



Research Spotlight

# The WELL Factor: Understanding the Impact of WELL Certification

A new study in the *Journal of Building and Environment* finds WELL Certification boosts occupant perceived satisfaction, health, well-being and productivity

## Brief Synopsis

In the largest and most comprehensive research of its kind, a newly published peer-reviewed study in the [\*Journal of Building and Environment\*](#) found that occupants in WELL Certified spaces report improved workplace satisfaction, increased levels of productivity and gains in their health and well-being. The study analyzed the impact of WELL Certification using more than 1,300 pre- and post-occupancy survey responses from six companies in North America with analyses conducted at both the aggregate and company level. Specifically, the study showed WELL Certification improved overall occupant satisfaction by nearly 30%, as well as occupant perceived well-being scores by 26%, reported mental health scores by 10% and productivity gains by 10 median points.

In the *Journal of Building and Environment*, September 2022

### Title:

Impact of WELL Certification on Occupant Satisfaction and Perceived Health, Well-being, and Productivity: A Multi-Office Pre-Versus Post-Occupancy Evaluation

### Authors:

Nasim Ildiri, University of Colorado Boulder  
Heather Bazille, Cornell University  
Yingli Lou, University of Colorado Boulder  
Kathryn Hinkelman, Pennsylvania State University  
Whitney A. Gray, International WELL Building Institute  
Wangda Zuo, Pennsylvania State University and National Renewable Energy Laboratory

## Key Findings

Using extensive pre- and post-occupancy survey data, the analysis was able to assess the impact of WELL Certification on the people inside a space when compared to their experiences before certification. The study comprehensively analyzed the impacts of WELL Certification on occupants from four different perspectives:

Satisfaction with the workplace • Physical & mental health • Well-being • Productivity

According to the study's survey findings, WELL Certification showed a series of statistically significant occupant benefits, including:



A near 30% improvement in overall satisfaction with the workplace, which jumped from 42% to 70%



A 10% increase in reported mental health and a 2% increase in reported physical health



A 26% overall increase in reported well-being scores



A 10-point jump in median productivity scores

These findings are described in further detail below.

Specifically, the study finds WELL Certification improved overall occupant satisfaction by nearly 30%, as well as occupant perceived well-being scores by 26%, reported mental health by 10% and productivity by 10 median points.

## Research Methods

This research uses a rigorous pre-occupancy and a post-occupancy survey methodology, including the use of psychometrically validated scales. Further, the survey respondent samples were evaluated for representativeness using a chi-square test. “To accurately assess productivity, we used a set of questions from the World Health Organization that has been validated into a scale and used in multiple workplace settings,” said Dr. Whitney Austin Gray, Senior Vice President of Research at IWBI and a co-author of the study. “Using validated scales and robust methodology we can assure that the questions asked lead to the outcome measured.” In addition, each project reported on the WELL features pursued, including results of indoor environmental performance testing. Thus, the study was able to calibrate across both subjective human data and objective environmental data measures. This research also provides insight on other specific focus areas, such as air quality levels, acoustical and light levels and their connection with human health and productivity.



## Occupant Satisfaction

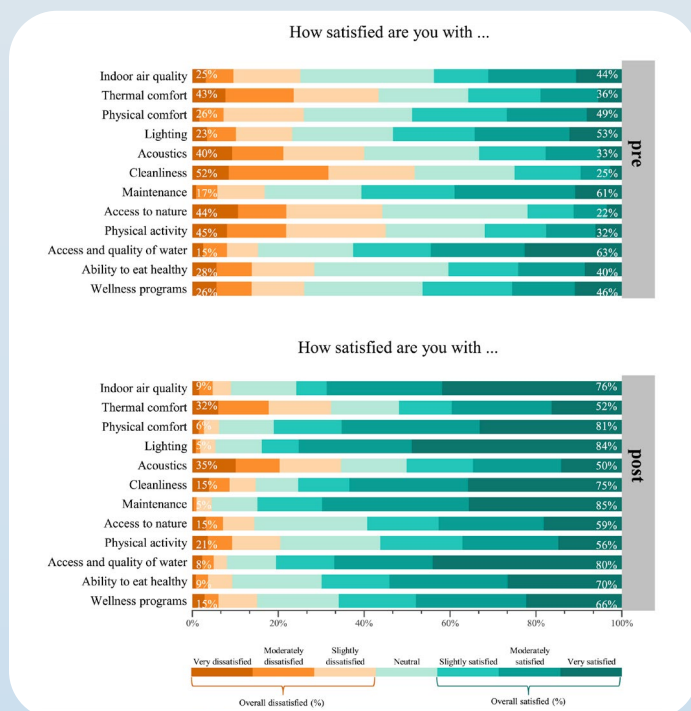
WELL Certification considerably boosts occupant satisfaction with the workplace, improving overall satisfaction by nearly 30%.

The study examined occupant satisfaction across 12 WELL-related healthy building parameters, including indoor air quality, thermal comfort, physical comfort, lighting, cleanliness, maintenance,

access to nature, ability to eat healthy, physical activity, wellness programs, acoustics and water access and quality.

Across 8 of the 12 satisfaction areas examined (indoor air quality, thermal comfort, physical comfort, lighting, cleanliness, maintenance, access to nature and ability to eat healthy), the study found statistically large effect size improvements, which means occupant satisfaction improved dramatically across these areas.

Occupant satisfaction also improved across the other four focus areas —physical activity and wellness programs at the medium effect size and acoustics and water access and quality at the small effect size.



Ildiri, N., Bazille, H., Lou, Y., Hinkelmann, K., Gray, W. A., & Zuo, W. (2022). Impact of WELL certification on occupant satisfaction and perceived health, well-being, and productivity: A multi-office pre-versus post-occupancy evaluation. *Building and Environment*, 224, 109539.

## Mental and Physical Health

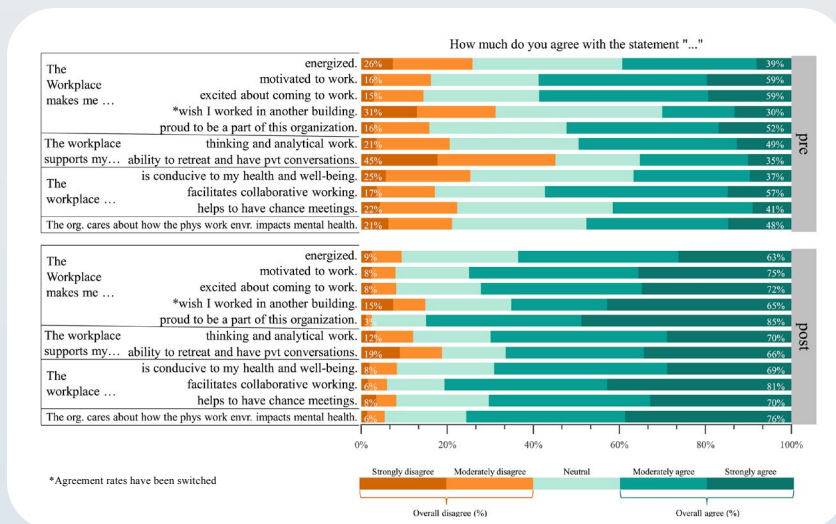
WELL Certification improves occupant perceived mental and physical health, with a 10% improvement in perceived mental health and a 2% improvement in perceived physical health.

In terms of health, the study used a global scale that measures against US national averages and found WELL Certification improves occupant perceived mental and physical health, with the largest improvement in mental health.

- Average occupant perceived mental health scores increased 10 percent (from 41.7% to 51.7% in pre- to post-occupancy).
- The average occupant perceived physical health score increased 2 percent (from 53% to 55.1% in pre- to post-occupancy).

## Well-being

WELL Certification increased overall occupant well-being scores by 26%.



In its examination of occupant perceived well-being, the study linked WELL Certification to a 26% overall improvement across 11 well-being measures. The study showed that the agreement rates with statements associated to occupant well-being were considerably higher post-occupancy compared to pre-occupancy. The overall average agreement rate improved from 46% to 72% from pre- to post-occupancy, with no decline in overall agreement rate across the parameters.

Ildiri, N., Bazille, H., Lou, Y., Hinkelman, K., Gray, W. A., & Zuo, W. (2022). Impact of WELL certification on occupant satisfaction and perceived health, well-being, and productivity: A multi-office pre-versus post-occupancy evaluation. *Building and Environment*, 224, 109539.

More specifically, the study showed that with WELL Certification occupants felt more energized, more motivated to work, more confident that the workplace is conducive to health and well-being and increased pride in being part of the organization. The majority of the effect sizes calculated for each of the above perceived well-being parameters were large or medium, averaging 0.7 improvement on a 5-point statistical scale.

## Productivity

WELL Certification improves productivity scores by 10 median points.

In terms of occupant perceived productivity based on presenteeism scores, the study found post-occupancy scores were overall higher. Specifically, the median productivity score in WELL Certified buildings improved 10 points, from 80 to 90.

The study used the World Health Organization's Health and Work Performance Questionnaire (HPQ) to measure perceived productivity using absolute presenteeism scores. This tool is a psychometrically validated survey that has been used globally.

## Organizational-Level Benefits

For each organization examined in the study, WELL Certification shows significant benefits across each of the four areas – satisfaction, health, well-being and productivity.

The study also examined the impact of WELL Certification at the organizational level, showing that each company examined saw similar improvements in occupant satisfaction, health, well-being and productivity.



### SATISFACTION

Every company in the study saw sizeable improvements in overall occupant satisfaction, ranging from nearly a point to more than 2 points on a 7-point statistical scale.



### MENTAL HEALTH

Every company improved in overall perceived mental health, with one company reaching a high 14% improvement in its average occupant perceived mental health score.



### WELL-BEING

Average scores for well-being “increased considerably” for all companies’ statistical scale.



### PRODUCTIVITY

The average occupant perceived productivity score improved for all companies, with improvements ranging from 1.39% to as much as 6.72%.



“Based on what we know from other research, our hypothesis held that the human-centered design strategies found in WELL would have a positive impact on health and well-being. The study overwhelmingly confirmed that hypothesis, showing notable improvements across each of the four major areas examined: satisfaction, health, well-being and productivity. For organizations and companies, the study verifies the material benefits of WELL, which could very well serve as another powerful accelerant for healthy building adoption.”

Nasim Ildiri | Lead author | University of Colorado, Boulder

Citation: Ildiri, N., Bazille, H., Lou, Y., Hinkelman, K., Gray, W. A., & Zuo, W. (2022). Impact of WELL certification on occupant satisfaction and perceived health, well-being, and productivity: A multi-office pre-versus post-occupancy evaluation. *Building and Environment*, 224, 109539.

Learn more about WELL at [wearewell.com](https://wearewell.com)