

A blurred office scene with people working at desks with computers. In the foreground, a person is seen from the back, wearing a red and white polka-dot top, looking at a large computer monitor. The monitor displays a dashboard with various charts and graphs. A wooden pencil holder with several pencils sits on the desk next to the monitor. A green notebook is also visible on the desk. In the background, two other people are standing near a window, looking at a laptop.

DELOS INSIGHTS – APPLIED RESEARCH PROGRAM

WELL Post-Certification Survey Analysis Report

ASID

1152 15th St NW #910, Washington, DC

DelosTM
Innovate Well

ASID Washington DC

OVERVIEW

Thank you for your participation in the Delos Insights – Applied Research Program and your pursuit of research on the impact of the WELL Building Standard on your building occupants. The results of this survey will better inform our understanding of interventions in the physical work environment focused on human health and well-being as it relates to the implementation of the WELL Building Standard. As you review this report please consider that the findings are from a longitudinal comparison analysis of occupants perceptions of the physical work environment and health and well-being before and after working in a WELL-certified space. This report is not conclusive in nature, but is meant to illuminate the impact of the WELL Building Standard on occupants' experience in the physical work environment.



*To navigate this report,
please reference the star icon
below for key findings in each
section of the survey.*

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EXECUTIVE SUMMARY

How does the workplace environment impact employee health and well-being?

The Delos Insights – Applied Research Program investigated the impact of the WELL Building Standard™ as an intervention on perceptions of employee health and well-being at ASID headquarters in Washington, DC. ASID employees participated in the Building Wellness Survey™ by reporting on their satisfaction with their current workplace environment and workplace well-being, as well as absenteeism, presenteeism, and perceived physical and mental health states through the use of psychometrically validated scales. The Building Wellness Survey was administered prior to moving into the newly WELL Platinum-certified office and one year after the initial survey administration. Survey results were analyzed to determine differences in employees' perceptions about their space, well-being, productivity, and health across office space settings. Key findings from the ASID Building Wellness Survey™ study are found below:

- **Statistically significant improvements in all environmental conditions except water pre- to post-WELL Certification with greatest improvements in satisfaction for air quality, thermal comfort, access to nature, acoustics, physical comfort, and light**
- **Statistically significant improvements in all workplace well-being items pre- to post-WELL Certification**
- **Statistically significant improvements in productivity measures absenteeism and presenteeism pre- to post-WELL Certification**
- **Improved perceived mental and physical health scores (not significant)**

EXECUTIVE SUMMARY: ENVIRONMENTAL CONDITIONS

AIR QUALITY

During the pre-certification surveys, the average score was -0.82 (slightly dissatisfied) on a scale of -3 to +3, with 73% of respondents indicating dissatisfaction with stuffy/stale air, outdoor/exterior odors, cleaning product odor, and food odor. The office met 12 of the 18 applicable Optimizations for air quality during WELL Certification, including the following most relevant to providing fresh air and removing odors:

- 8: Healthy Entrance
- 13: Air Flush
- 17: Direct Source Ventilation
- 18: Air Quality Monitoring and Feedback
- 23: Advanced Air Purification

At post-certification, the mean satisfaction score rose to 2.68 (very satisfied), **increasing the proportion of employees satisfied with access to nature in the office by 110%.**

THERMAL COMFORT

During the pre-certification surveys, the average score was -1.74 (dissatisfied), with 73% of respondents indicating dissatisfaction with temperature and lack of thermostat access/control. Relevant to issues regarding temperature adjustment, Optimization 82: Individual Thermal Control was achieved during WELL Certification.

At post-certification the mean satisfaction score was 0.74 (slightly satisfied), **increasing the proportion of employees satisfied with workplace thermal comfort by 110%.**

ACCESS TO NATURE

During the pre-certification surveys, the average score was -1.05 (dissatisfied), with 58% of respondents indicating dissatisfaction with views to nature outside the building, lack of potted plants, lack of building features resembling natural environments, lack of interior design elements that elicit nature, and lack of a garden on site. The following Features relevant to enhancing employee access to nature were achieved during WELL Certification including:

- 88: Biophilia I
- 61: Right to Light
- 67: Exterior Active Design

At post-certification, the mean satisfaction score rose to 2.16 (very satisfied), **increasing the proportion of employees satisfied with access to nature in the office by 105%.**

EXECUTIVE SUMMARY: ENVIRONMENTAL CONDITIONS

ACOUSTICS

During pre-certification surveys, the average score was -1.26 (dissatisfied), with 79% of employees indicating dissatisfaction with lack of sound privacy, noise from other occupants, and exterior noise. All acoustics-focused Features in the Comfort Section were achieved during WELL Certification including the following:

- 74: Exterior Noise Intrusion
- 78: Reverberation Time
- 79: Sound Masking
- 80: Sound Reducing Surfaces
- 81: Sound Barriers
- 89: Adaptable Spaces

At post-certification, the mean satisfaction score rose to 1.26 (satisfied), **increasing the proportion of employees satisfied with workplace acoustical comfort by 92%.**

PHYSICAL COMFORT

During the pre-certification surveys, the average score was -0.63 (slightly dissatisfied), with 58% of respondents indicating dissatisfaction with uncomfortable furniture and lack of adjustment in workspace ergonomics. Optimizations achieved during WELL Certification most relevant to providing a comfortable and adjustable workspace include:

- 71: Active Furnishings
- 89: Adaptable Spaces

At post-certification, the mean satisfaction score rose to 2.3 (very satisfied), **increasing the proportion of employees satisfied with workplace physical comfort by 81%.**

LIGHT

During the pre-certification surveys, the average score was -0.16 (slightly dissatisfied), with 47% of respondents indicating dissatisfaction with light intensity throughout the day, lack of lighting control in the building, and too little natural daylight. The following Optimizations most relevant to providing adequate natural daylight, lighting control, and consistent light levels were achieved during WELL Certification:

- 59: Surface Design
- 60: Automated Shading and Dimming Control
- 61: Right to Light
- 62: Daylight Modeling

At post-certification, the mean satisfaction score rose to 2.58 (very satisfied), **increasing the proportion of employees satisfied with workplace lighting by 71%.**

EXECUTIVE SUMMARY: WELL-BEING, PRODUCTIVITY, AND HEALTH

WORKPLACE WELL-BEING

Employee workplace well-being was measured by calculating an inventory of responses based on employees' attitudes about how their workplace supports their well-being, pride in the workplace, and motivation to do good work. Significant improvements in agreement were found pre- to post-certification for the following statements:

- The workplace energizes me
- The workplace is conducive to my health and well-being
- The workplace supports my thinking and analytical work
- I look forward to coming to work
- I wish I worked in another building (negatively worded)
- The workplace makes me proud to be a part of this organization
- The workplace supports my ability to retreat and have private conversations
- It is easy to work collaboratively with others
- The workplace creates an opportunity for chance meetings helping us to reveal opportunities
- The organization cares about how the physical work environment impacts mental health

ABSENTEEISM AND PRESENTEEISM

Employees were asked to report their productivity and job performance over the past four weeks. Employee absenteeism and presenteeism scores were calculated using a psychometrically validated inventory.

- **Absenteeism scores improved by 19% ($p < .05$) from pre- to post-certification.** The scores indicate that, on average, ASID employees **work 16% more than expected by their employers** in the WELL-certified space.
- Presenteeism scores indicate how efficiently employees use their time at work. **These scores increased by 16% ($p < .05$) with employees reporting that, on average, they are working at 90% of their possible job performance in the WELL-certified space.**

PERCEIVED MENTAL AND PHYSICAL HEALTH

Employees' perceptions of their mental and physical health states were calculated using a psychometrically validated inventory. Although both perceived mental and physical health scores were higher when employees reported in the WELL-certified space, these differences were not statistically significant.

PROJECT SUMMARY

Name ASID
Address 1152 15th St NW #910, Washington, DC

SURVEY SUMMARY PRE-CERTIFICATION

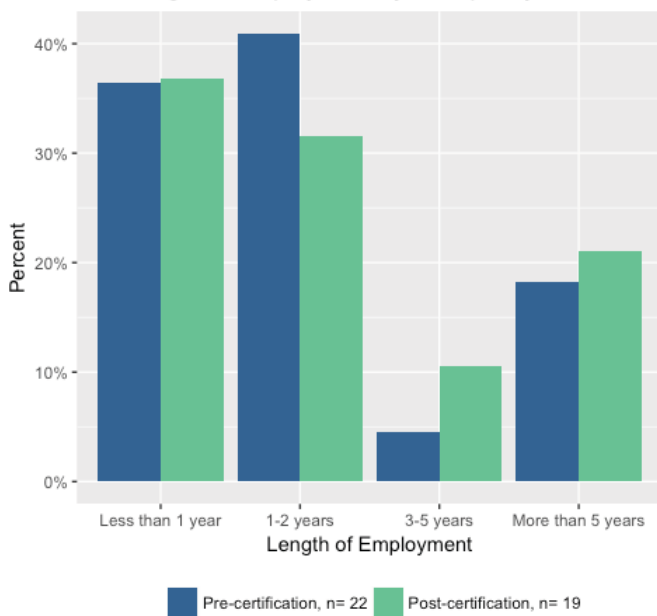
Response Rate 22/29 (76%)
Unique IDs 22 ID numbers submitted
Duration 15 days
Notes Lunch and learn introduced ASID employees to the Delos Applied Research Program and the Building Wellness Survey. The Cornell sociometric badge IDs were used to track responses.

SURVEY SUMMARY POST-CERTIFICATION

Response Rate 19/29 (66%)
Unique IDs 18 ID numbers submitted
Duration 15 days
Notes Six matched pairs were identified from pre- to post-certification surveys, which was insufficient for repeated measures analysis. Seven participants were dropped from longitudinal analysis since they were new employees and had not participated in the pre-certification survey resulting in uneven sample sizes.

DEMOGRAPHICS AND BACKGROUND

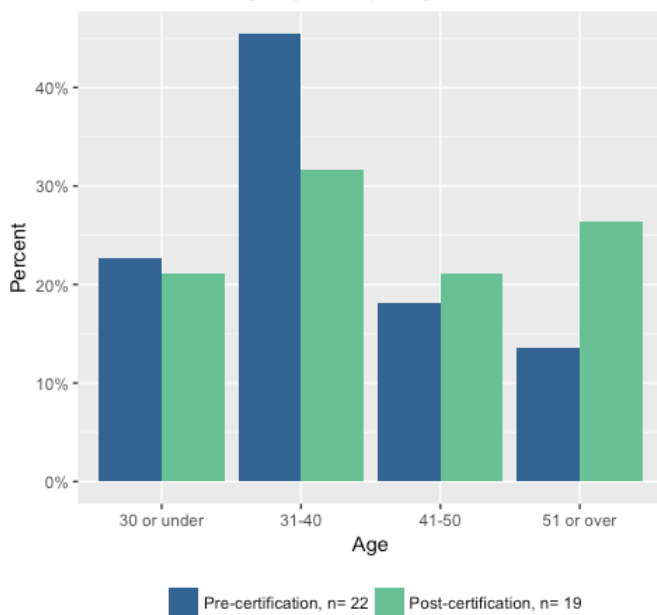
Length of Employment by Occupancy Status



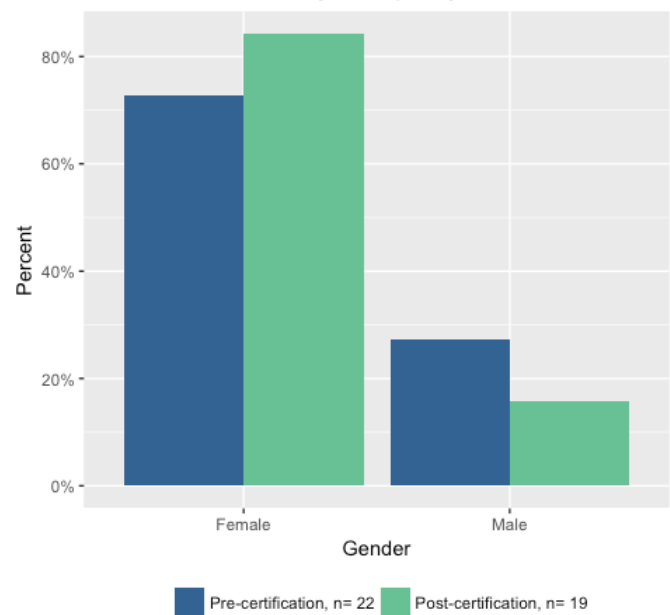
Hours Worked Weekly in Building by Occupancy Status



Age by Occupancy Status



Gender by Occupancy Status



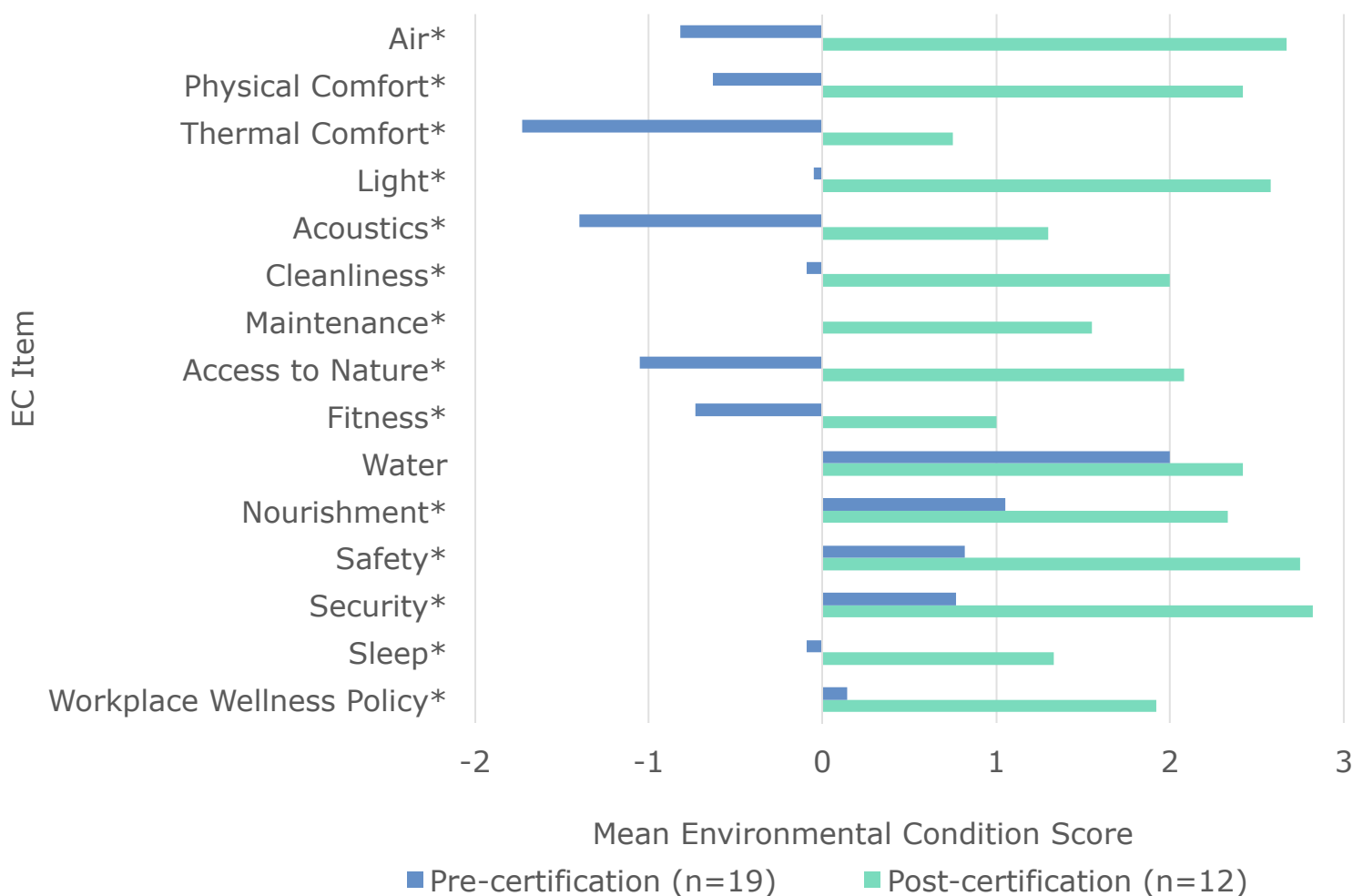
ENVIRONMENTAL CONDITIONS SUMMARY

Participants reported how satisfied they were with physical work environment features as a way to measure the impact of environmental conditions in the workplace.

Based on the level of occupant satisfaction, environmental conditions scores range from -3 to 3. Positive scores indicate satisfaction with a particular environmental condition, and negative scores indicate dissatisfaction.



Environmental Condition Satisfaction Scores by Occupancy Status



* Indicates a statistically significant difference ($p < .05$) between the pre-certification space and the post-certification space.



The most dramatically improved environmental condition satisfaction scores include:

- Air quality
- Thermal comfort
- Access to nature
- Acoustics
- Physical comfort
- Light

AREAS OF IMPACT

**AIR QUALITY**

- **73%** (16/22) of respondents reported being dissatisfied with workplace air quality in the pre-certification space
 - **100%** (n=16) of those dissatisfied also reported that the stuffy/stale air was also a problem
 - Of those dissatisfied, **75%** (n=12) of respondents cited odors as a problem. Main sources of odor include:
 - **67%** (n=8) Outdoor/exterior odors (e.g., car exhaust, smog, etc.)
 - **67%** (n=8) Cleaning products
 - **50%** (n=6) Food
- Satisfaction with air quality improved **110%** in the post-certification space

**THERMAL COMFORT**


- **73%** (n=16/22) of respondents reported being dissatisfied with their thermal comfort in the pre-certification space
- Key contributors to dissatisfaction:
 - **100%** (n=16) of those dissatisfied reported temperature
 - **81%** (n=13) of those dissatisfied reported lack of thermostat access/control
- Satisfaction with thermal comfort improved **110%** in the post-certification space

**ACCESS TO NATURE**


- Having access to nature throughout the day was very important to **68%** of respondents (n=13/19) while in the pre-certification space
- **58%** (n=11/19) of respondents reported being dissatisfied with their access to nature in the pre-certification space
 - Those dissatisfied reported the following as the best ways to improve access to nature in the workplace:
 - **100%** (n=11) Views to nature outside of the building
 - **91%** (n=10) Potted plants
 - **82%** (n=9) Building features that resemble natural environments (e.g., hard wood floors)
 - **73%** (n=8) Interior design elements that elicit nature
 - **64%** (n=7) Garden
- Satisfaction with access to nature improved **105%** in the post-certification space
 - **63%** of respondents (n=12/19) reported having access to nature throughout the day was at least 'moderately important' while in the post-certification space

AREAS OF IMPACT

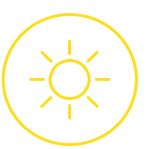
ACOUSTICS

- 
- **79%** (n=15/19) of respondents reported being dissatisfied with workplace acoustics in the pre-certification space
 - Key contributors to dissatisfaction:
 - **93%** (n=14) Lack of sound privacy (have conversations without others hearing)
 - **87%** (n=13) Noise from other occupants (e.g., phone calls, conversations)
 - **80%** (n=12) Exterior noise (e.g., noise coming from outside the building)
 - Satisfaction with workplace acoustics improved **92%** in the post-certification space

PHYSICAL COMFORT

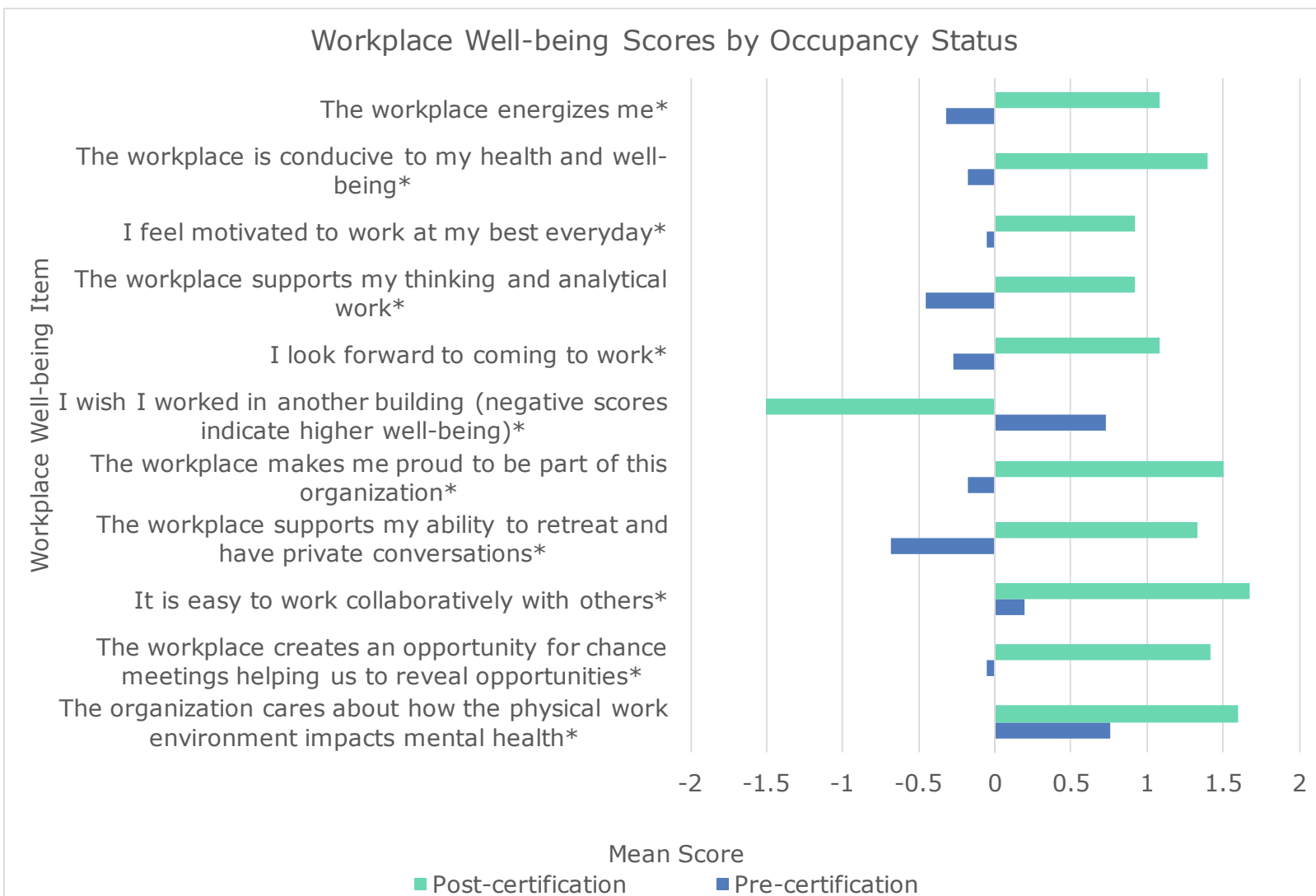
- 
- **58%** (n=11/19) respondents reported being dissatisfied with physical comfort in their workplace in the pre-certification space
 - Key contributors to dissatisfaction:
 - **100%** (n=11) Uncomfortable furniture
 - **91%** (n=10) Lack of adjustment in workspace ergonomics (desk height, monitor distance/angle)
 - Satisfaction with physical comfort improved **81%** in the post-certification space

LIGHT

- 
- **47%** (n=9/19) respondents reported being dissatisfied with the lighting in their workplace in the pre-certification space
 - Key contributors to dissatisfaction:
 - **67%** (n=6) Light intensity throughout the day
 - **56%** (n=5) Lack of control of lighting in the building
 - **56%** (n=5) Too little natural daylight
 - Satisfaction with light quality improved **71%** in the post-certification space

WORKPLACE WELL-BEING SUMMARY

Workplace well-being was measured by calculating an inventory of responses based on occupants' attitudes about how their workplace supports their well-being, pride in the workplace, and motivation to do good work. Scores range from highly agree (+2) to highly disagree (-2).



* Indicates a statistically significant difference ($p < .05$) between the pre-certification space (WeWork) and the post-certification space.

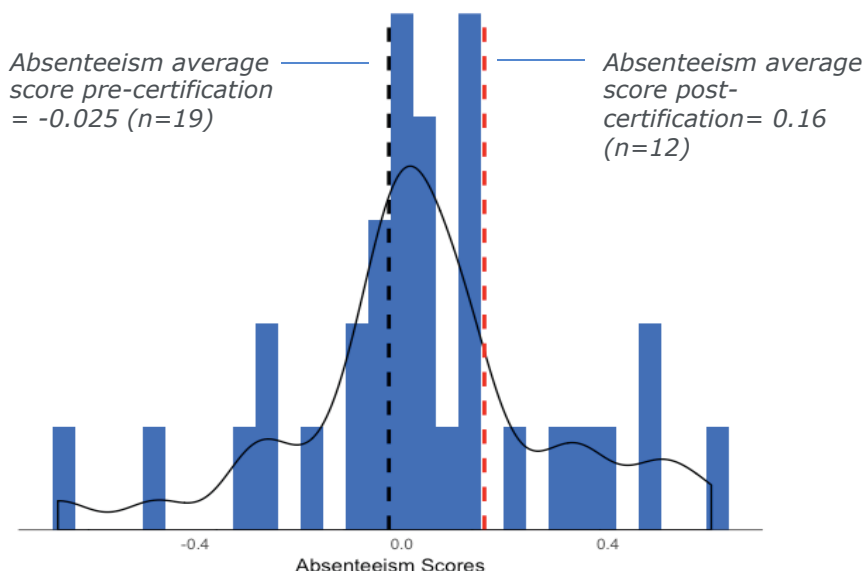


All workplace well-being items significantly improved ($p < 0.05$) pre- ($n=22$) to post-certification ($n=12$).

ABSENTEEISM AND PRESENTEEISM SUMMARY

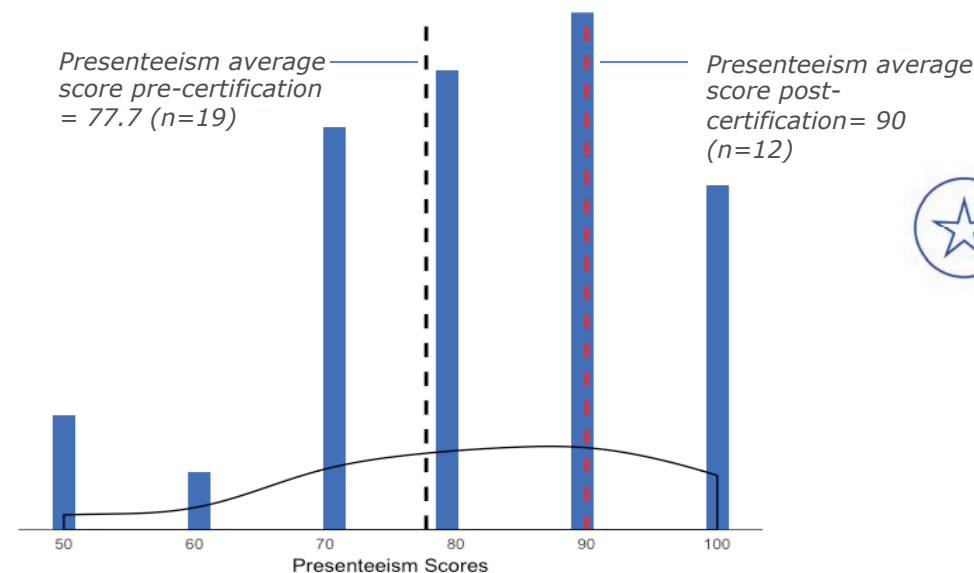
Respondents were asked to recall and report on their productivity and job performance over the past four weeks. Use of our psychometrically valid survey tool produces distributions and means for both absenteeism and presenteeism scales.

Absenteeism



Absenteeism scores range from -1 to 1. Absenteeism scores improved (less absenteeism) by **19% from -0.025 (pre-certification) to 0.16 (post-certification)**, which indicates employees are working **16% more than expected by their employer**. This increase is statistically significant at the 0.05 level.

Presenteeism

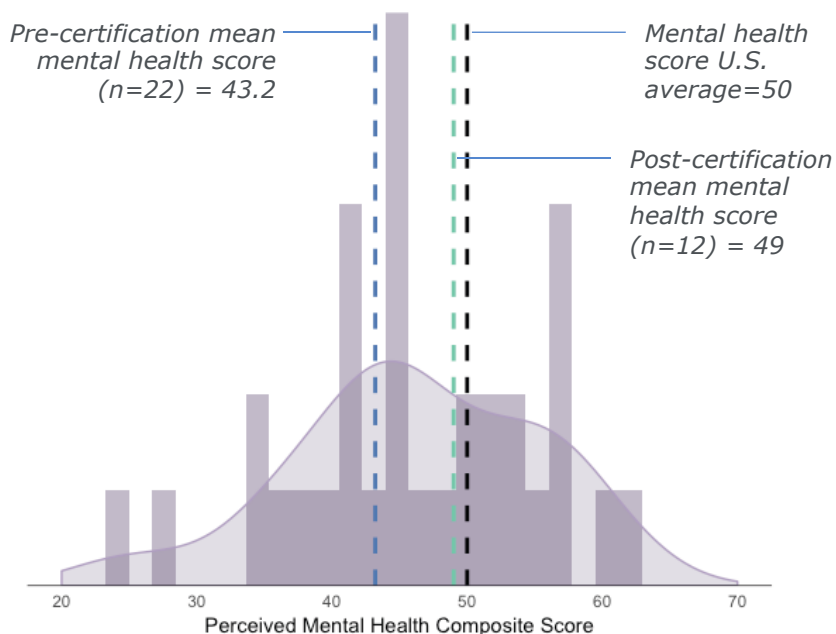


Presenteeism scores range from 0 – 100 with higher scores indicating higher self-rated work performance. Presenteeism scores improved by **16% from 77.7 to 90**. This indicates that on average, employees feel they are working at **90% of their possible job performance, increasing their job performance by 16%**. This difference is statistically significant at the 0.05 level.

PERCEIVED MENTAL AND PHYSICAL HEALTH SUMMARY

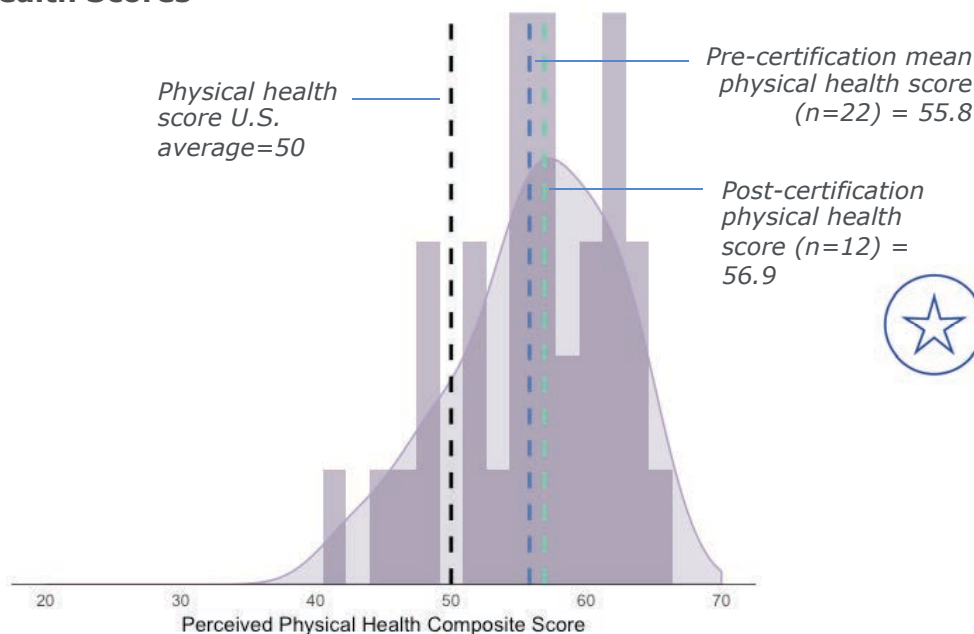
Measuring perceptions of occupant health and well-being is a primary goal of the analysis. The psychometrically valid survey tool shows mean mental and physical health scores for the pre-certification space (blue dotted lines), post-certification space (green dotted lines), and American averages (black dotted lines = 50).

Mental Health Scores



Mean mental health scores were higher at post-certification, however the difference between pre- and post-certification scores was not significant.

Physical Health Scores



Mean physical health scores were higher at post-certification, however the difference between pre- and post-certification scores was not significant. Scores were significantly higher than the U.S. average at both the pre-certification and post-certification space conditions

QUALITATIVE FINDINGS AND ADDITIONAL ANALYSIS

Respondents were asked to provide open-ended responses to the question “What impacts your health and well-being the most in the workplace?” The following answers provide a general description of key themes and quotes but are not intended to be representative.

PRE-CERTIFICATION

17 of **22** employees responded to the open-ended question. Of those who responded:

- **35%** (n=6) cited their coworkers as making an impact on their health and well-being
“My health and well-being is impacted by a collaborative and positive work experience. I work most efficiently when able to share my ideas with my coworkers in collaboration with their ideas, to reach a common goal.”
- **29%** (n=5) reported that having varied, ample workspace as impactful to their health and well-being
“Ability to have (or not) the correct space available when I need it impacts my well-being”
“Working areas suited to the task at hand”
- **24%** (n=4) reported that consistent temperature and access to the thermostat made an impact. Noise was also cited as an issue (n=4).
“Temperature inconsistency makes the environment uncomfortable”
“Being unable to control temperature and noise also has an effect.”
“Noise, temperature, access to people and meeting space, team building with peers”

QUALITATIVE FINDINGS AND ADDITIONAL ANALYSIS

Respondents were asked to provide open-ended responses to the question “What impacts your health and well-being the most in the workplace?” The following answers provide a general description of key themes and quotes but are not intended to be representative.

POST-CERTIFICATION: ASID OFFICE

14 of **19** employees responded to the open-ended question. Six of the employees who responded were employed less than one year. They reported natural daylight and access to views (n=4), standing desks (n=3), free gym in the building (n=3), healthy food options (n=2), workspace variety (n=2), and floor plan (n=2) all made an impact on their health and well-being.

Of those who were employed longer than one year (n=8):

- **38%** (n=3) cited the design and layout of the overall workplaces and variety of workspaces as having an impact on their health and well-being
"Sit/stand workstations; Collaborative spaces, Openness of the environment; Variety of work space choices (personal choice)"
"Project volume and issues with prioritization impacts my mental well-being negatively. The amount of light and the design of the space definitely helps me find more calm."
- **38%** (n=3) cited access to the gym, standing desks, and healthy food options as having an impact on their health and well-being
- Employees feel that embracing health and well-being as part of the organizational culture and supporting employees' health and well-being is important.
"Access to the gym, healthy food options and most importantly, a culture of caring about health and well being."
"The staff, the mission, the work and the environment all have a positive impact on my health and well-being."