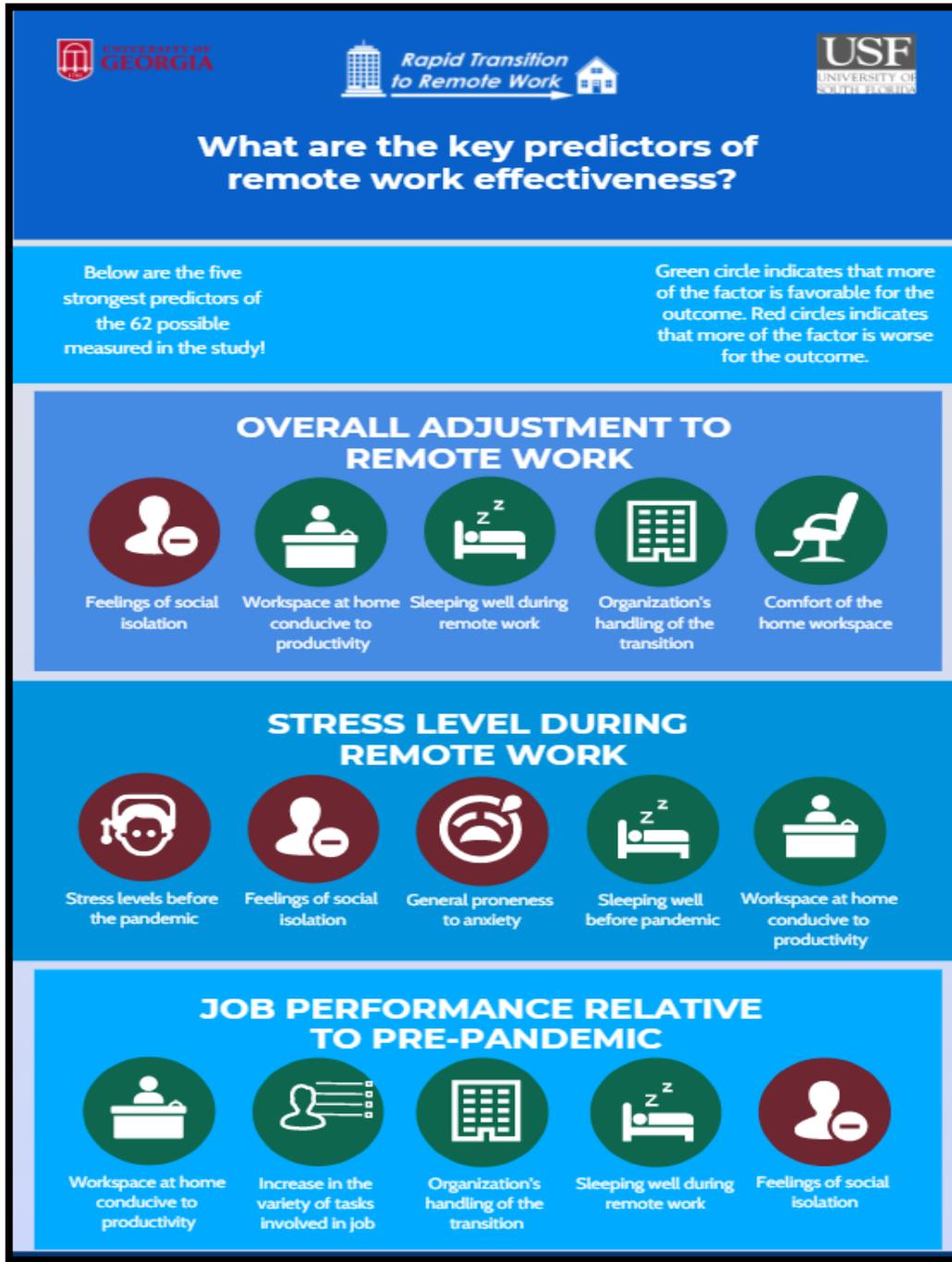
| Aspect of Work Before Transition        |      |    | Aspect of Non-Work Before Transition |      |    | Aspect of the Transition Process        |      |    | Aspect of Work After Transition  |      |    | Aspect of Non-Work After Transition      |      |    | Individual Difference Variables       |      |    | Demographics                   |      |    |
|---|------|----|--------------------------------------|------|----|---|------|----|----------------------------------|------|----|--|------|----|---------------------------------------|------|----|--------------------------------|------|----|
| Adj.                                    | Str. | JP | Adj.                                 | Str. | JP | Adj.                                    | Str. | JP | Adj.                             | Str. | JP | Adj.                                     | Str. | JP | Adj.                                  | Str. | JP | Adj.                           | Str. | JP |
| Task interdependence                    |      |    | Exercise frequency                   |      |    | Difficulties with tech                  |      |    | Job-related information exchange |      |    | Division of childcare with spouse*       |      |    | Conscientiousness                     |      |    | Age                            |      |    |
|   |      |    |                                      |      |    | x                                       | x    | x  | x                                | x    | x  | x  |      |    |                                       |      |    | x                              |      |    |
| Communication frequency with supervisor |      |    | Sleep quality                        |      |    | Assistance from org. in setting up tech |      |    | Supervisor poor mgmt. style      |      |    | Family intruding on work*                |      |    | General comfort with technology       |      |    | Marital status                 |      |    |
|   |      |    |                                      | x    |    |   |      |    |                                  |      |    | x  | x    | x  | x                                     |      |    | x                              | x    |    |
| Communication frequency with coworkers  |      |    | Sleep quantity                       |      |    | Organizational communications           |      |    | Adequate supervisory support     |      |    | Spousal respect of boundary preferences* |      |    | Home-to-work segmentation preferences |      |    | Percentage of household income |      |    |
|   |      |    |                                      | x    |    |   |      |    |                                  | x    |    |  |      |    |                                       |      |    |                                |      |    |
| Frequency of face-to-face communication |      |    | Perceived stress                     |      |    | How smoothly org. handled transition    |      |    | Work criticality to society      |      |    | Change in alcohol consumption            |      |    | Work-to-home segmentation preferences |      |    | Gender                         |      |    |
|   |      |    |                                      |      |    | x                                       | x    | x  |                                  |      |    |  |      |    |                                       |      | x  |                                |      |    |
| Job performance                         |      |    |                                      |      |    | Org's remote work mentality             |      |    | Work criticality to colleagues   |      |    | Sleep quality                            |      |    | Trait anxiety                         |      |    | # adults in household          |      |    |
|   |      |    | x                                    |      |    |   |      | x  |                                  | x    |    |  |      | x  | x                                     | x    |    | x                              |      |    |

# QUESTION ONE

| Aspect of Work Before Transition |      |    | Aspect of Non-Work Before Transition |      |    | Aspect of the Transition Process |      |    | Aspect of Work After Transition |      |    | Aspect of Non-Work After Transition |      |    | Individual Difference Variables |      |    | Demographics                    |      |    |
|----------------------------------|------|----|--------------------------------------|------|----|----------------------------------|------|----|---------------------------------|------|----|-------------------------------------|------|----|---------------------------------|------|----|---------------------------------|------|----|
| Adj.                             | Str. | JP | Adj.                                 | Str. | JP | Adj.                             | Str. | JP | Adj.                            | Str. | JP | Adj.                                | Str. | JP | Adj.                            | Str. | JP | Adj.                            | Str. | JP |
| Adequate supervisory support     |      |    |                                      |      |    | Remote work expectation setting  |      |    | Work criticality to customers   |      |    | Sleep quantity                      |      |    | Self-discipline                 |      |    | Number of children in household |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    |                                 |      |    | x                                   | x    |    | x                               | x    | x  |                                 |      |    |
| Job-related info. exchange       |      |    |                                      |      |    |                                  |      |    | Work flexibility                |      |    | Perceived stress                    |      |    |                                 |      |    | Income                          |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    |                                 |      |    |                                     |      |    |                                 |      |    |                                 |      |    |
| Job demands                      |      |    |                                      |      |    |                                  |      |    | Job demands                     |      |    |                                     |      |    |                                 |      |    | Job tenure                      |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    |                                 | x    | x  |                                     |      |    |                                 |      |    |                                 |      |    |
| Job satisfaction                 |      |    |                                      |      |    |                                  |      |    | Social isolation                |      |    |                                     |      |    |                                 |      |    | Org. tenure                     |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    | x                               | x    | x  |                                     |      |    |                                 |      |    |                                 |      |    |
| Work engagement                  |      |    |                                      |      |    |                                  |      |    | Comfortable workspace           |      |    |                                     |      |    |                                 |      |    | Education                       |      |    |
|                                  | x    |    |                                      |      |    |                                  |      |    | x                               | x    |    |                                     |      |    |                                 |      |    |                                 |      |    |
| Work-nonwork balance             |      |    |                                      |      |    |                                  |      |    | Productive workspace            |      |    |                                     |      |    |                                 |      |    | Supervisor status               |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    | x                               | x    | x  |                                     |      |    |                                 |      |    |                                 |      |    |
| Burnout                          |      |    |                                      |      |    |                                  |      |    | Work hours                      |      |    |                                     |      |    |                                 |      |    | Eldercare                       |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    |                                 |      |    |                                     |      |    |                                 |      |    |                                 |      |    |
| Belongingness at work            |      |    |                                      |      |    |                                  |      |    | Change in task variety          |      |    |                                     |      |    |                                 |      |    |                                 |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    |                                 |      |    |                                     |      |    |                                 |      |    |                                 |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    | Supervisory trust               |      |    |                                     |      |    |                                 |      |    |                                 |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    | x                               |      |    |                                     |      |    |                                 |      |    |                                 |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    | Job insecurity                  |      |    |                                     |      |    |                                 |      |    |                                 |      |    |
|                                  |      |    |                                      |      |    |                                  |      |    |                                 | x    |    |                                     |      |    |                                 |      |    |                                 |      |    |

# QUESTION ONE

This infographic shows the top 5 strongest predictors for each outcome.



## Summary of Key Factors that Matter and Recommendations from Question 1

### Supervisor Support & Feeling Trusted by Supervisor

Train supervisors how to convey support and trust in remote workers.

### Self-Discipline & Trait Anxiety

Provide employees training on goal-setting and stress reduction.

### Organizational Culture

Make preparation to go remote in crisis situations a part of the organization's strategic plan.

### Work-Family Challenges

Recognize worker family situations and work with them to identify solutions while school and childcare centers remain fully or partially closed due to COVID-19.

### Characteristics of Work (e.g. Job Demands, Information Exchange)

Provide technology that allows employees to exchange information freely and quickly.

### Sleep Quality

Advocate for effective sleep hygiene practices, such as unplugging from electronics 30-60 minutes before bed.

### Home Work Environment

Enable workers to establish home work stations that have a proper desk, comfortable chair, and office-quality computer equipment.

### Feeling Socially Isolated

Schedule remote social activities, coffee breaks, lunches, game hours, etc.

# QUESTION TWO

## Highlights of Findings for Question 2

*How do workplace and personal variables that can vary daily or weekly (frequency and nature of communication, interruptions, supervisor management behaviors, break-taking, knowledge sharing, and feelings of social isolation) relate to remote worker daily performance and well-being?*

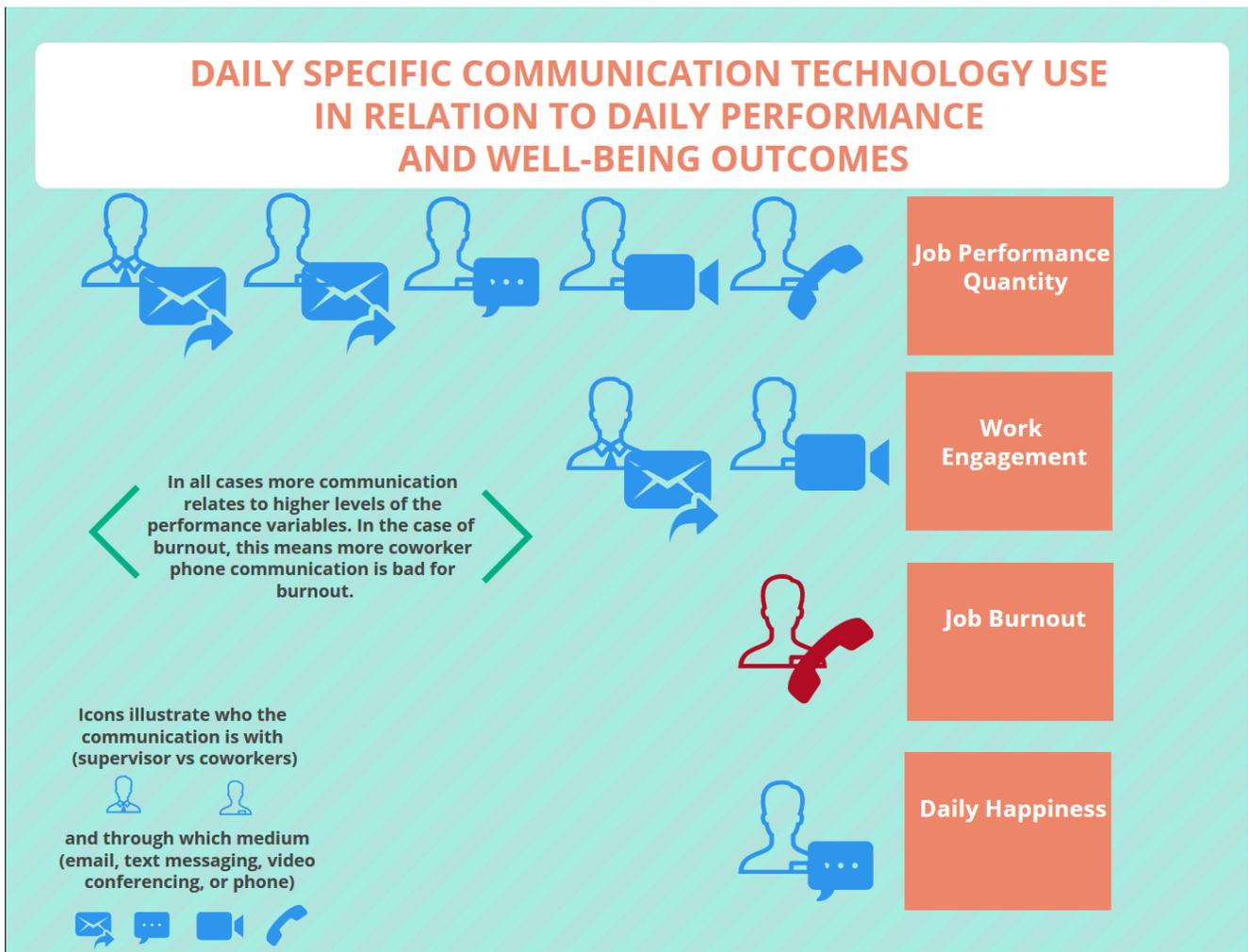
The table below shows all the variables (left column) that were examined on a daily basis in relation to daily performance and well-being outcomes (top row). “X”s indicate the three strongest predictors for each outcome. There was only one significant predictor of daily sleep quantity. Blue “X”s indicate a positive relationship (more of the predictor relates to higher levels of the outcome) whereas red “X”s are negative relationships (more of the predictor relates to lower levels of the outcome).

In general, a person performed best and had highest well-being on days when technology was perceived as more helpful, (s)he took shorter breaks, had more job-related info. exchange, and felt less socially isolated relative to an average day on all of these values.

|  | Daily Performance Quantity | Daily Performance Quality | Daily Engagement | Daily Burnout | Daily Happiness | Daily Sleep Quantity |
|--|----------------------------|---------------------------|------------------|---------------|-----------------|----------------------|
| Interruptions (sum of spouse, kids, and other)                             |                            |                           |                  |               |                 |                      |
| Tech facilitating productivity   | X                          | X                         | X                |               |                 |                      |
| Tech causing exhaustion  |                            |                           |                  | X             |                 |                      |
| Supervisor communication frequency (sum of e-mail, video, phone, and text) |                            |                           |                  |               |                 |                      |
| Coworker communication frequency (sum of all forms)                        |                            |                           |                  |               |                 |                      |
| Job-related info. exchange   |                            | X                         | X                | X             | X               |                      |
| Supervisor micromanagement   |                            |                           |                  |               |                 |                      |
| Feelings of social isolation   | X                          | X                         |                  | X             | X               | X                    |
| Lunch break length   |                            |                           |                  |               |                 |                      |
| Non-lunch break length   | X                          |                           | X                |               |                 |                      |

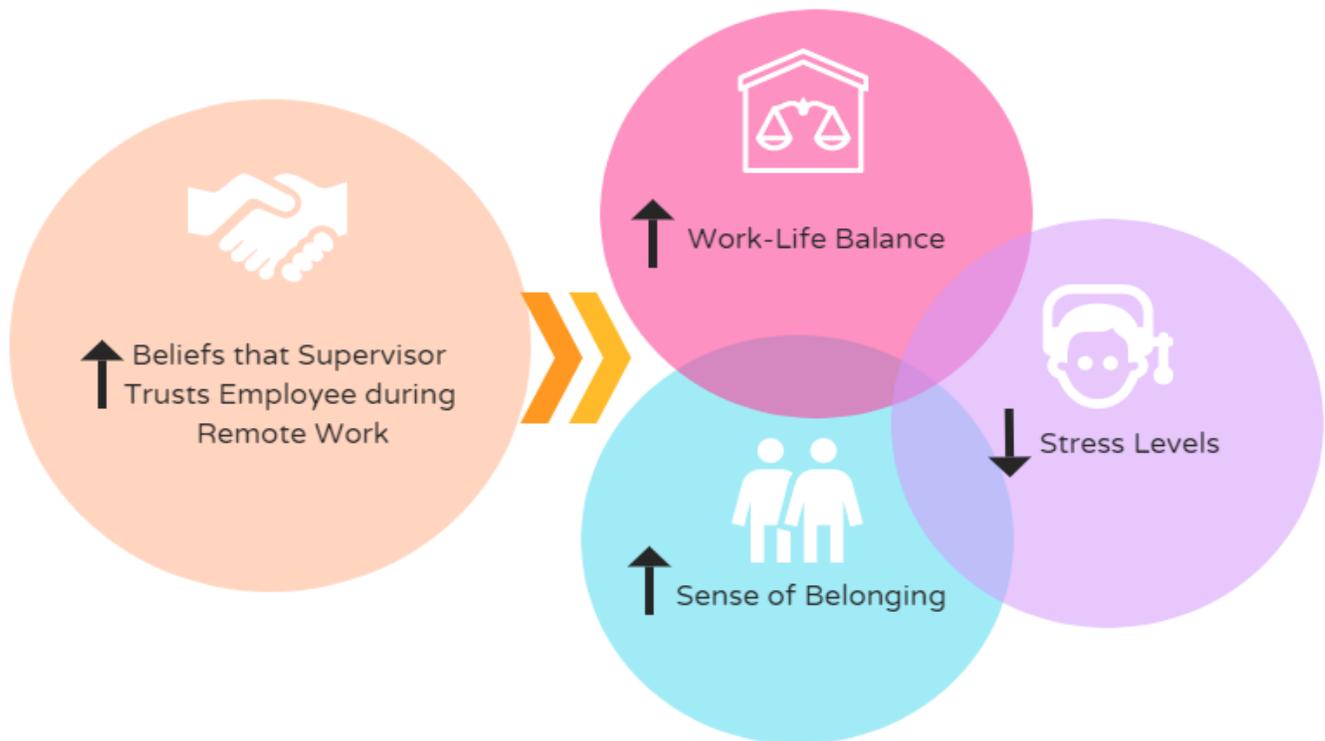
# QUESTION TWO

In addition to overall communication with supervisors and frequencies, we looked at communication by type of medium.



## QUESTION TWO

With our weekly data, we examined the relationship between belief that the supervisor trusts the employee during remote work and worker well-being.



Based on data from our Phase I survey and averages across our weekly survey data, we examined change in several health-related variables.



## Changes in Health Behavior and Stress



*Before remote work, participants exercised 3.58 times/week and then 3.04 times on average each week during the 4 week study period.*

| Period                             | Frequency |
|------------------------------------|-----------|
| Before Remote Work                 | 3.58      |
| Average Across 4 Week Study Period | 3.04      |



*Stress increased from before remote work to start of remote work, but the average decreased during 4 week study period (scored on a 1 to 5 scale; higher scores = more stress).*

| Period                             | Stress Score |
|------------------------------------|--------------|
| Before Remote Work                 | 2.33         |
| Start of Remote Work               | 2.76         |
| Average Across 4 Week Study Period | 2.22         |



*At the start of remote work, 42.7% of participants reported that they had increased their consumption of alcohol.*



| Alcohol     | Start of Remote Work | Average Across 4 Week Study Period |
|-------------|----------------------|------------------------------------|
| Decreased   | 9.50%                | 23.50%                             |
| Stayed Same | 47.80%               | 66%                                |
| Increased   | 42.70%               | 10.50%                             |

## Summary of Key Factors that Matter and Recommendations from Question 2

### Daily Performance and Well-Being Predicted by Technology and Job-Related Information Exchange

- \* Ensure technology used fits employee needs
- \* Offer technology training
- \* Use technology that facilitates information exchange

### Day-to-day Feelings of Social Isolation Matter

- \* Social isolation needs to be considered on a day-to-day basis in addition to holistically
- \* Communicate the importance of social isolation to employees so they can proactively be aware of detrimental effects and engage in behaviors to combat it.

### Perception of Supervisor Trust Related to Well-Being

- \* Communicate to workers trust and support

### Less Physical Activity

- \* Per CDC, encourage 150 minutes/week of moderate intensity exercise
- \* Avoid scheduling meetings early/late in the day to enable workouts

### Increased Alcohol Consumption

- \* Provide workers with stress management tools

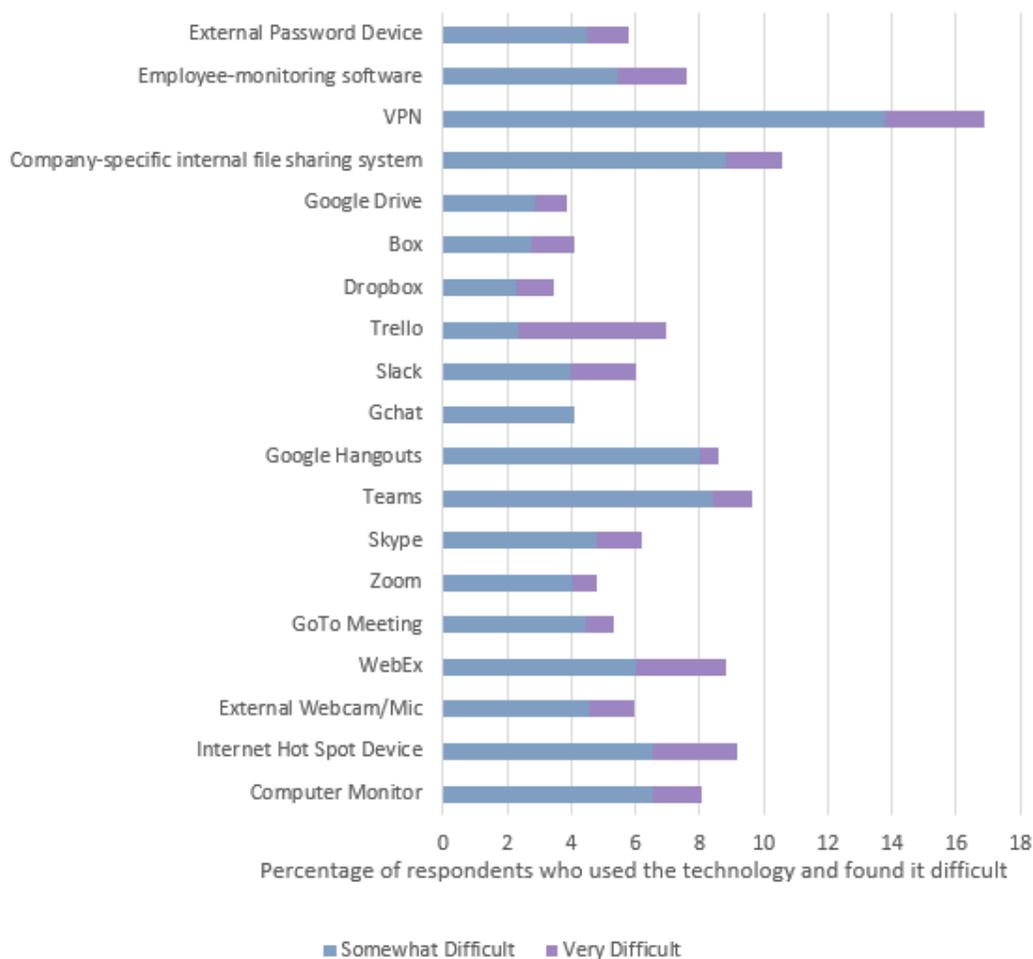
## Highlights of Findings for Question 3

*What role do specific technologies play in remote work effectiveness?*

### Technology Use Challenges

Percentages indicate the percent of people who used that technology and indicated having a somewhat difficult or very difficult time using it. Other response options (not depicted) were “very easy”, “somewhat easy”, and “neither easy nor difficult”.

**Difficulty of Using Specific Tech While Working Remotely**

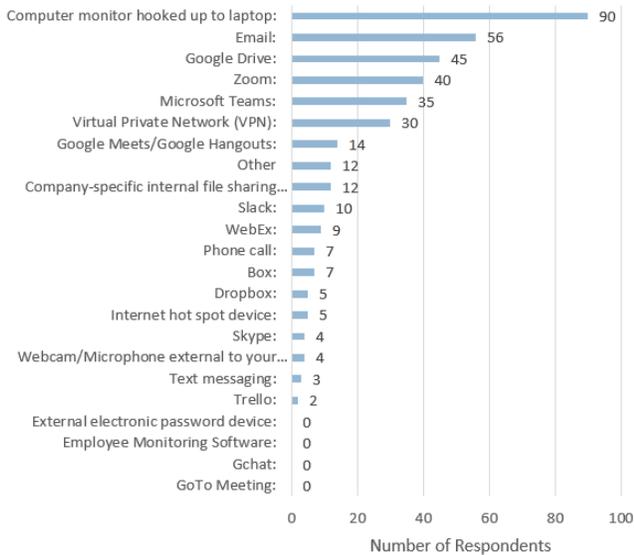


# QUESTION THREE

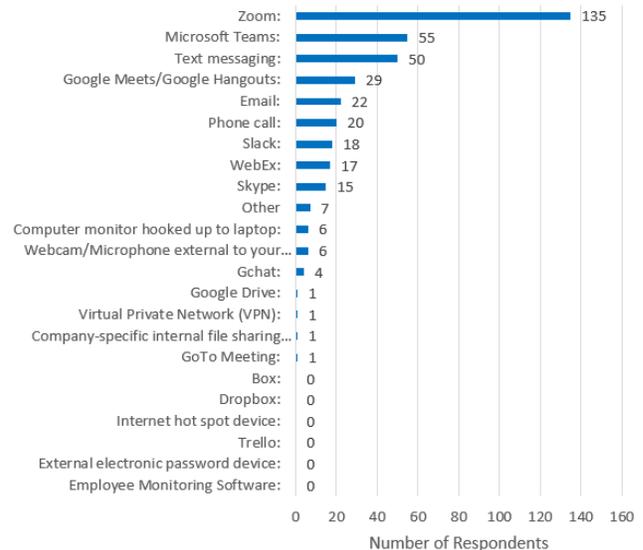
## Technologies Rated as Best for Productivity, Best for Socialization, and Most Frustrating

Zoom, Microsoft Teams, and e-mail top the lists as best for productivity and social connection but are also the most frustrating. This could be in part a function of the high use of these technologies. External monitors seem particularly important for productivity. Texting is also a key to social connection. VPNs are frustrating!

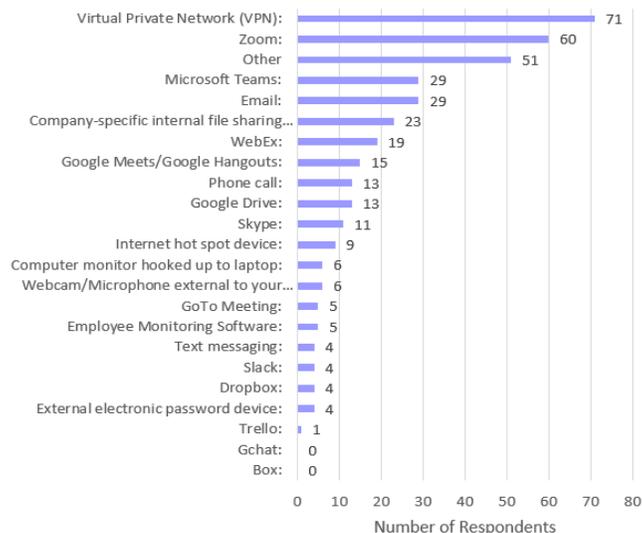
Best Technology for Productivity



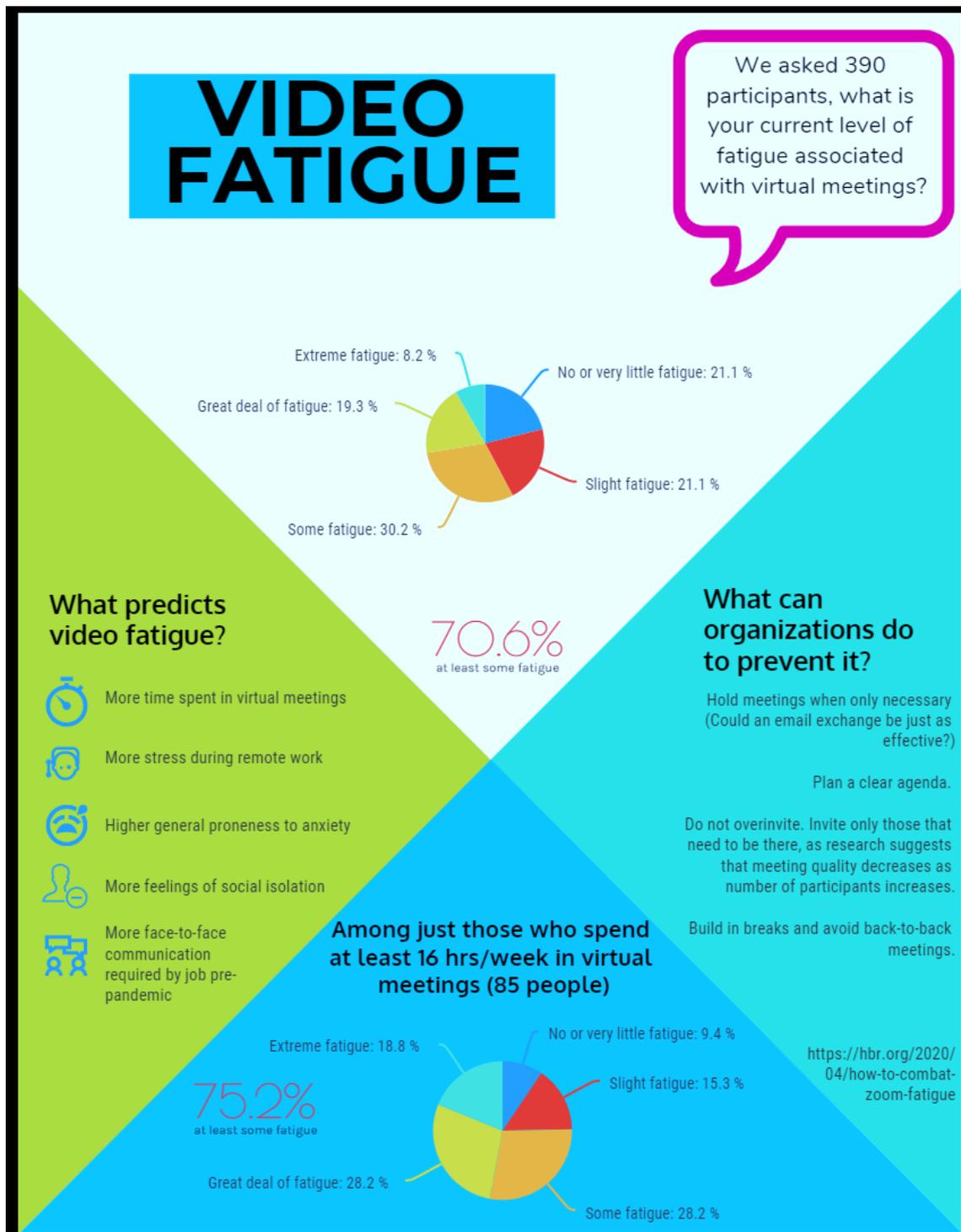
Best Tech for Social Connection



Most Frustrating Technology



## Video Fatigue – Frequency, Predictors, and Recommendations



## Summary of Key Factors that Matter and Recommendations from Question 3

### Technology Plays a Key Role in How Workers Experience Remote Work

- \* Regularly check in on employees with regard to technology challenges and needs
- \* Regularly provide technology assistance and upgrades/updates

### Technology Helps and Hinders

- \* VPN problems require particular attention because they serve as a significant source of frustration
- \* Find the balance between social connection and avoiding fatigue with video platforms

### Proper Equipment

- \* Ensure employees have desktop monitors and external keyboards
- \* Help workers set up ergonomically-sound work stations

## Highlights of Recommendations for Managers

*We asked participants at the end of the study to answer the following questions regarding advice for managers. We content-coded these responses, and the top 5 themes are displayed below.*

**Based on your remote work experience thus far, what advice would you give managers to...**

### ...promote remote employee productivity?

"Staying engaged and in communication with employees. As an employee under a supervisor who work very closely together, it's hard to be productive when the supervisor is unresponsive."

**Increase Communication**

**Flexibility and understanding**

"If employee output is the same or better in quality and quantity and they are meeting deadlines, why does it matter when/where?"

"Trust your team. Don't micromanage. Micromanaging means that either you didn't hire the right people, or you don't trust in your own ability to manage."

**Trust Employees More**

**Provide Clear Expectations**

"Give specific guidelines for what apps/platforms to use for work and set guidelines for how much work should be completed or how much time should be spent on work per week."

"Make sure employees have the technology they need (e.g. webcams, desktops/monitors, etc.)."

**Improve Resources**

### ...promote remote employee health and well-being?

**Encourage General Breaks**

"Understand employees need to step away from their computers. Working remotely puts pressure on employees to respond in even shorter periods of time – making typical breaks for things like lunch seem impossible.."

"Try to find ways to promote movement and fitness, perhaps by doing group fitness via Zoom or paying for subscriptions to fitness programs."

**Encourage Exercise**

**Check up on Employees**

"I would say check in, see how they're doing, talk to them like people and not just a tool or means to an end."

"Mostly just to be understanding that everyone's mental health needs different things to thrive, so one healthy employee's habits may not work for another employee."

**Flexibility and Understanding**

**Encourage Boundaries**

"Encourage employees to stick to a reasonable length work day. I found it hard to step away from the computer, as there was always more work to be done. Not physically 'leaving the office' made it hard to stop working."

## Conclusion

We followed new remote workers across a four-week period on a daily and weekly basis. Results of our research identify the predictors of adjustment to remote work, the daily challenges that remote workers faced, and the ways by which technology can be a tool for productivity and a source of frustration. As more organizations move toward long-term remote work arrangements, the findings can be used as a guide for organizations for establishing remote work arrangements that meet the needs of workers and the organization.

Read the full report to learn more. Download here:

<https://iwillugaresearch.wixsite.com/website/publications>

## Acknowledgements

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