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ARTICLE

Analysis and Assessment of Selected Iranian Contemporary Buildings by Well-Building Criteria

Shahram Salimi Sotoudeh* **Shadi Tabarsi**

Department of Architecture, Faculty of Engineering, Shoushtar Branch, Islamic Azad University, Shoushtar, Iran

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ABSTRACT

Aims: Pandemics have brought about new conditions to today's life and designing well-buildings is now a priority. However, having a peek at the prior studies reveals that the most important issue in this area is the disharmony among the different elements of well-buildings. The main objective of this article is addressing the complexities of studying all requirements of such buildings. **Methods**: The main means of undertaking this research are case studies, indeed. First, the ten selected cases will be analyzed by means of the theoretical framework of this research. Then, the results shall be discussed based upon the fundamental design theory, and finally practical resolutions will be suggested. **Findings**: Seven fundamental elements including Air, Water, Nourishment, Light, Fitness, Comfort, and Mind are all simply achievable separately; however, an analysis of the case studies has revealed that gathering them all together would not be an easy task to undertake. **Conclusions**: This study has revealed that the problem of mingling and uniting these seven principal elements is serious and it is rather difficult to put together such elements, simultaneously. Finally, design approach to the very principles is the most important suggestion of this study since it is clear that in the world of architecture, unification is of high importance. Therefore, the secret to the beauty of healthy architecture is the unification of design of all the elements.

1. Introduction

The factors that contribute to a healthy building are numerous and can be explored from several angles. Many requirements must be met in order for a building to be considered healthy. Sound design and construction are required for each building's technical functioning and mechanical stability, as well as the basic safety of its occupants. However, this is insufficient to ensure the occupants' indoor environmental quality (IEQ). A variety of other factors have an impact on the occupants' well-being, either directly or indirectly. Heating, ventilation, and air conditioning are examples of such factors, as are occupant activities such as the use of office equipment or household

*Corresponding Author:
Shahram Salimi Sotoudeh,
Department of Architecture, Faculty of Engineering, Shoushtar Branch, Islamic Azad University, Shoushtar, Iran;
Email: salimisotoudeh.sh@gmail.com

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activities such as cooking, cleaning, or applying pesticides [1].

Current green building criteria are superficial and insufficient for specifying materials and developing ventilation systems to create a healthy indoor atmosphere, i.e. a "healthy building" by design. Public perception, cultural preferences, litigation trends, current codes and regulations, as well as the rapid introduction of new building materials and commercial products, as well as the prevalent design-build practices, all pose challenges to systems integration in the design, construction, and operation phases of modern buildings. We are on the threshold of a paradigm change in the way we think about ventilation design. Previously, the thermal qualities of the air inside a zone governed heating, ventilation, and air-conditioning parameters. The use of occupant-specific and highly sensitive systems will become the standard in the future [2].

The significant subjective changes of indoor discuss and the dynamic increment within the outright number of toxins, combined with the logical mindfulness of the well-being impacts determining from investing more than 90% of one's time interior restricted spaces, have increased the consideration onto the requirements of well-being, cleanliness, and the wellbeing of clients. This logical consideration has delivered considers and investigations valuable for evidence-based experiences into building execution [4].

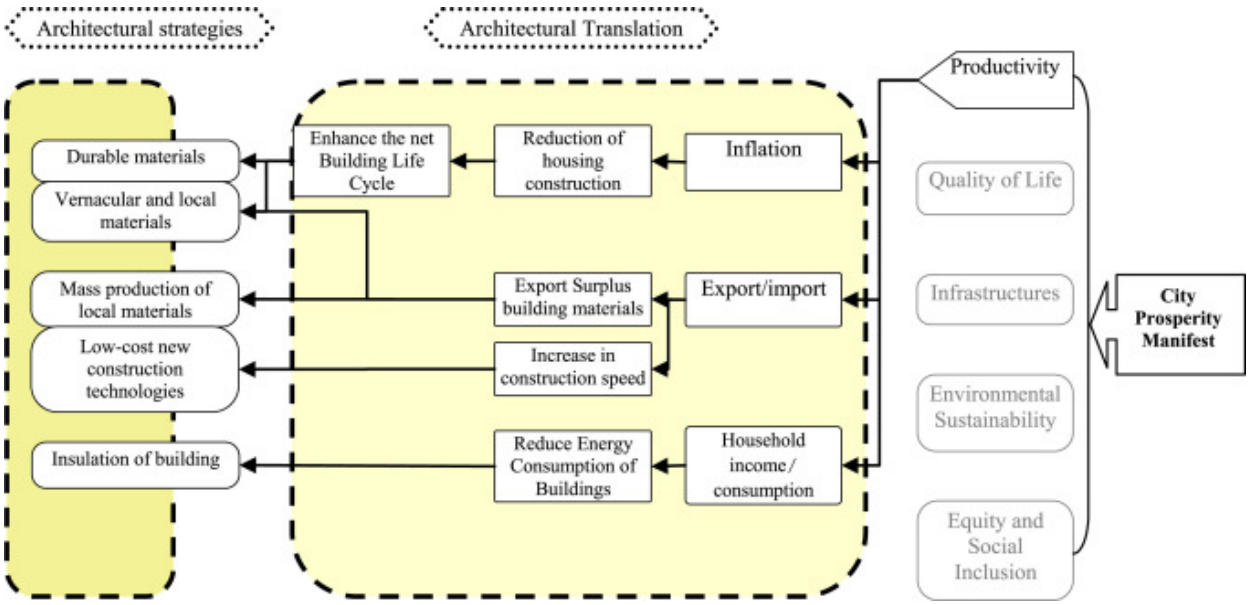

Figure 1. Workflow from idea to design [3]

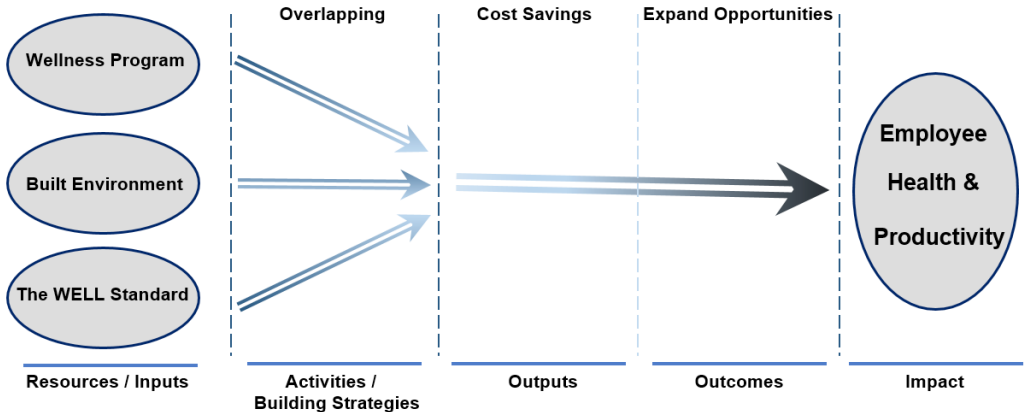

Figure 2. A framework to incorporate wellness programs, built environment, and the well building standard

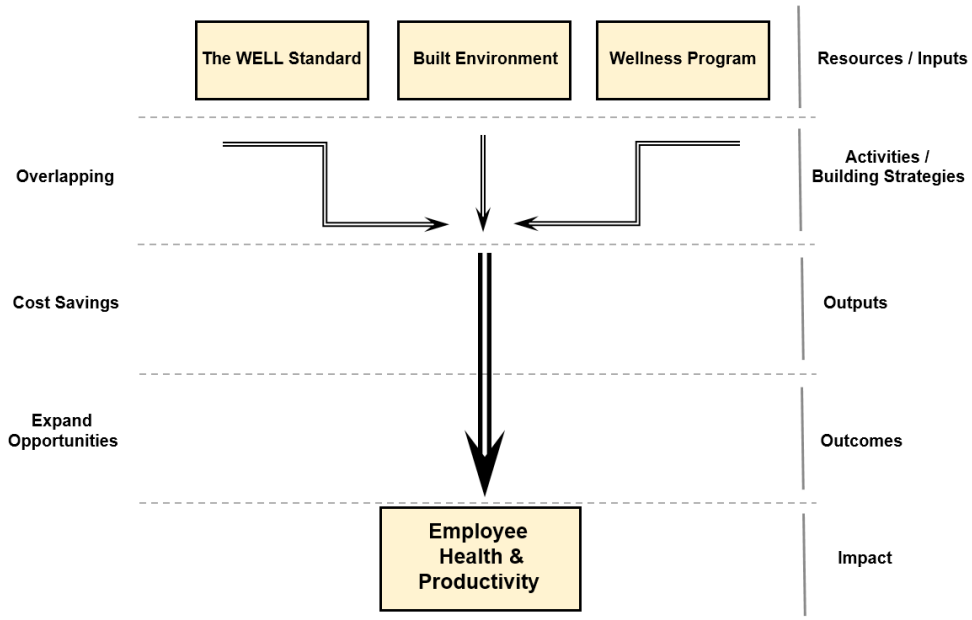

Figure 3. The well-building framework promotes sustainability and efficiency

Among the main pollutants in the indoor environment, Volatile Organic Compounds (VOCs) play a central role, and the use of box-models using the mass balance approach and Computational Fluid Dynamics (CFD) models are now consolidated to study their concentrations in an indoor environment [4].

2. Literature Review

Since 2013, the International WELL Building Institute (IWBI) has commenced its measures in progressing global culture of health through better buildings. It has, moreover, cooperated with corporations which have activities in sustainable architecture and has been approved by them.

"WELL Building Standards" program was the first environmental assessment program in the world to focus on well-being and human health within the administrative building by means of interior designing. Enhancing the physical and psychological health of the human being is done by improving the quality of indoor environment of the building, and it is necessary to resort the "WELL Building Standards" program and using its standards in the interior design [5].

The literature highlights the Rose Bowl at Leeds Beckett University is an iconic building designed to BREEAM Excellent. The experience of staff and pupils in classrooms, offices and lecture theatres was proving to be less than excellent. In order to assess and quantify the different parameters that characterize the Indoor Environment (IE) an Australian Government developed tool, NABERS Indoor Environment was used to evaluate the Rose Bowl. The results of the assessment revealed that the IE in the Rose Bowl less than optimal for staff and student health and weelbeing. There were shortcomings in thermal, acoustic and lighting comfort. In addition, indoor air quality (IAQ) was also not optimal for people. The most significant finding was elevated levels of formaldehyde, which can have significant effects on occupant health [6]. In 2021, California made historic changes to its early learning system [7] that refers to understanding the value of health more than ever.

Rani et al. (2022) studied factors affecting workplace well-being and building construction projects in order to explain healthy concepts of design. Well-being encompasses both physical and mental health, leading to more comprehensive approaches to illness prevention and health promotion [8]. Lower levels of happiness have been linked to an increased risk of disease, illness, and injury, as well as impaired immune function, delayed recovery, and shorter lifespans [9-13]. Asniza Hamimi Abdul Tharim et al. (2022) in "the determinant factors of biophilic design strategies and occupants' psychological performance in office building" emphasized on the role of the design strategies. Urbanization can result in the changing of climate change, global warming, threatens biodiversity, and decrease access to the natural environment. Hence the current lifestyle and urban living make people distance themselves from the natural world, especially during working hours. Therefore, biophilic design strategies function to eradicate the void between modern design, urbanization, and human needs [14].

RazlinMansor and Low Sheau-Ting (2022) in "a meas-

urement model of occupant well-being for Malaysian office building" highlights [15]:

- Indoor environment impacted occupant well-being in an office building.
- AHP methodology was adopted to assign the priority weight.
- The priority weight of the occupant well-being criteria and associated indoor environment parameters for Malaysian office building were determined.
- Occupant health has the highest priority, followed by occupant comfort, occupant safety and occupant adaptation.
- A measurement model of occupant well-being for Malaysian office building was developed.

The literature highlights Human well-being is the responsibility of architects and interior designers. According to their professional position, they must examine many aspects of the surrounding context and the users' environmental parameters [16,17]. The literature emphasizes on the adoption status of sustainable energy technologies [18,19] by controlling the sick building syndrome (SBS). At present, with more and more attention paid to the impact of buildings on the health and well-being of occupants, sick building syndrome (SBS) has become a global concern. Since the introduction of SBS by the World Health Organization (WHO) in 1983, thousands of research literature have been published in this field [19]. Houser et al. (2022) in a method and tool to determine the colorimetric and photobiological properties of light transmitted through glass and other optical materials, showed that synthesis of colorimetric and biological quantities that can be derived from spectral data. It is to be understood that energy and environment have a lot to do with healthy concept and well-building [21]. Securing well-being and building resilience in response to shocks are often viewed as key goals of sustainable development. The literature emphasizes on the role of design in health and well-being [22-27]. Redesign of ZEB Lab building at NTNU was a sample of prioritising passive climate control which shifted toward healthy concept of well-building [28]. The well Building Standard is the first of its kind to focus on the health and wellness of building occupants. It's a dynamic rating system between design and construction with evidence-based health and wellness interventions. It's a holistic design approach addressing seven concepts: air, water, nourishment, light, fitness, comfort, and mind. Within these concepts are 100 "features" intended to address specific aspects of occupant health, comfort, and knowledge. To model these concepts and features, I will be using my Spring 2022 interior design studio project to exemplify the importance and benefits of the well Building Standard in workplace design [29]. The well concepts that support office building occupants' health, well-being, and productivity in a developing country [30]. In the last three decades, many green and sustainable building standards have been established. These standards, however, focus on delivering environment-conscious and energy-saving buildings rather than supporting occupants' health, well-being, and productivity [30]. Recently, the evaluation of well COVID-19 certificate [31] resulted in a promising horizon for meeting the health of the occupants.

The Well-Building Standard is organized into seven categories of wellness called Concepts: Air, Water, Nourishment, Light, Fitness, Comfort and Mind for which specific architectural design standards are mandatory. According to these categories, the International WELL Building Institute (IWBI) issues a certification which enhances the prestige of a brand; like what takes place with ISO certifications. The certification can be issued for construction projects which are planned, in progress or completed and it indicates that these projects have prioritize health issues of customers, employees and employers. This will lead in a uniform attitude.

The certification is issued in three classifications: Silver, Golden and Platinum. For Silver, all prerequisites are required where for Golden all the prerequisites and 40 percent of optimization indicators are essential. Platinum indicates that all the prerequisites plus 80 percent of optimization indicators have been complied with. In order to apply for certification five steps should be taken:

- Registration
- Documents Submission (Required Documents: Annotated Documents, Letters of Assurance (LOAs), General Documents)
- Performance Verification
- Certification Issuance
- Annual Renewal

3. Methodology

The research methodology is based on a comprehensive approach to architectural design process. The research is based on descriptive-analytical methodology. It is to elaborate a discussion in order to find out what the concept of well-building are. The number of the case studies in descriptive and analytical research methodology depends on the quality and quantity of the research. Therefore, the quality and quantity of research dictate the number of cases that are needed in the research [32,33]. The cases are selected by purposive sampling (non-probability sampling) which is also known as judgment, selective or subjective sampling technique. When the researcher relies on his or her own expertise in the field and his or her judgment, "purposive

sampling" (with focused sampling orientation) [34,35] is the best choice for choosing members of the population for studying.

In order to explain and described the method more clearly, it is necessary to have a deep look and further explaination about expert-based analysis in combination with focus group discussion (FGD) technic. The samples of the research was a kind of purposive sampling; therefore, a group of experts including two experienced architects, three related experts (a bank manager, a health assessment expert and a socio-cultural scholar) gathered to analyze the case studies in depth and more precisely. The results are enriched by the group in a close collaboration.

4. Case Study

Tehran is the most leading city in the field of architecture in Iran. Iran is a young country in using electronic banking and it has a long way to reach an acceptable and now people have to go to the branches physically, thus, banks are well case studies with having many branches, employees and customers. Consequently, all the case studies are selected from among Tehran banks.

The research team knows the most important case studies in contemporary architecture of Iran. Therefore, ten different cases have been studied and analyzed:

- Tehran, Pasargad Bank, Pamenar Branch (Branch No. 389,Corner of Marvi, Pamenar st., Panzdah-e-Khordad st., Tehran, 1116965915, IRAN)
- Tehran, Melli Bank, Daneshgah Tehran Branch (No. 1168, Between University and Aboureyhan st., Enghelab st., Tehran, 1315693681, IRAN)
- Tehran, Melli Bank, Fakhr Razi Branch (No. 1228, In Front of Tehran University, After Fakhr-e-Razi st., Enghelab st., Tehran, 1314754361, IRAN)
- Tehran, Maskan Bank, Sattar khan Branch (No. 34, Lower of Habibollah st., Sattar khan st., Tehran, 1455864886, IRAN)
- Tehran, Ayandeh Bank, Ekbatan Town Branch (No. 20, Corner of Tusi Alley, Nafisi St., Phase 1, Ekbatan Town., Tehran, 1393864514, IRAN)
- Tehran, Saderat Bank, 17 Shahrivar Branch (No. 116, Above of Mansour Cross, South Hefdah Shahrivar st., Tehran, IRAN)
- Tehran, Saman Bank, Nafisi St. Branch (No. 59, In Front of Mokhaberat, Nafisi St., Phase 1, Ekbatan Town., Tehran, 1393844181, IRAN)
- Tehran, Keshavarzi Bank, Habibollah Branch (Branch No. 29000, Corner of Habibollah Junc., Sattar khan st., Tehran, , IRAN)
- Tehran, Mellat Bank, Valiasr-Beheshti Branch (No. 371, Corner of Beheshti St., Valiasr St., Tehran, 1595783115, IRAN)
- Tehran, Sepah Bank, Tehran Villa Branch (No. 327, Corner of Niyayesh St., In Front of Habibollah St., Sattar khan st., Tehran, IRAN)

Tehran, Melli Bank, Fakhr Razi Branch: It is located on Enghelab Street - in front of the main door of the University of Tehran .It opened a year ago. According to the gradual change of the banking system in Iran, the first modern banking branch was launched by the National Bank of Iran. The designer pays special attention to performance and beauty so that by creating special features and attracting people's attention, they could encourage them to use new banking systems. Everyone can perform services in certain spaces personally. Its facilities and equipment include:

- New banking system
- Heating and cooling by Duct Split
- Water purifier
- Coffee Shop
- Library
- Web browsing stands
- Free WiFi
- Smart Robot
- Conference room
- Sports space (not yet equipped)

The following points have been carefully considered in the design of this project:

- Use the right colors
- The beauty and fit of the forms
- Transparency of spaces
- Allocation of suitable and sufficient spaces for each function
- Use of appropriate materials
- Proper use of extra spaces
- creation cute views by use flower boxes
- Proper spatial proportions

Table 1. Tehran, Melli Bank, Fakhr Razi Branch

Item	Division	Level of Agreement				
		1	2	3	4	5
Air	Quality					■
	Humidification					■
	Purity				■	
Water	Quality					■
	Treatment				■	
	Drinking Promotion			■		
	Natural access			■		
Light	Color				■	
	Diming		■			
Mind	Collaboration					■
	Quiet Room					■
	On-site child care	-----	-----	-----	-----	-----
	Health and Wellness library					■
Comfort	Ergonomics				■	
	Sound Reduction				■	
	Olfactory Comfort					■
Fitness	Fitness Centers	■				
	Stairs				■	
	Bike Room	-----	-----	-----	-----	-----
Nourishment	Incentives Programs			■		
	Selection / Availability				■	
	Serving Size		■			
	Information		■			
Architectural Design	Venustas / Beauty					■
	Utilitas / Function					■
	Firmitas / Structure					■

Figure 4. Tehran, Melli Bank, Fakhr Razi Branch

5. Results

In this section all the outcomes of the ten case studies are gathered and combined in order to prepare an overlooking perspective toward healthy building contribution in Tehran. The survey includes air, water, light, mind, comfort, fitness, nourishment and "design".

The maximum amount in air indicates 14, in water indicates 12, in light indicates 14, in mind indicates 15, in comfort indicates 13, in fitness indicates 8, in nourishment indicates 8 and in "design" indicates 15. The minimum amount in air indicates 7, in water indicates 5, in light indicates 7, in mind indicates 5, in comfort indicates 8, in fitness indicates 4, in nourishment indicates 7 and in "design" indicates 7.

The comparative analysis emphasized on the role the design elements on the criteria of well building especially "air", "water" and "light". Sustainability is an important part of the design concept in the successful case studies of the research. The results confirmed the role of well-building standard in enhancing the physical and psychological health of the human being. The banks are sample of the indoor environment impacted occupant well-being in an office building.

6. Conclusions

The conclusion highlights that "designing a project based on the function and beauty of architecture" plays an essential role in the quality of the buildings; as well as, the level of satisfaction of the well-building criteria. The designers should be aware of energy consumption and the reduction in carbon emissions from the quantitative analysis for lighting and other energy consuming factors. It in significant to be promoted in the Middle East and North Africa (MENA) region especially.

A designed building tidily resolves many workplace issues, like air condition, vision, comfortable and etc. All of these are subset of seven categories of well building. The conclusion praises the significance of the well Certificate from the International Well Building Institute (IWBI) for measuring human health and well-being of the future buildings in order to be popular in the developing countries such as Iran. The results confirmed the literature that the occupant health has the highest priority, followed by occupant comfort, occupant safety and occupant adaptation.

In bank design, the designer would better focus on well-being and human health within the administrative

Table 2. The Results of the survey

Survey	Air	Water	Light	Mind	Comfort	Fitness	Nourishment	Design
1	11	7	11	6	10	6	7	10
2	8	7	**14**	6	11	**8**	7	**15**
3	**14**	**12**	9	**15**	**13**	**8**	**8**	**15**
4	7	7	8	5	8	5	7	11
5	12	10	10	7	11	7	7	14
6	**8**	5	7	5	8	4	7	7
7	10	9	8	7	10	6	7	13
8	10	9	8	6	9	6	7	11
9	8	7	9	6	8	5	7	10
10	10	9	8	6	10	6	7	11

Table 3. Comparative Analysis Table

Survey	Air	Water	Light
1	10	5	68
2	15	3	76
3	15	1	94
4	11	9	58
5	14	2	78
6	7	10	51
7	13	4	70
8	11	7	66
9	10	8	60
10	11	6	67

building based on the "well Building Standards". It is building materials that affecting workplace well-being in building construction even in highrise building construction projects and non-high-rise building. Since 2014 when the International Well Building Institute introduced the WELL certification system for assessing human health, well-being and sustainability in buildings until now, our general knowledge enhanced more and more. Right now, it is time to express the necessity of the well Building Standards internationally the developing countries.

Study Limitation

The limitations of this study lie in the expert-based assessment which ignores the audiance. Moreover, another outstanding limitation of the study is the subjective effect which marginized the objective aspects of the well-being.

Conflict of Interest

There is no conflict of interest.

References

[1] Loftness, V., Hakkinen, B., Adan, O., et al., 2007. Elements that contribute to healthy building design. Environmental health perspectives. 115(6), 965-970. DOI: https://doi.org/10.1289/ehp.8988

[2] Spengler, J.D., Chen, Q., 2000. Indoor air quality factors in designing a healthy building. Annual Review of Energy and the Environment. 25(1), 567-600. DOI: https://doi.org/10.1146/annurev.energy.25.1.567

[3] Mohtashami, N., Mahdavinejad, M., Bemanian, M., 2016. Contribution of city prosperity to decisions on healthy building design: A case study of Tehran. Frontiers of Architectural Research. 5(3), 319-331. DOI: https://doi.org/10.1016/j.foar.2016.06.001

[4] D'Amico, A., Pini, A., Zazzini, S., et al., 2020. Modelling VOC emissions from building materials for healthy building design. Sustainability. 13(1), 184. DOI: https://doi.org/10.3390/su13010184

[5] Darwish, B.H., Rasmy, W.M., Ghaly, M., 2022. Applying "well building standards" in interior design of administrative buildings. Journal of Arts & Architecture Research Studies. 3(5), 67-83. DOI: https://doi.org/10.47436/JAARS.2022.124889.1073

[6] Ajiboye, P., Garnys, V., Cash, G., 2022. Applying NABERS IE to a University Building in the UK. In ASHRAE Topical Conference Proceedings. pp. 1-8. American Society of Heating, Refrigeration and Air Conditioning Engineers, Inc.. https://www.proquest.com/openview/c954ccde848d963d7a65b1ecdf3d858a/1?pq-origsite=gscholar&cbl=5014767.

[7] Melnick, H., García, E., Leung-Gagné, M., 2022. Building a Well-Qualified Transitional Kindergarten Workforce in California: Needs and Opportunities. Learning Policy Institute. https://learningpolicyinstitute.org/sites/default/files/product-files/California_Transitional_Kindergarten_Workforce_BRIEF.pdf.

[8] Rani, H.A., Radzi, A.R., Alias, A.R., et al., 2022. Factors Affecting Workplace Well-Being: Building Construction Projects. Buildings. 12(7), 910. DOI: https://doi.org/10.3390/buildings12070910

[9] Dunn, H.L., 1959. High-level wellness for man and society. American journal of public health and the nations health. 49(6), 786-792. https://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.49.6.786.

[10] Pressman, S.D., Cohen, S., 2005. Does positive affect influence health?. Psychological bulletin. 131(6), 925. https://psycnet.apa.org/buy/2005-15687-004.

[11] Ostir, G.V., Markides, K.S., Black, S.A., et al., 2000. Emotional well-being predicts subsequent functional independence and survival. Journal of the American Geriatrics Society. 48(5), 473-478. DOI: https://doi.org/10.1111/j.1532-5415.2000.tb04991.x

[12] Ostir, G.V., Markides, K.S., Peek, M.K., et al., 2001. The association between emotional well-being and the incidence of stroke in older adults. Psychosomatic medicine. 63(2), 210-215. https://journals.lww.com/psychosomaticmedicine/Abstract/2001/03000/The_Association_Between_Emotional_Well_Being_and.3.aspx.

[13] Fredrickson, L.B., Levenson, R.W., 1998. Positive emotions speed recovery from the cardiovascular sequelae of negative emotions. Cognition & emotion. 12(2), 191-220. DOI: https://doi.org/10.1080/026999398379718

[14] Tharim, A.H., Ahmad, A.C., Saarani, P.S., et al., 2022. The determinant factors of biophilic design strategies and occupants'psychological performance in office building. Malaysian Journal of Sustainable Environment. 9(3), 87-106. DOI: https://doi.org/10.24191/myse.v9i3.18292

[15] Mansor, R., Sheau-Ting, L., 2022. A measurement model of occupant well-being for Malaysian office building. Building and Environment. 207, 108561. DOI: https://doi.org/10.1016/j.buildenv.2021.108561

[16] McLeod, R.S., Mathew, M., Salman, D., et al., 2022. An investigation of indoor air quality in a recently refurbished educational building. Frontiers in Built Environment. 156. https://static.frontiersin.org/articles/10.3389/fbuil.2021.769761/full.

[17] Mahmoud, N.S., El Samanoudy, G., Jung, C., 2022. Simulating the natural lighting for a physical and

mental Well-being in residential building in Dubai, UAE. Ain Shams Engineering Journal. 29, 101810. DOI: https://doi.org/10.1016/j.asej.2022.101810

[18] Wang, M., Li, L., Hou, C., et al., 2022. Building and health: Mapping the knowledge development of sick building syndrome. Buildings. 12(3), 287. DOI: https://doi.org/10.3390/buildings12030287

[19] Schwartz, E.K., Krarti, M., 2022. Review of Adoption Status of Sustainable Energy Technologies in the US Residential Building Sector. Energies. 15(6), 2027. DOI: https://doi.org/10.3390/en15062027

[20] Houser, K.W., Esposito, T., Royer, M.P., et al., 2022. A method and tool to determine the colorimetric and photobiological properties of light transmitted through glass and other optical materials. Building and Environment. 215, 108957. DOI: https://doi.org/10.1016/j.buildenv.2022.108957

[21] Chaigneau, T., Coulthard, S., Daw, T.M., et al., 2022. Reconciling well-being and resilience for sustainable development. Nature Sustainability. 5(4), 287-293. https://www.nature.com/articles/s41893-021-00790-8.

[22] Hayawi, Z., 2022. Building a proposed mentoring program of emotional rational programme for lowering theFuture Anxeity of college of education for human sciences and pure sciences. Nasaq. 34(3). https://www.iasj.net/iasj/article/239266.

[23] Hashemin, S., Kazemi, A., Bemanian, M., 2020. Examining the Influence of Healing Garden on Mental Health of the Patients by Emphasizing Stress Reduction. Journal of Environmental Science and Technology. 21(12), 263-276. DOI: https://doi.org/10.22034/jest.2020.27268.3636

[24] Mohtashami, N., Mahdavinejad, M., Bemanian, M., 2016. Contribution of city prosperity to decisions on healthy building design: A case study of Tehran. Frontiers of Architectural Research. 5(3), 319-331. DOI: https://doi.org/10.1016/j.foar.2016.06.001

[25] Rasoolzadeh, M., Moshari, M., 2021. Prioritizing for Healthy Urban Planning: Interaction of Modern Chemistry and Green Material-based Computation. Naqshejahan - Basic Studies and New Technologies of Architecture and Planning. 11(1), 94-105. [Persian] DOI: https://dorl.net/dor/20.1001.1.23224991.1400.11.1.7.0

[26] Shams, G., Moshari, M., 2022. Health and Post-Corona: Air Filtration through Building Skins as Biological Membranes. Naqshejahan - Basic studies and New Technologies of Architecture and Planning. 11(4), 44-59. [Persian] DOI: https://dorl.net/dor/20.1001.1.23224991.1400.11.4.3.2

[27] Yazhari Kermani, A., Nasrollahi, F., Mahdavinejad, M., 2018. Investigation of the relationship between depth of overhang and amount of daylight indicators in office buildings of Kerman city. Environmental Health Engineering and Management Journal. 5(3), 129-136. DOI: https://doi.org/10.15171/EHEM.2018.18

[28] Leng, S., 2022. Redesign of ZEB Lab building, NTNU-prioritising passive climate control & comparison with existing (Master's thesis, NTNU). https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/3007024.

[29] Raines, E., 2022. The Importance of the WELL Building Standard in Workplace Design. https://keep.lib.asu.edu/items/165640.

[30] Tan, C.Y., Rahman, R.A., Xia, B., et al., 2022. Streamlining WELL Concepts of Office Buildings for Developing Countries: The Case of Malaysia. Construction Research Congress. pp. 606-616. https://www.researchgate.net/profile/Rahimi-A-Rahman/publication/359066619_Streamlining_WELL_Concepts_of_Office_Buildings_for_Developing_Countries_The_Case_of_Malaysia/links/62327c96d37dab4f96eb0936/Streamlining-WELL-Concepts-of-Office-Buildings-for-Developing-Countries-The-Case-of-Malaysia.pdf.

[31] Yamak, F.B., Doğan, E., 2022. Evaluation of WELL Covid-19 Certificate Structure and Criteria. Kent Akademisi. 15(1), 51-63. DOI: https://doi.org/10.35674/kent.1023057

[32] Wienk, R., 2022. Using Websites as Purposive Sample: An Analysis of How White Supremacist Hate Groups Frame Slavery. DOI: https://dx.doi.org/10.4135/9781529601589

[33] Ayu, A., Syarifuddin, S., 2022. Keterlibatan Pengguna, Budaya Organisasi Dan Kompetensi Pengguna Terhadap Kualitas Sistem Informasi Akuntansi. AKUA: Jurnal Akuntansi dan Keuangan. 1(3), 261-268. DOI: https://doi.org/10.54259/akua.v1i3.932

[34] Thomas, F.B., 2022. The Role of Purposive Sampling Technique as a Tool for Informal Choices in a Social Sciences in Research Methods. https://justagriculture.in/files/newsletter/2022/january/47.%20The%20Role%20of%20Purposive%20Sampling%20Technique%20as%20a%20Tool%20for%20Informal%20Choices%20in%20a%20Social%20Sciences%20in%20Research%20Methods.pdf.

[35] Gutierrez, J.M., Yandug, J.S., 2022. Focused Sampling Orientation: Strategy for Quality Assurance in Company XYZ. https://ieomsociety.org/proceedings/2022istanbul/771.pdf.