

Exploring the Relationship Between Interior Workspaces and Employee Wellness



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¹ Kohll, 'How Your Office Space Impacts Employee Well-Being'.

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Abstract

The design of workplaces can be challenging, considering the mental and physical wellness of those occupying these spaces. Within the last ten years, companies have realised that focusing on the layout and design of a workplace can alter employees' work performance. This essay reviews research on the built environment, from lighting and indoor air quality to layout and ergonomics, and how it leads to measurable benefits such as reduced stress, increased focus, lower turnover, and fewer illnesses. It analyses recent case studies and articles that support and expand the knowledge of specific elements of interior office spaces that influence employee wellness. The essay also focuses on natural lighting, demonstrating how this improves mood and productivity. The essay links the relationship between interior workspaces and employee wellness.

Introduction

A wellness workplace could mean different things to different individuals, including fresh air, lighting, or other simple features. Finding ways around this is viewing the space, such as layouts, interiors and the overall environment of today's office space designs and reviewing the past. Simple features such as employee well-being, engagement, retention and overall work performance will be taken into account in the research of this essay. The aim is to inspire workplace design that supports workers' experiences.

There have been multiple studies on the link between well-being and the environment of a workspace. Factors on indoor air quality, daylight access, noise disruption, aesthetic appeal and ergonomic design impact physical and mental wellness.² For example, there is a case study on daylight and how it positively affects an employee's performance, satisfaction and well-being. Also, there are case studies on the effects of indoor work environment quality highlight critical factors of lighting comfort, noise annoyance, and measures of performance and well-being. Multiple case studies suggest similar ways of improving workplace wellness and productivity conditions.

Throughout the essay, specific challenges of implementing employee wellness in interior workspaces will be outlined, as there will be challenges to the types of conditions in buildings and how different workplaces vary. This includes employee wellness, which requires understanding and knowing each unique workplace and tailoring it to the desires of each setting. Only some designs will solve all solutions and might need to be more effective. Considering some aspects of the research, it can be tailored to different settings.

These insights provide outlines for how choices in lighting, indoor air quality, layout, nature, noise control, and aesthetics influence stress, emotional outlook, concentration, collaboration, healthy movement and job performance and can make a difference in space for everyone and help individuals have a health work life. Overall, this essay will inform the researchers about practices that are important for providing a healthy workplace design that values worker wellness, satisfaction, engagement and productivity.

² Jamrozik et al., 'Access to Daylight and View in an Office Improves Cognitive Performance and Satisfaction and Reduces Eyestrain'.

Factors that affect employee wellness in interior workspaces

Individuals frequently stay indoors; ³about 90% of the time, people stay indoors, most of which is spent at work. ⁴The workspace significantly impacts work performance and how the environment is set out, as employees spend a considerable amount of time in these spaces, it will affect how they work. ⁵Designing these spaces has to be comfortable for the employees and ensure they are satisfied, which can impact their behaviour individually. Employees who are happy within their environment will mostly have a positive reflection on their workplace. The physical work environment influences employee wellness through natural light, ventilation, temperature control and ergonomic design. There are design strategies that create interior workspaces that enhance health within the workplace.

Besides physical health within the workplace, the space's design and layout can influence individuals' emotional wellness. Privacy, personalisation, and workplace connections have been problems in different environments. The workplace can get too loud with few private areas to split away from, and not having these spaces can negatively impact concentration and productivity. Different effects on emotional wellness can be the aesthetic appeal of the workplace interior, as focusing on the space's aesthetic can affect mood and motivation. Elements of natural materials, plants and beautiful views of nature have been proven to boost happiness and focus and improve wellness overall. This link between these essential factors is needed to extend the support of employees' health and incorporate this into the space's interior.

Impact of natural light, air quality, and temperature on employee wellness

One of the essential elements of designing a workspace that improves wellness and productivity is lighting. Lighting is a crucial feature often overlooked and a powerful tool for personalising a room. Lighting can come from many sources, such as indoor ceiling lighting, LEDs, wall lighting, lamps, laptop screens, etc. Window lighting should be considered as natural lighting is a powerful element that impacts individual wellness significantly. This has been proven in a few case studies. ⁶One case study is based on examining three different settings of a workspace. These spaces have three different designs of lighting from the windows. One set had mesh shades on the windows, another group had dynamic tint, and the last room was in a basement lacking daylight. It was reported that the performance of cognitive function was improved within one of these settings; therefore, these results can lead to motivated and productive employees with better well-being.

Indoor air quality can physically affect the individual, as it has long and short-term effects on the environment and the individual's health. There are common strategies that building designers go through to succeed in having the best air quality in the environment. Some

³ Jamrozik et al., 'Access to Daylight and View in an Office Improves Cognitive Performance and Satisfaction and Reduces Eyestrain'.

⁴ Wang, Zhang, and Chun, 'How Does Mobile Workplace Stress Affect Employee Innovative Behavior?'

⁵ Zhenjing et al., 'Impact of Employees' Workplace Environment on Employees' Performance'.

⁶ Jamrozik et al., 'Access to Daylight and View in an Office Improves Cognitive Performance and Satisfaction and Reduces Eyestrain'.

methods include increasing the ventilation rate, which will reduce the air pollutants within the space. Not providing good indoor air quality within the space could lead to sick building syndrome symptoms. Sick building syndrome is multiple health problems caused by the indoor environment. Not dealing with health problems in an indoor environment could lead to other issues involving the employees. These issues include irritation of the eyes, nose, and throat, headache, cough, wheezing, depression, light sensitivity and other illnesses.⁷

Comfort is an essential aspect impacting wellness, which also includes the thermal comfort part.⁸ Body temperature can affect how individuals work within the space, influencing attention, memory and decision-making.⁹ Research conducted in offices has shown that optimal indoor temperature ranges between 20- 22 degrees. Sticking to this range can impact the employee's performance and provide comfort within the space. Providing the preferences and personalisation of the thermal of the interior space enables employees to tailor to their needs, and this empowers individuals to control the indoor comfort of the area.

Design features that promote employee wellness

Designers can employ multiple design strategies to influence individuals' wellness positively,¹⁰ such as biophilic elements like indoor plants, natural wood surfaces and nature imagery to boost health and minimise stress. Ensuring natural light and views are accessed. Material selection is critical in choosing suitable materials that impact the employees and building, with fitting sustainable and eco-friendly resources and offering workplace alternatives to workstations to design a more flexible and agile space for the employees, with functional areas that promote community and healthy socialisation, similarly, including alternative quiet rooms, phone booths, outdoor terraces, or wellness rooms, and diversifying workspace functionality.

The process of interior design has the potential to create a space that can positively or negatively impact employee health, productivity and job satisfaction. There are essential factors in wellness design, such as natural lighting, quality ventilation and thermal control, which must be carefully considered. Focus on the user experience and incorporate biophilic elements, prioritising user-friendly designs and offering adaptability and amenity-rich spaces to enhance the experience. Reviewing interior design's strategies and factors over physical, psychological and social well-being will empower organisations to prepare healthier, higher-performing and happier workplaces.

⁷ Al horr et al., 'Impact of Indoor Environmental Quality on Occupant Well-Being and Comfort'.

⁸ Wargoeki and Wyon, 'Ten Questions Concerning Thermal and Indoor Air Quality Effects on the Performance of Office Work and Schoolwork'.

⁹ Wargoeki and Wyon.

¹⁰ Lei, Yuan, and Lau, 'A Quantitative Study for Indoor Workplace Biophilic Design to Improve Health and Productivity Performance'.

Case Study 1



¹¹ Fig. 1 Office Design

¹¹ Morrison and Smollan, 'Open Plan Office Space?'

A fourteen-month office design case study was conducted in Auckland, New Zealand¹². A law firm at the time, with a summary of 200 employees six months previously, moved into a newly built open-plan office design due to the previous space needing to be better suited to the company. The past area contained single-cell offices, central workspaces, and open spaces. The office was not soundproof, making the sound travel through the office, and everyone could be heard. For the new build, the company invited staff to be interviewed and to do anonymous surveys. This would help provide the company with past building design mistakes and enhance the employee's experience.

The new law firm office was placed on the entire top floor of the five-story building. This unique design had a significant number of beneficial features. They provided better indoor quality surrounding the space, with the impact of better natural lighting with floor-to-ceiling windows and a centre-ceiling window atrium. The company incorporated greenery of over 1300 plants, including the greenery walls that can be privacy and sound reduction dividers. Twenty-eight soundproof collab rooms with plug-and-play. Strict silent areas within the closed-off internal library to allow concentration. A garden lunch area with a café and tables that encourage group setting seating that can impact employee communication and socialisation. A variation of workstations and group seating for informal or formal meetings, such as sit-to-stand desks and standing bar leaners. Numerous hydration stations throughout the office space consist of sparkling and still water. All employees have desks, but everyone has multiple choices regarding where to sit and how to work in their day. Space consists of open light walkways for a straightforward user experience throughout the office. Other facilities were considered, such as lockers, larger conference rooms, and a room called the "end of trip", which has showers, etc, for all staff.

When the staff were asked what they desired for the new office, comments such as workstations suited to the work itself were mentioned. The company tried to involve the employees as much as possible because they would be there most of the time. Staff got a choice of the materialistic side of the designing process; the team got a vote on the decision of the wallpaper and types of chairs. In late 2016, researchers conducted a three-week cycle of interviews, which employees were invited to go to if they were willing to contribute. The discussions were there six months after moving into the new offices. There were twenty-four interviews, and the variation of the period that the employees worked there was between three months to twelve years. This can give an open view from multiple perspectives of employees and what they consider. The interview times were between 15 and 43 minutes. The main focus of the questions was on the previous building they worked in and what they enjoyed and did not enjoy about the new premises. Considering the privacy, productivity, distraction, and how the office design affected their relationships with other employees.

The researchers operated five rating questions for the participants who were involved with volunteering for the interviews, demonstrating which they preferred satisfaction compared to the previous office and the new office. A total of one hundred responses were made for surveys, including interviewees. It had a variety of individuals from different roles, age groups, and genders, which gave a wide range of feedback from different perspectives. The

¹² Morrison and Smollan.

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researchers conducted not just one office design review but two. This was 14 months after the initial surveys and interviews; this was a twenty-month process, including the move from the previous office. The next set of questions was similar to the first survey but did not include any questions related to change in management.

The final results of the fourteen-month research demonstrate positive and negative comments with each theme, physical space, interpersonal relationships, productivity, and privacy. The physical space featured the functionality of the area, for example, the staff's personal space, fan, desk, features, storage, base, functional bins, collaboration, rooms, lunchrooms, atrium, and hydration stations. The main positive comments from the employees were the ability to use the space as a team. There are options for different areas to work, such as the quiet rooms, not making the staff feel trapped where to work and making the process less stressful. The team admired the little breakout rooms and the kitchen. The positive comments highlighted the elevation of movable desks and collaborative spaces, the modern kitchen, and the implementation of hydration stations. The mention of the open space being well social and interactive as a team and the plants surrounding the office impacted the long working day. There were minor negative comments on the physical space, and the staff asked for more positive words, such as collaboration rooms, which the team admired. The space needed some team areas to be more spacious. Also, mention the office feels cramped and needs more space due to the excessive number of desks.



¹³Fig. 2 People in open plan workspace with natural lighting and plants for wellbeing

The aesthetics of the place consider features, natural lighting, windows, décor throughout the space and greenery. The comments from the interviews and employees were quite specific in what worked and what did not in the office aesthetic. Employees made positive remarks on how wonderful the office is to work at, with being around plants and the addition of the high-level plant dividers, making the area more private. Evidence of improved wellness is noticed by an individual saying, "I love the greenery, it feeds my soul! Also, love the extra lightness and feeling of fresher air"¹⁴. This demonstrates a positive impact of comfort and feeling healthy in the work environment. There were not just positive comments on the plants; there were also negative ones. A few individuals thought the plants were not appealing and "just looked like weeds"¹⁵. It mentioned plants creating too much dust and attracting insects into the workplace. There were also comments on the décor and wallpaper being too much and distracting to individuals.

The research on the new law firm office design has highlighted effective and ineffective results towards the company's employees. The researchers explored many aspects of this case study by collecting statistical data through surveys and voluntary interviews, investigating over fourteen months, giving time to define the changes, the advantages and disadvantages and allowing the employees to review the workplace design accordingly. The researchers studied the previous office and focused on the negatives of creating a workplace that the employees disliked; the advantage is that the employees have been in both offices and can compare the previous office to the new build and what has benefited them. Surveys conducted were anonymous, implying a more truthful response. From the surveys, it has promoted a personalised office to meet the employees' needs.

Reflecting on the research on the opposing view, the results are more tailored to this company and user group, which leads to results that can only be applied to some in some different sectors due to the case study focusing on one industry, the law firm. Also, the interviewers gave the results as quotes, making it hard to measure the benefits as no one would agree with all the changes. More statistical studies are required to produce a more numerical outcome, which would be more beneficial for comparing old and new office design spaces. Relying on employers' choices for office design will turn into something other than the outcome the employees want. There were mentions of researchers asking staff about their preference for wallpaper and furniture choices, which ended with negative comments about the new office design having too much going on with the décor and being distracting.

The overall conclusion of this case study reflects the relationship between interior workspaces and employee wellness, shown through the researcher's conducted study, multiple surveys and employee feedback. The surveys are a vital factor for this case study, as the reliance on design is mainly on the employees' opinions and see where they can improve the mistakes and what can be changed in the new building. From the start of the study, the key elements that had a clear impact on the wellness of the employees were the plants surrounding the space; it created a positive outlook of working, which provides significant productivity and mentions better air quality in the workspace due to adding the greenery. This element of plants also had a negative impact because it caused distractions

¹⁴ Morrison and Smollan.

¹⁵ Morrison and Smollan.

due to the insects entering the workplace as they were attracted to plants. It would be better to find a middle-ground solution to balance this issue. This could be adding less greenery within the space, as it mentioned it had many plants. Decreasing the amount might help with the insects not entering the office. Careful thought was given to the layout of the space because it was an open-plan office; there was a focus on the breakout spaces, collaboration rooms, and desk areas. By viewing different ways to make spaces private as well as open and friendly. The researchers implied this into the design by adding multiple choices of spaces to go to and work, such as collaboration rooms with acoustic panelling to cancel out the noise, have that sense of privacy, and encourage productivity by being able to focus. This had a positive review on most staff due to the available collaboration rooms and breakout areas. But there were comments about the office having too many desks, making it too cluttered. To resolve this, remove some desks to allow extra room in the office and make the staff feel more comfortable.

Case Study 2

This case study is based on reviewing the critical importance of a workplace, which is productivity, creativity, and health. ¹⁶Fourteen open planned offices worldwide were analysed in places such as Australia, New Zealand, and Hong Kong. Investigating the satisfaction with privacy and the connection to the outdoor environment to impact health and focusing on other vital elements such as productivity, layout and creativity. Also, compare the different offices and whether they are Well certified or non-Well certified buildings. ¹⁷ The meaning of a Well Certified Building is a building that meets the high standards of well-being in the building, considering air, water, nourishment, light, fitness, comfort, and mind.

All of the fourteen offices volunteered to take part in this study. Each workplace has an open-plan design and style, such as traditional, activity-based, and agile. In a traditional design, each worker has an assigned desk. Activity-based and agile design are similar design styles, with flexibility given to the employees and assigned desks removed. The survey outline of different sectors is a wide range of industries, which provides a fair advantage of the results. Ten of fourteen offices were Well certified, as the company has already been awarded or wants to pursue it at the tenancy level. The four others were not meeting the standards of the Well certified Building.

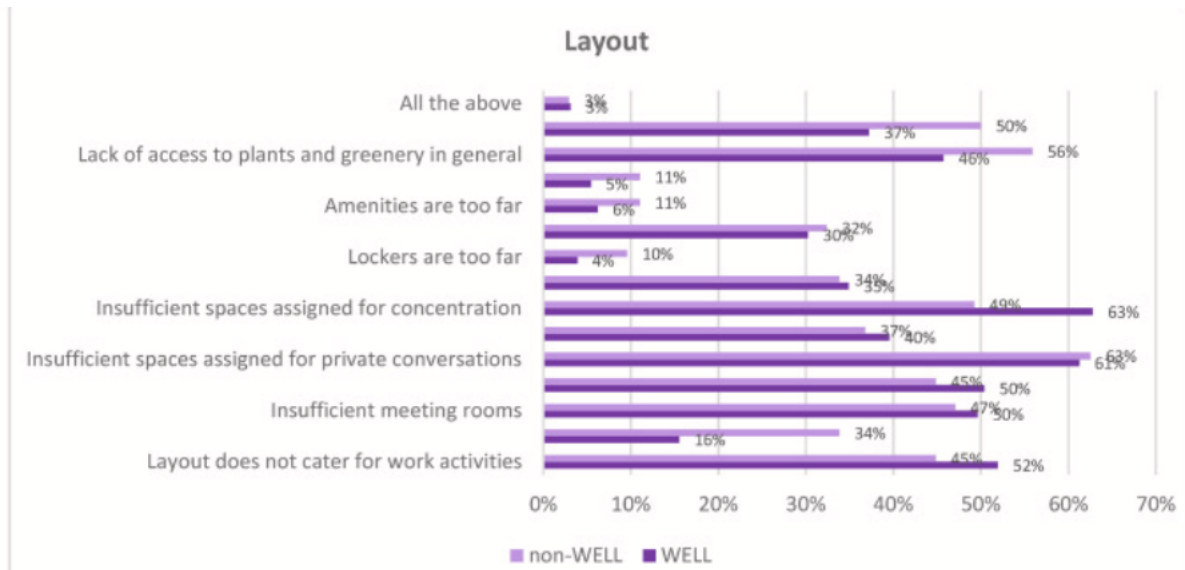
The surveys were based on the Sustainable and Healthy Environments, created to collect information about human, organisational and environmental variables from offices and other sectors. The questions are related to layout, aesthetics, water availability and intake, nutrition, sleep, workplace wellness and engagement, and physical and mental health. The surveys also evaluate links between workplace productivity, creativity and health. The questionnaire is structured as a seven-point Likert scale, from 1 to the lowest scale and from seven to the highest. A total of 1403 surveys were analysed and were taken place online. The volunteers were working in the office at the time, which gives a better idea of the circumstances of the results. The majority were working full-time at their firms.

¹⁶ Marzban et al., 'The Potential of High-Performance Workplaces for Boosting Worker Productivity, Health, and Creativity'.

¹⁷ 'Jolie Interior Design Studio – WELL Certification'.

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The results of the 24-question questionnaire were structured into four themes: layout and interior design, indoor air quality, privacy and outdoor connection and organisational aspects. The main positive elements mentioned by most companies within this survey were how much personalisation the employees have around the space with the equipment and furniture. This gives a sense of freedom and not feeling restricted by how the individuals use the space, which will encourage confidence and comfort.



¹⁸Fig. 3 The Survey Results of the Layout for the Well and Non-Well Offices

¹⁸ Marzban et al., ‘The Potential of High-Performance Workplaces for Boosting Worker Productivity, Health, and Creativity’.

Analysing Fig 3 of the chart comparing the Well and non-Well certified offices has shown that some Well Certified offices were not sticking to the standards and had similar results to non-Well certified offices. From both groups, there is a lack of plants and greenery, which seems the employees are unhappy about. This highlights the urgency of greenery to enhance the space, as biophilic elements have connections to wellness, which can significantly impact the company. The thermal comfort and air quality charts results have high percentages from both groups being too cold and the air being too stuffy. This shows that the spaces do not sound comfortable to work in, which could lead to individuals having low motivation and productivity with these issues. The studies inform the problem of privacy, high noise levels and lower acoustic satisfaction, which can have a similar issue with not producing good work. The results that have been analysed can demonstrate to all companies that they need to review and explore how the employees feel because this can increase many factors to benefit the companies and the staff themselves.

To conclude, this case study review has highlighted many reasons why not all office designs will be perfect for everyone's needs. This is due to different workplaces needing different essentials, as it was shown in some results in the case study that the well-certified workspaces had lower results compared to the non-well-certified workspaces. This could be because different companies have different values and what they need in their workspace. Not one study is going to resolve all problems in all workplace designs. Overall, this study has demonstrated the differences and values between a well-certified workspace and a non-well-certified workspace. It has also shown how certain design elements can easily impact the employees' work ethic, motivation, and, generally, how they feel.



¹⁹Fig.4 An Office Design Focused on Wellness

¹⁹ SBID, 'Interior Design Blog | Designers Focus on Interior Wellness to Promote Employee Wellbeing'.

Conclusion

In conclusion, the research demonstrates the importance of relationships between employee wellness and workspace design and how the choices can impact the employees positively and negatively. Key elements highlighted throughout the research positively influence health, including light exposure and noise-cancelling acoustics to balance focus and collaboration. Indoor air quality and biophilic designs incorporate nature and satisfy the indoor environment. The research indicated factors that have been presented as potentially impacting the health and wellness of the employees with care for how the office is designed. It improves employee health, happiness, stress levels, and productivity when optimising the interior and design of the workplace.

The critical findings of the essay were discovered by the main factors of creating a workspace and designing any space. Such as reviewing an essential characteristic of indoor air quality, how it dramatically impacts the individual, and how the person focuses within the space. It highlighted that not providing a high standard of good indoor air quality can cause illnesses and discomfort, and avoiding issues can undoubtedly impact the individual and the firm. This information benefits the understanding of each study reviewed in this essay, helping explain why individuals feel that way about the design of the workplace.

Employee wellness offers significant benefits for both individuals and sectors. The analysed case study indicated benefits to the employees and the firm overall. Such slight modifications can impact the office, lighting, acoustics, greenery, air quality, and flexibility, supporting physical, mental, and emotional health. There was a strong influence on the employees' opinions of the overall design by stating what worked well for the individuals and what did not. This can develop a sense of empowerment and being listened to by including the thoughts and improvements that can be made. The continuous surveying and interviewing furthered increased comfort levels and identified issues that employees could not inform at the beginning of the research. Comparing the first case study to the second one, there was a big difference in how it was researched. In the first case today, it was based around one firm and the second one was based on around fourteen firms. The second case study gives a broader range of different audiences, meaning it provides a better understanding of the wellness between relationships of the interior space. However, the findings from the first study were more personalised and researched further tailored to the firm. After all, both studies gave extraordinary evidence of how employees interact with the workplace.

This essay's final thoughts resulted in better knowledge of how people interact with interior design and how it impacts daily tasks. The workplace is a crucial place to analyse for this topic, with how much the workspaces are used and needed. It has demonstrated the importance of prioritising how the space should be designed to benefit the individuals better and not only to make it aesthetically pleasing. Understanding the user's needs by getting feedback from the staff is necessary but not always essential. Reviewing the results from one of the case studies showed that most of the time, the employees are unsure of what they want and how they want it, and just being involved makes the staff feel a part of the design progress. More research definitely needs to be done on the relationship between employees and the design of a workplace. The findings show that the top companies

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apparently have a significant aspect of wellness design in the workplace, but the employees tend to disagree with some elements of the designs, showing that the staff are not usually involved in their opinion on how the space makes them feel. The outcome of this is to recommend advanced research on the employees and how they think about the space they are working in to provide a better work environment for staff and the company.

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