

Mapping Building Performance and Wellbeing Assessment Approaches: A Bibliometric Analysis

*¹Damilola Omusi Adesina

¹Department of Architecture, Faculty of Environmental Sciences, Baze University, Abuja, Nigeria.

*Corresponding authors' email: damilola.adesina@bazeuniversity.edu.ng

ABSTRACT

In research, the environmental quality of the indoor environment is usually assessed through building performance and wellbeing assessment approaches, which studies show are usually disconnected. Historically, building performance assessment approaches have largely focused on energy efficiency, carbon emissions, and resource consumption, while occupant experience studies focus on factors such as thermal and visual comfort, indoor air quality, perceived comfort, and psychological well-being. This separation creates a limited understanding of how building performance conditions interact with human experience. Therefore, this paper aims to examine how building performance and wellbeing assessment approaches have been integrated over time, employing a literature review method that combines bibliometric analysis of studies which span from 1989 - September 2026 through papers sourced on Scopus database. The findings reveal that building performance and wellbeing are assessed largely through separate pathways, with indoor environmental quality emerging as the main point of convergence between them. The geographic spread, spanning North-America, Europe, the Middle-East and East-Asia indicates that building performance and wellbeing assessment is a genuinely international research priority which highlights a gap in this study for the African context. Furthermore, building performance is mainly assessed through green building rating systems, Particularly BREEAM and wellbeing through WELL. The study highlights the need for more integrated assessment frameworks that consider physical building performance, occupant wellbeing and organisational outcomes within a common approach.

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INTRODUCTION

In the current global society, humans spend approximately 90% of their daily lives indoors; as such, the physical characteristics of the built environment represents one of the critical factors affecting human health and well-being (Elnaklah et al., 2021; Fissore et al., 2023; Hu et al., 2021; Mewomo et al., 2023). Research has shown that poor Indoor Environmental Quality (IEQ) is often associated with Sick Building Syndrome (SBS), worse work performance and higher absenteeism, especially in formal environments such as offices and classrooms (Arif et al., 2016; Felgueiras et al., 2023; Niza et al., 2023; Palacios et al., 2021; S. Wang et al., 2021). Therefore, this has resulted in a shift, from buildings that are merely green to buildings that are healthy within the research landscape.

Historically, sustainable building research has progressed from green assessment to healthy assessment, advancing to comfort assessment and then human performance assessment. The first stage, (early green building) was primarily driven by a desire to conserve energy and improve efficiency in material use which resulted in broader sustainability benchmarking. However, these systems emphasised quantitative metrics focusing on environmental and engineering more than qualitative metrics such as occupant outcomes (Bungau et al., 2022; Elshafei et al., 2022; Gou & Xie, 2017; Xie et al., 2017) which left a gap that spawned the development of the second stage (healthy building). This stage emerged to complement the green building stage by focusing on strategies to prevent sick building syndrome (SBS) by improving indoor air

quality and ensuring compliance with IAQ standards and certifications (Abdul-Wahab et al., 2015; Samudro et al., 2022; Wei et al., 2022; Xie et al., 2017). The next stage (Occupant comfort) recognises that high-quality buildings must perform across the major IEQ domains of thermal, visual, acoustic, and air quality conditions, which together shape occupant satisfaction and well-being (Bungau et al., 2022; Mewomo et al., 2023; Mujan et al., 2019; Xie et al., 2017; X. Zhang et al., 2023). The fourth stage (human performance) highlights buildings that are designed to actively support cognition and work performance through integrated control of IAQ, thermal, visual, acoustic and broader spatial factors rather than avoid discomfort (Deng et al., 2024; Rad et al., 2026; C. Wang et al., 2021).

Despite this conceptual progression found in literature, the broader research landscape is still profoundly fragmented. While there are studies which still emphasise performance frameworks centred on thermal insulation, efficiency, benchmarking, energy use and broader sustainability optimisation, adjacent literatures on indoor environmental quality more often examine occupant comfort, perception, health, wellbeing and productivity as distinct endpoints rather than as integrated outcomes of the two related fields (Elshafei et al., 2022; Gou & Xie, 2017; Newsham et al., 2019; Van Der Voordt & Jensen, 2021; X. Zhang et al., 2023).

Often, many studies are limited to a single discipline (Bungau et al., 2022; Khovalyg et al., 2023; Newsham et al., 2019; Van Der Voordt & Jensen, 2021; Xie et al., 2017) preventing a proper analysis of the true metrics that show how building

performance truly affects wellbeing and productivity within organisational settings.

This paper therefore presents a literature review employing bibliometric science mapping to analyse how the existing literature has sought to integrate building performance with human wellbeing assessment. The indicators, and evaluation frameworks that define the current research landscape are mapped in order to identify the extent to which building performance and occupant wellbeing are integrated, highlighting dominant assessment trends and identifying gaps in existing literature.

Literature Review

Building Health / Performance

Building Health Assessment (BHA) can be delineated across six interacting dimensions, which are safety performance, environmental quality, occupant experience, system, energy and economic performance.

Safety Performance

This dimension represents the foundational layer of building health. It encompasses structural reliability (following Eurocode requirements such as EN 1990 to EN 1999). EN 1990 functions as the head Eurocode, establishing principles and requirements for safety across the structural Eurocodes (Gulvanessian, 2001; Snijder & Steenbergen, 2020).

Environmental Quality

Environmental quality represents the main exposure layer and is consistently defined around four core IEQ domains, which are thermal comfort, indoor air quality, visual quality and acoustic quality. (Mewomo et al., 2023; Mujan et al., 2019; Wani et al., 2026). Reviews of office IEQ link these domains to health and performance, with airborne particles, CO₂, O₃, and thermal conditions associated with SBS symptoms, and poor lighting and acoustics associated with malaise and physiological stress (Felgueiras et al., 2023). Furthermore, Field studies show that assessments commonly included temperature, humidity, air movement, illuminance, noise and pollutant indicators such as CO₂, TVOC's, PM_{2.5} and PM₁₀, while broader IAQ frameworks also consider moisture, chemicals and outdoor pollution (Kaushik et al., 2022; Kim et al., 2022; Mewomo et al., 2023; Wani et al., 2026).

Occupant Experience

This performance metric captures the subjective layer of the building health by documenting how users perceive and experience indoor conditions (Dam-Krogh et al., 2024; Graham et al., 2021; Wani et al., 2026). In practice, POE frameworks consistently combine occupant questionnaires with measured IEQ data to evaluate satisfaction with thermal, air, visual and acoustic conditions and to record symptoms or perceived performance outcomes (Dam-Krogh et al., 2024; Kim et al., 2022; Park et al., 2018; Wani et al., 2026). This layer commonly includes thermal sensation, perceived air quality, self-reported productivity and health complaints, and several reviews argue that fixed standards alone do not fully capture adaptive or context-specific user satisfaction (Graham et al., 2021; Wani et al., 2026).

System, Energy and Economic Performance

At the operational level, system performance concerns itself with the functional reliability of building services, especially HVAC and other technical systems that shape both environmental delivery and running cost. (Gobinath et al., 2024; Park et al., 2018).

Energy performance then evaluates how efficiently the asset operates over time, and recent studies increasingly integrate simulation with real operation scenarios to compare various strategies rather than relying on design intent alone. (De Castro et al., 2026; Gibbons & Javed, 2023; Gobinath et al., 2024; Hajare & Elwakil, 2020). Economic performance extends this logic by embedding maintenance, operating cost, capital renewal and productivity decisions within lifecycle costing models: energy can account for 48% of total life cycle budget in a green building, future cost can reach 3.6 times initial design and construction cost and combined passive active conservation strategies or optimised retrofits can reduce life cycle cost meaningfully (De Castro et al., 2026; Dwaikat & Ali, 2018; Hajare & Elwakil, 2020).

Standards and Certification Frameworks

The scientific literature heavily relies on a core set of international engineering standards to benchmark indoor environmental parameters across thermal comfort, air quality, lighting and acoustics (Berger et al., 2023; Khovalyg et al., 2023; Mohammed et al., 2026; Perera et al., 2025). Thermal comfort calculations rely primarily on ASHRAE Standard 55 and ISO 7730 for analytical PMV-PPD equations and adaptive comfort assessment approaches in naturally conditioned spaces (B. & Brager, n.d.; Khovalyg et al., 2023; Parkinson et al., 2019; Tartarini & Schiavon, 2025). Indoor air quality and ventilation baselines are typically set by ASHRAE Standard 62.1 and European frameworks like EN 16798 - 1 or EN 15251 (Babich et al., 2023; Khovalyg et al., 2023; Perera et al., 2025).

Operational Performance Gaps

Empirical reviews emphasise that certification frameworks are predominantly voluntary and struggle to bridge the gap between design-phase intent and post-occupancy performance. (Afroz & O'Brien, 2020; Devine & Kok, 2015; Li et al., 2019; Marchi et al., 2021). Static design stage compliance often fails to guarantee high post occupancy satisfaction, frequently missing the conventional 80% satisfaction threshold. (Afroz & O'Brien, 2020; Licina et al., 2021)

Field studies indicate certified green buildings can exhibit equivalent or even poor perceived thermal and acoustic satisfaction compared to conventional spaces (Afroz & O'Brien, 2020; Alkhatib, 2026; Perera et al., 2025). Inconsistent operations management, lack of continuous tracking and non-closed-loop policies hinder persistent building performance over the life cycle (Afroz & O'Brien, 2020; Zhou et al., 2022).

IEQ Evaluation Assessment Approaches

IEQ evaluation assessment approaches combine measured and perceived indoor conditions into a single summary index, but the literature remains methodologically heterogeneous across model type, weighting strategy and validation practice. (Heinzerling et al., 2013; Roumi, Zhang, & Stewart, 2022; Roumi, Zhang, Stewart, et al., 2022). The main facets are the assessment approach classes, the analytical methods used to build them and the quality and benchmarking criteria used to judge whether an assessment approach is scientifically robust (Roumi, Zhang, Stewart, et al., 2022).

Model Classes

The literature distinguishes subjective, objective and subjective-objective IEQ models, based on whether they use occupant surveys, physical measurements or both (Roumi, Zhang, Stewart, et al., 2022; D.-D. Zhang et al., 2023). Earlier

reviews used a similar two-way framing, separating subjective-objective models that correlate measured conditions with satisfaction from objective criteria models that compare measurements against fixed classes or thresholds (Heinzerling et al., 2013; Lolli et al., 2023)

Subjective Models

These models typically derive IEQ weights mainly from occupant or expert judgements collected through questionnaires, interviews, or pairwise comparisons (Rohde et al., 2020; Roumi, Zhang, & Stewart, 2022; Sorkhan et al., 2024)

Objective Models

These models score spaces from measured variables against predefined criteria, often without embedding occupant responses into the final index (Heinzerling et al., 2013; Lolli et al., 2023)

Subjective-Objective Models

These are the most common in benchmarking work because they link monitored IEQ variables to category satisfaction and then to overall IEQ satisfaction (Fissore et al., 2023; Heinzerling et al., 2013; Lolli et al., 2023)

Analytical Methods

The literature landscape shows that five major analytical families recur. These are Linear Regression, Non-Linear Regression, AHP, Ensemble Averaging and Updated Acceptance Model, with newer studies also adding SEM, Machine Learning, Bayesian Updating and Indirect Elicitation Approaches (Roumi, Zhang, Stewart, et al., 2022; D.-D. Zhang et al., 2023). Regardless, Linear regression is the most widely used traditional weighting technique, especially in office IEQ studies (Danza et al., 2020; Ncube & Riffat, 2012; Roumi, Zhang, & Stewart, 2022). This is followed closely by regression models, which estimate weights from survey-based measurement datasets, and several studies show weights differ by building type and population (Mujan et al., 2019; Tang et al., 2022). Next are AHP and FAHP, which are used when experts or occupants directly prioritise domains, but the resulting weights vary substantially across stakeholder groups (Rohde et al., 2020; Sorkhan et al., 2024). Newer methods try to capture non-linearity and dynamic weighting, including Bayesian updating, open acceptance models, logarithmic aggregation, variable weight theory, and indirect elicitation with TOPSIS or PROMETHEE (Du et al., 2026; Mahdavi et al., 2026; D.-D. Zhang et al., 2023)

Quality and Validation

Roumi's review proposes five quality criteria for IEQ models: the number of domains, spatial coverage, temporal coverage, analytical rigour, and survey sample size. (Roumi, Zhang, Stewart, et al., 2022; D.-D. Zhang et al., 2023). That framework was introduced because IEQ models are difficult to compare when measurement protocols, weighting schemes and analytical methods vary widely (Fassio et al., 2014; Roumi, Zhang, Stewart, et al., 2022; D.-D. Zhang et al., 2023). The field lacks a standardised protocol for indicators, weighting and cross-building validation, and several reviews conclude that generalised models often miss domain interactions, personal differences and the one-vote veto effect, where the worst IEQ domain dominates overall satisfaction. (D.-D. Zhang et al., 2023; Zhou et al., 2022). The BOB tool is a strong recent example of a subjective-objective benchmarking model because it combines post-occupancy evaluation, measurements, and building data across 48

Danish and Greenlandic office buildings to identify suboptimal conditions and estimate the economic value of IEQ improvement. (Dam-Krogh et al., 2024).

Although these studies provide important insights into IEQ assessment, the present study addressed a broader analytical concern: how building performance and wellbeing assessment approaches connect through their indicators and outcomes.

This study maps the assessment approaches used across both domains and examines the extent to which these two domains overlap and provides a basis for identifying gaps in the assessment of these relationships.

MATERIALS AND METHODS

This study utilises a literature review methodology aided by bibliometric analysis to provide a science mapping of the building performance and wellbeing assessment fields.

The core database employed in this research is Scopus. The search strategy targeted peer-reviewed journal articles, technical reports and conference papers from 1989 to date, focusing on engineering, computer science, energy, architecture and environmental studies.

Query strings combined terms related to building performance, IEQ, wellbeing indicators and post-occupancy evaluation "TITLE-ABS-KEY (("building performance" OR "building performance assessment" OR "building performance evaluation" OR "building assessment" OR "building performance model*" OR "building performance index*" OR "building assessment model*" OR "building evaluation model*") AND (wellbeing OR "well-being" OR "occupant wellbeing" OR "occupant well-being" OR "human wellbeing" OR "human well-being" OR "occupant satisfaction" OR "occupant comfort" OR "quality of life" OR "health and wellbeing") AND (indicator* OR index* OR indice* OR model* OR framework* OR "assessment tool*" OR "evaluation framework*" OR "performance metric*" OR "performance measure*")) AND PUBYEAR > 1989 AND PUBYEAR < 2026". The dataset retrieved was exported in CSV and RIS format and imported in to Zotero (Reference management software) for further analysis.

An initial screening phase was carried out wherein, duplicates were first of all merged within Zotero and then articles were excluded if they (i) did not have full length text available, (ii) were not written in English (iii) unrelated to building performance and wellbeing. After the exclusion metrics were applied, it resulted in a total of 433 entries which were employed in the analysis of the results. The retrieved data was analyzed using Scopus built in analytical tools, while further bibliometric analysis and science mapping were conducted using the bibliometric package in VOSviewer.

The bibliometric maps were generated using VOSviewer version 1.6.21, applying full counting and association-strength normalization, with a clustering resolution of 1 and a minimum cluster size of 1. Keywords were obtained from an RIS file exported from the reference management software. For the keyword co-occurrence analysis, a minimum threshold of 20 occurrences was applied to the 3,106 identified keywords, of which 38 met the threshold and were all selected. For the co-authorship analysis, a maximum of 25 authors per document and a minimum of 4 documents per author were specified. Of the 1,302 authors identified, 12 met the threshold and were selected for the network. The largest connected component comprised of 8 authors, while the remaining authors were disconnected from this component.

In this study, integration refers to the extent to which building performance and wellbeing are considered within the same assessment approach. This includes approaches that

Document by Year

The temporal distribution of publications retrieved from Scopus shows a field that remained largely dormant from the late 1980s through the early 2000 with output rarely exceeding a handful of documents per year. A gradual upward trend becomes visible from around 2010, punctuated by a notable early peak around 2013. However, the most striking feature of the trend is the sharp escalation beginning around

2022-2023, culminating in a dramatic spike to roughly 90 documents in 2025, before a partial decline in the most recent year which is expected since the year is in progress. This pattern suggests that building performance and wellbeing assessment has only recently crystallized into an active rapidly growing research area, consistent with rising global attention to sustainability linked building evaluation frameworks.

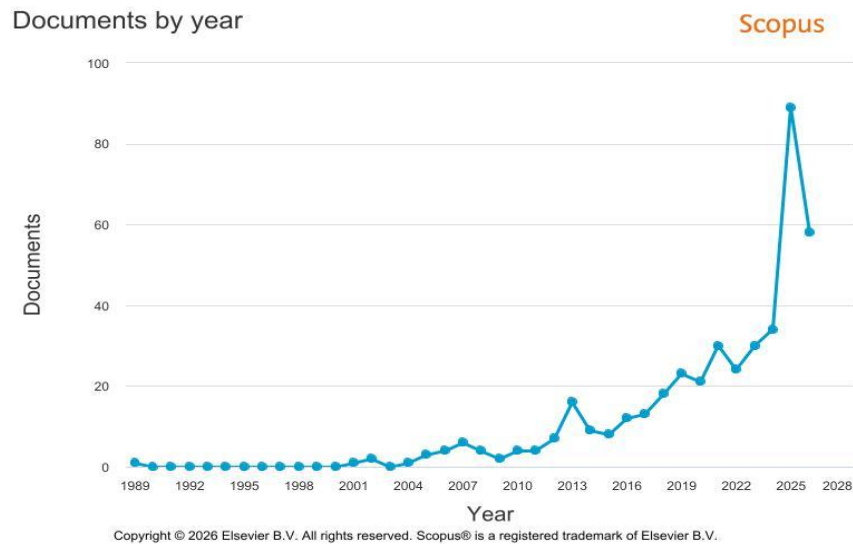


Figure 3: Image Showing the Document Output by Year (source: (Elsevier, 2026))

Documents by Subject Area

The subject area analysis confirms the expected interdisciplinary character of building performance and wellbeing research. Engineering leads by a wide margin 318 results (38.2%), followed by environmental science 113 results (13.6%), energy 85 results (10.2%) and social sciences 82 results (9.8%), the latter likely reflecting the wellbeing dimension of the field, which draws on occupant experiences and behavioural perspectives alongside technical ones.

Computer science, 65 results 7.8% and mathematics 38 results 4.6% point to a growing role of data-driven and computational methods (e.g modelling, simulation, indicator development), while smaller contributions from Business /management, arts and humanities, earth and planetary sciences and physics/astronomy round out the picture, underscoring the field's breadth across technical, social and managerial domains.

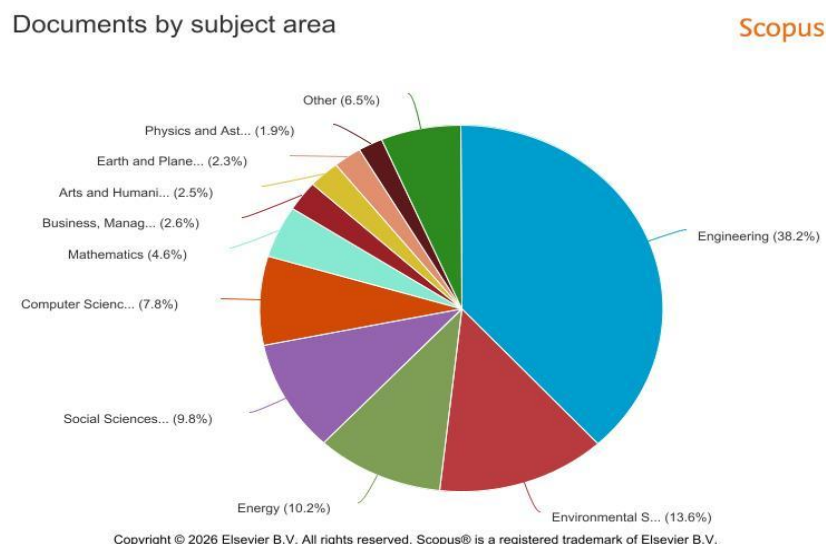


Figure 4: Image Showing Documents by Subject Area (Source: (Elsevier, 2026))

Documents by Affiliation

The affiliation analysis highlights the leading institutions contributing to this research area, led by University College London with 19 documents and Lawrence Berkeley national

laboratory with 13 documents, followed by a cluster of institutions such as Politecnico di Torino, Tsinghua University and Technische Universiteit Eindhoven each contributing around 9 documents. University of Toronto and

Khalifa University follow closely, 8 each , with Norges Teknisk , Natuvitenskapelige universitet and Carleton University completing the top ten, The geographic spread, spanning North America , Europe , the Middle-East and East-

Asia indicates that building performance and wellbeing assessment is a genuinely international research priority , with contributions concentrated among institutions known for strong built environment and energy research programmes.

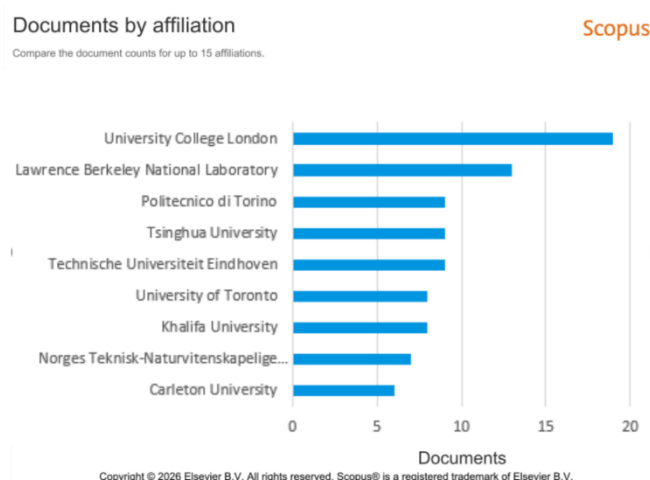


Figure 5: Image Showing Documents by Affiliation (Source: (Elsevier, 2026))

Co-authorship Documents

The co authorship generated using Vosviewer, visualises the collaborative structure among authors meeting the minimum publication /citation threshold in the dataset, with node size indicating relative productivity and colour denoting distinct clusters identified through network clustering.

Using full counting, a minimum threshold of 4 documents per author was applied, with a maximum of 25 authors per document. Of the 1,302 authors identified, 12 met the threshold and were selected for analysis. The networks comprised three clusters, with the largest connected component containing eight authors, while the remaining four were disconnected from this component.

three loosely connected clusters emerge: a blue cluster anchored by Liu Y and Liu K; a green cluster centred on wag

Z , linking davies M and mumovic D and a red cluster built around Hong T , connecting Azar E and Obrien W. notably, Wan Z service as a weak bridging node between the blue/green cluster and the red cluster via a single connecting edge to Hong T , suggestion g only limited cross group collaboration . Overall, the network is sparse and fragmented, with small , tightly knit clusters of two to four authors rather than a single dominant collaborative core indicating that research on building performance and wellbeing assessment approaches is currently produced by relatively isolated research teams with co-authorship links largely confined within institutional or regional groupings (e.g , the UCL affiliated Davies Mumovic pairing) rather than spanning the wider filed.

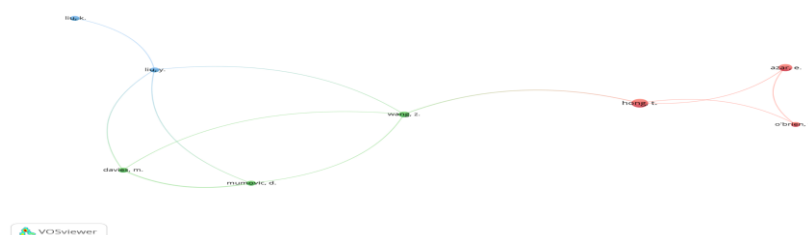


Figure 6: Image Showing Co-authorship Network (Source: (van Eck & Waltman, 2010))

Sankey Diagram

The sankey diagram shows that building performance and wellbeing assessment are represented by an equal number of flows, however, the assessment tools and outcomes differ. Flow values mentioned here represent coded-tool outcome associations rather than publication counts. Assessment tools were identified through a literature search managed in Zotero and coded manually by one reviewer. Each tool was recorded once and classified as building only, wellbeing only or overlap, according to whether the sources describe it as measuring building performance, occupant wellbeing or both. Each distinct indicator and tool covered was counted as one link, so a tools contribution to a domain equals the number of indicators coded under it. Overlap tools were counted once as

tools but contributed links to both domains. Indicators were coded only where the sources state them explicitly. The full coding table showing the counting rules and source reference is provided in supplementary material S1.

Building performance is mainly assessed through green building rating systems, particularly BREEAM (7 flows), LEED (6) POE (5) CASBEE (4) WELL (4) and DGNB (3) which are linked to outcomes such as energy, materials , water , environmental performance and sustainability. In contrast , wellbeing assessment are more varied and tend to be used once or twice includes both building related evaluation methods such as Building health assessment (6), building performance evaluation (5) and post occupancy evaluation POE (5) and psychological assessment tools such

as PERMA profiler (5), personal wellbeing index (5) and wellbeing assessment (5). WEMWBS (4), WHOQOL-BREF (2) and several single use cases, they concentrate on physical health (6), occupant health, mental wellbeing, occupant satisfaction and social relationships. The few tools that straddle both domains such as WELL, FITWEL, Living Building Challenge, The Building Health Assessment and the CBE Occupant Survey act as bridges. They connect IEQ and occupant health indicators and show that integration is possible but not yet the norm. For example, Indoor environmental quality IEQ, with 11 flows is the most frequent endpoint in the diagram, this suggest that it is an important point of connection between physical building conditions and occupant experience. Other outcomes, including physical health and occupant health (6 flows each) and occupant satisfaction (5) flows, further demonstrate the relationship between buildings and human wellbeing. Tools such as WELL, Fitwel, the Living Building Challenge and the CBE

Occupant Survey demonstrate how building performance and Occupant wellbeing can be considered within the same assessment approach, highlighting the overlap between the two domains.

However, including indicators from both domains does not suggest that their relationships are empirically examined. Some approaches assess building conditions and occupant outcomes separately, while other investigate relationships between them. Although the Sankey diagram identifies associations between tools and outcomes, it cannot establish whether these relationships were statistically tested.

The distribution of outcomes also highlights areas that receive comparatively less attention within the coded associations. Productivity and economic performance receive only 2 flows each, while cost value and risk receives 1, indicating that the relationship between building performance, occupant wellbeing and organizational value receives comparatively little attention.

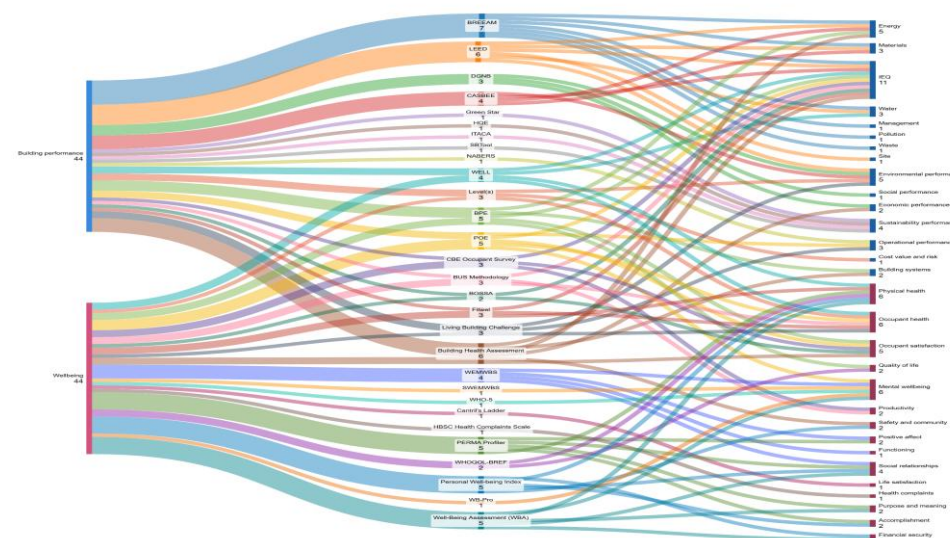


Figure 7: Image Showing Wellbeing and Building Performance Assessment Tools and Their Metrics (Source authors work)

Discussion

The bibliometric mapping reveals that building performance and wellbeing assessment has evolved from a marginal research interest into a rapidly consolidating field. Publication output remained negligible from the late 1980s through the early 2000s, rarely exceeding a handful of documents annually. A modest but sustained upward trend emerged, from around 2010 with an early local peak near 2013 suggests a first wave of interest, plausibly linked to the maturation of post occupancy evaluation and green building certification schemes during that period. The most significant inflection, however, occurs from approximately 2022 onward, culminating in a nearly threefold increase to roughly 90 documents in 2025. This recent acceleration signals that the field has moved beyond a niche, methodologically fragmented pursuit into an area of sustained international priority, likely driven by the convergence of climate performance mandates, post pandemic attention to indoor environmental quality and the growing availability of sensing and computational tools for occupant centric evaluation. The distribution of document type, dominated by journal articles 54.7% and conference papers 29% with reviews comprising under a tenth 9.2% suggest a literature still in an active knowledge generation phase rather than a mature

review saturated one. The relatively low share of reviews is notable: despite the field's rapid growth, systematic consolidation of indicators, indices and frameworks (of the kind this study undertakes) remains comparatively rare, indicating a gap that synthesis oriented work, including the present analysis, is positioned to fill.

The high share of articles and conference papers against a few reviews indicates a field still generating knowledge rather than consolidating it. The co authorship network is sparse, with isolated clusters linked by a single bridging tie. The mapping of assessment approaches shows the same fragmentation. Building performance tools such as BREEAM, LEED and CASBEE focus on environmental and technical indicators, particularly IEQ, while wellbeing instruments such as PERMA, WEMWBS and WHOQOL-BREF address health and psychosocial outcomes and only a few tools (e.g WELL, FITWEL, THE BUILDING HEALTH ASSESSMENT) bridge the two. Together, these findings suggest that rapid growth has produced a proliferation of indicators and frameworks rather than convergence, which underscore the need for integrated harmonised assessment approaches that link building conditions to occupant wellbeing.

Overall, the findings indicate that the field is entering a transitional stage, research output is growing rapidly and becoming more established but weak collaborations and limited synthesis continue to prevent convergence around common assessment standards. This highlights the need for systematic synthesis to connect research clusters, identify areas of agreement and divergence and support the development of more integrated and widely applicable building performance and wellbeing assessment frameworks.

CONCLUSION

In conclusion, this study shows that building performance and human wellbeing are still largely assessed through separate approaches, with indoor environmental quality (IEQ) emerging as the main point of convergence between the two domains. While existing assessment tools provide established methods for evaluating technical building performance and occupant experience, their integration remains limited, particularly in linking building conditions and wellbeing with productivity and organizational value. The findings also reveal differences in the indicators, assessment methods and outcomes used across the literature, making it difficult to establish a common approach for evaluating overall building performance. Future research should therefore focus on developing and validating integrated assessment frameworks that combine technical building performance indicators with occupant wellbeing measures and organizational outcomes. Further studies should also investigate how objective environmental measurements relate to occupants reported experiences, develop more reliable methods for measuring productivity and economic value and explore the use of digital technologies for continuous building performance and occupant wellbeing assessment. These efforts would support a more holistic understanding of how buildings perform not only as physical assets but also as environments that support human wellbeing.

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