

Perception of Wellness Factors of Working People in Housing Projects

Darin Saensamran^{1*}, Siwaporn Klinmalai² and Tipsuda Janjamlah³

^{1,2,3} Faculty of Architecture and Planning, Thammasat University, Pathum Thani, Thailand

* Corresponding author e-mail: darinsaensamran@gmail.com

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Abstract

Climate change and the COVID-19 pandemic have influenced wellness trends. The wellness condominium market in Thailand is expanding rapidly, with working people being the primary target demographic. This study aims to analyze the wellness factors of working people and to compare their perceptions of wellness between residents of vertical housing projects (condominiums) and those of horizontal housing projects (townhouses and single houses). Data were collected through a questionnaire administered to a sample of 123 working people and analyzed using Exploratory Factor Analysis. The analysis identified nine key wellness factors: 1) environment conducive to living, 2) mental balance, 3) openness to learning, 4) stability in work, 5) good relationship with co-workers, 6) good relationship with the community, 7) good health, 8) freedom to live, and 9) self-care from diseases. The findings indicate that overall, working people perceive good relationships with co-workers as the most important, while having good relationships with the community is seen as the least important factor impacting wellness. Variables that influence differences in wellness perceptions include housing project type and income. Working people in condominiums perceive wellness factors as more important than working people in townhouses, in the factors of environment conducive to living, good relationship with the community, and good health. Additionally, working people with incomes not exceeding 15,000 THB per month place less importance on wellness factors compared to those with incomes of more than 65,000 THB per month, in the factors of environment conducive to living, mental balance, openness to learning, stability in work, and good relationship with co-workers. Entrepreneurs, real estate developers, and designers can use the research findings to prioritize wellness factors in housing projects, addressing the diverse needs of different project types and income groups while fostering community engagement and sustainable practices.

Keywords

Wellness; Working People; Vertical Housing; Condominium; Exploratory Factor Analysis

1. Introduction and Background

Climate change and the COVID-19 pandemic are reshaping awareness of wellness and transforming the role of housing to better align with new working behaviors and emerging wellness trends. The wellness

real estate sector, which has been the fastest-growing segment in the wellness economy, has exceeded pre-pandemic projections and overall economic growth trends. It is projected to be the leading growth sector through 2027, with the market size reaching \$398 billion USD and experiencing a +20.5% annual growth rate from 2020 to 2022—177% above the 2019 market level. The sector is anticipated to grow at an annual rate of +17.4% from 2022 to 2027, aiming to reach \$887.5 billion USD (Global Wellness Institute, 2023). In Thailand, wellness condominiums are witnessing sustained growth, particularly in Bangkok, where demand is robust. Working people remain the primary target demographic due to their greater purchasing power and distinctive behavioral characteristics.

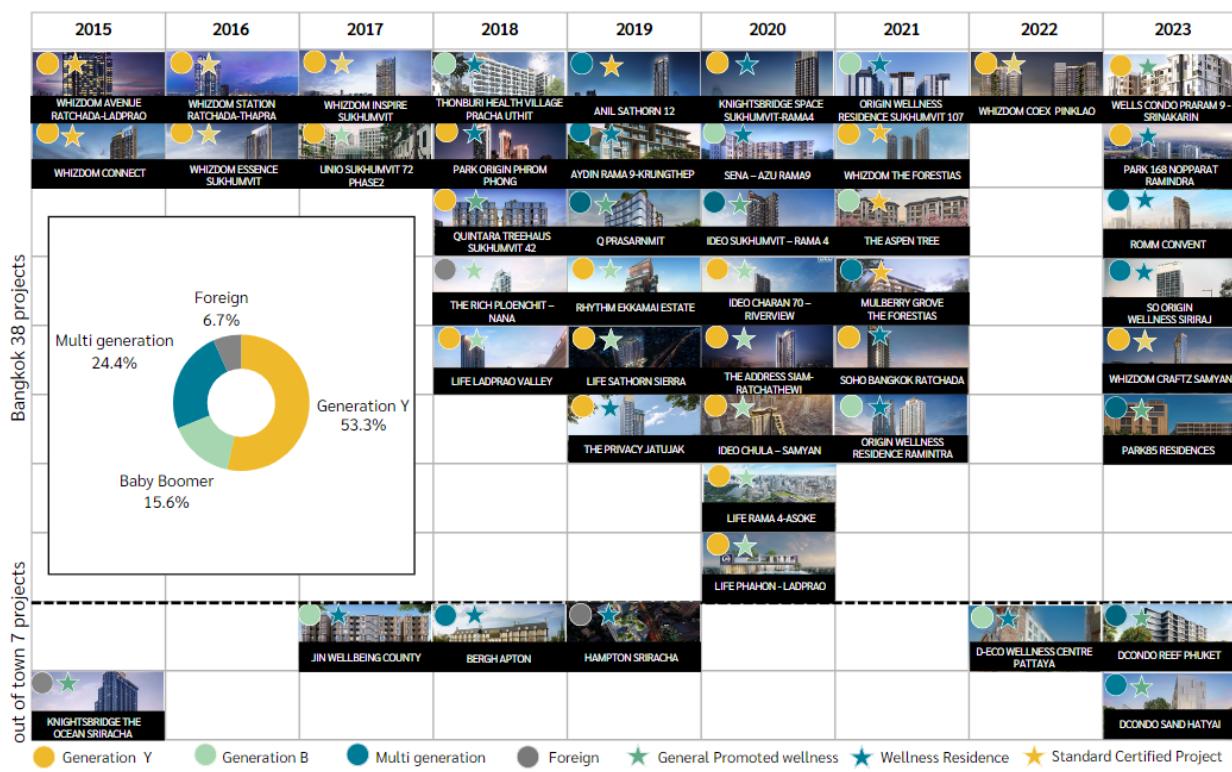


Figure 1. Project launch and target demographic groups of wellness condominiums in Thailand between 2015-2023.

Incorporating wellness concepts into real estate projects offers prospective buyers enhanced options for selecting housing that meet their long-term healthcare needs. The design and development of wellness condominium projects necessitate a thorough understanding of the specific wellness factors relevant to the target demographic. This study aims to analyze the wellness factors of working people and to compare their perceptions of wellness between residents of vertical housing projects (condominiums) and those of horizontal housing projects (townhouses and single houses). The study aligns with the Sustainable Development Goals, specifically Goal 3: Good Health and Well-being, and Goal 11: Sustainable Cities and Communities.

2. Scope of the Study

This study focuses on examining wellness factors for the population of working people, specifically Generation Y, aged 23 to 43 years (as of 2023), who reside in vertical and horizontal housing projects in Bangkok.

3. Literature Review

3.1 Working People

Generation Y (Working People) refers to individuals born between 1980 and 2000 (Office of the National Economic and Social Development Council, 2018), who are between 23 and 43 years old as of 2023. Changes in the demographic structure, characterized by an aging society, declining fertility rates below replacement level, and increased life expectancy, have resulted in the Generation Y population becoming the largest labor force group. This group will play a crucial role in driving the country's development. In 2017, the Gen Y group accounted for approximately 43.6% of the working-age population. In the next 20 years, this proportion is expected to increase to 56.4%. The large working-age population of Gen Y, combined with the transition to a fully aging society, will have important socio-economic implications (Office of the National Economic and Social Development Council, 2020). Globally, this cohort includes approximately 1.8 billion people, or 23% of the global population, with a notable concentration in Asia, where they make up about 24% of the population (Morgan Stanley Capital International [MSCI], 2021). In Thailand, Generation Y includes approximately 19.8 million individuals, representing 30.2% of the total population of 65.65 million. In Bangkok, Generation Y accounts for around 1.6 million people, or 30.3% of the city's population (Department of Provincial Administration, 2023). In Thailand, this age group has an average monthly income in the range of 24,247 THB (National Statistical Office of Thailand, 2017).

Growing up amidst changing social, economic, political, and technological contexts, Generation Y's behaviors, lifestyles, and values differ from those of previous generations. Office of the National Economic and Social Development Council (2020) identifies ten characteristics of Generation Y, including: 1) They are the largest labor force group in the country, 2) They have higher educational attainment than other generations, 3) They possess higher skills when entering the labor market, 4) They are familiar with technology, 5) Their work behavior emphasizes independence and the ability to organize their own tasks, 6) There is an increase in spending on non-essential goods, 7) They have a growing tendency to incur debt, 8) They lack awareness of future financial planning, 9) They marry later and place less importance on having children, and 10) They exercise less. According to a 2015 time-use survey, Gen Y allocates only 1.53 hours per day for physical exercise, while spending an average of 12 hours per day on personal activities. These findings align with various data from SCBEIC and Property Management Services, except for financial behavior. SCB Economic Intelligence Center (2014) states that Generation Y is characterized by being tech-savvy, sociable, making informed decisions, selective, and financially knowledgeable. Bigdealtech (2023) highlights that Generation Y is social media-savvy, creative, values flexibility in work, and prioritizes family stability. They tend to delay having children until they feel ready, show interest in money management, are highly educated, emphasize lifelong learning and skill development, prioritize civic engagement, value justice and human rights, support initiatives benefiting society, and possess entrepreneurial skills.

Moreover, Wittawatolan (2007, as cited in Jinapariwatporn, 2017) identified common characteristics of Generation Y, including self-assurance, low tolerance for boredom, curiosity, a tendency to challenge rules, ambition, technological familiarity, adaptability to change, positive thinking, creativity, self-confidence, and low organizational loyalty. In contrast, Silnitithaworn (2011, as cited in Chartnaphet, 2014) emphasizes different traits of Generation Y, such as intelligence, rapid problem-solving abilities facilitated by technology, multitasking skills, a willingness to embrace challenges, a preference for job independence, open-mindedness, and a tendency to select jobs aligned with their interests and comfort.

In summary, the life satisfaction and wellness of working people, particularly Generation Y, are shaped by behaviors such as independence, self-organization, and technological proficiency. While they exercise less than previous generations, they remain conscious of their health. Financially, they are becoming more aware of money management, although they tend to incur debt and lack long-term planning. Generation Y values social engagement, prioritizes work-life balance, and seeks career flexibility while aiming for personal stability. They also emphasize education, lifelong learning, and skill development in pursuing careers aligned with their values.

3.2 The Concept of Wellness

Wellness is a dynamic and multifaceted concept that extends beyond the absence of illness to include the active pursuit of a balanced and fulfilling life. Swarbrick (2006) defines wellness as “a conscious, deliberate process that requires a person to become aware of and make choices for a more satisfying lifestyle”. University of California, Davis (UCDAVIS, 2019) defines wellness as the care of the mind, body, and soul, influenced by culture and life experiences. It is self-defined and dynamic, encompassing more than merely the absence of illness or stress. Individuals can continue to strive for wellness even amidst these challenges. Meanwhile, The Global Wellness Institute (2020) defines wellness as “the active pursuit of activities, choices and lifestyles that lead to a state of holistic health.” There are two important aspects to this definition. First, wellness is not a passive or static state but rather an “active pursuit” that is associated with intentions, choices and actions as we work toward an optimal state of health and wellbeing. Second, wellness is linked to holistic health that is, it extends beyond physical health and incorporates many different dimensions that should work in harmony. Based on the definitions of wellness above, it generally is viewed as a concept not limited to any specific generation. Wellness can be defined as a state of completeness across various dimensions, including physical, intellectual, emotional, mental, spiritual, social, work, environmental, and financial, with an emphasis on promotion and prevention rather than treatment. However, when considering generational factors, the definition of wellness may differ, particularly regarding the wellness of generation Y (Working People).

In the New Normal, the adult population defines ‘well-being’ as achieving a ‘balanced and happy life,’ which involves maintaining equilibrium across physical, mental, economic, and social dimensions. This concept includes self-reliance, mental comfort, financial security, societal contribution, and overall balance (Rerkluenrit et al., 202 2). Moreover, Generation Y (Working People) places greater emphasis on work-life balance compared to other generations, with a strong focus on self-advocacy. This generation prioritizes mental health alongside physical health, and some individuals also highlight the importance of spiritual well-being (McFadden, 2016). It can be summarized that the wellness of working people can be defined as achieving a balance between success and happiness, with an emphasis on balance rather than completeness across various dimensions.

Housing design plays a crucial role in shaping the wellness and well-being of residents. Global Wellness Institute report has shown that homes, communities, and the surrounding environment significantly influence daily behaviors and lifestyles, accounting for up to 80–90% of individuals’ health. However, historical construction practices often have reinforced lifestyles that contribute to illness, stress, alienation, and dissatisfaction. Conversely, intentionally designed wellness-focused real estate can mitigate these negative impacts by reducing environmental effects on health, promoting healthier behaviors, and incorporating principles from green and sustainable building, design-driven movements, the food movement, New Urbanism, and intentional communities in innovative ways. (Global Wellness Institute, 2018). This is supported by evidence indicating that residents of buildings designed with wellness and well-being principles experience enhanced physical and mental health (Institute for the Built Environment of Colorado State University, 2023). Additionally, improved housing conditions

can save lives, prevent disease, increase quality of life, reduce poverty, and help mitigate climate change (World Health Organization, 2018), which are key components of wellness. The concept for housing goes beyond the physical structure of a dwelling. It also refers to the promotion of mental well-being by a house providing a sense of security and privacy, as well as protection from factors outside its walls. Characteristics of the peridomestic environment include access to services, green spaces, active space and public transport options, as well as social participation in the local community and protection from waste, pollution and the effects of disasters (World Health Organization, 2021).

The wellness real estate sector is both substantial and rapidly expanding, with buyers increasingly willing to invest in healthier living environments. Globally, the pipeline for wellness lifestyle real estate projects is growing; in 2018, the Global Wellness Institute identified over 740 wellness residential projects in development across 34 countries (Global Wellness Institute, 2018).

In Thailand, building standards increasingly are being utilized as tools for developing residential projects that promote the wellness of building occupants. One notable example is the WELL Building Standard, the world's first standard emphasizing wellness and well-being for building users. The latest version, WELL v2, evaluates buildings based on ten concepts: mind, community, movement, water, air, light, thermal comfort, nourishment, sound, material, and innovation (International WELL Building Institute, 2022). Additionally, Thailand's Rating of Energy and Environmental Sustainability (TREES), which serves as the country's sustainability assessment criteria for energy and environmental performance, contributes to enhancing the well-being of residents. This standard evaluates projects across six categories: site and landscape, water, waste and materials, energy, indoor environmental quality, and innovation (Thai Green Building Institute, 2022).

4. Methodology

This article presents quantitative research aimed at identifying wellness factors from the perspective of working people. It begins by conceptualizing the scope of “working people” and “wellness” through a literature review. Subsequently, two experts in housing development for the new generation were interviewed to confirm the concept (in-depth interviews were conducted in October 2023). A list of 50 wellness-related items was then generated and used to develop a questionnaire for a first-hand social survey, aimed at conducting Exploratory Factor Analysis to group the key wellness factors, as presented in Figure 2.

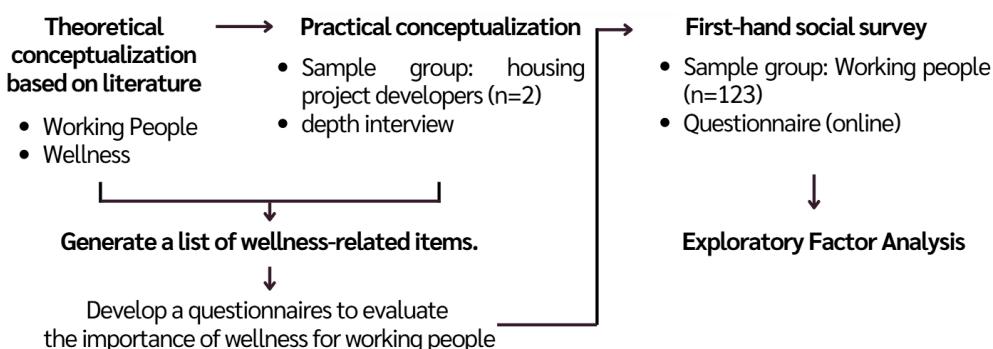


Figure 2. Methodology

4.1 Population and Sampling

From a total population of 130 individuals, a sample group of working people (n=123) was selected. These individuals belong to Generation Y, the largest labor force group in Thailand, aged 23-43 years (as of 2023), and reside in Bangkok.

4.2 Data Collection

Data were collected using a questionnaire designed to assess perceptions of the importance of wellness. The questionnaire, reviewed by three experts, including specialists in sustainable design, housing development, and architectural design research, demonstrated high reliability with a Cronbach's alpha coefficient of 0.969. The questionnaire consisted of 50 items related to the importance of wellness. Respondents rated each item on a scale from 1 to 10, where 1 denoted the least importance and 10 denoted the highest importance. Data collection was conducted in November 2023 via an online platform.

4.3 Data Analysis

Exploratory Factor Analysis using SPSS was used to group the wellness factors of working people and to name them based on the common characteristics of each factor group.

5. Results of the Study

5.1 Characteristics of the Working People

Analysis of the 123 responses revealed the following demographic details: 83.74% were aged between 23 and 32 years, 73.98% were female, and 39.02% were employed in the private sector. Additionally, 93.5% were single, 91.06% were childless, and 80.49% defined their family as consisting of parents. Regarding living arrangements, 29.27% lived alone, 43.09% resided in single houses, and 49.59% had a monthly income ranging from 15,000 to 35,000 THB. Detailed demographics are presented in Table 1.

Table 1. Demographic Summary of the Characteristics for Working people Participating in the Survey

General data	Groups	n	Percentage
1. Age	1.1 23-32 years	103	83.74
	1.2 33-43 years	20	16.26
2. Gender	2.1 Female	91	73.98
	2.2 Male	16	13.01
	2.3 LGBTQIA+	16	13.01
3. Occupation	3.1 Working student	24	19.51
	3.2 Government officer/Government enterprise	22	17.89
	3.3 Private sector employee	48	39.02
	3.4 Entrepreneur/Freelance	28	22.77
	3.5 Jobless	1	0.81
4. Marital status	4.1 Single	115	93.5
	4.2 Married	8	6.5
5. Parental status	5.1 Childless	112	91.06
	5.2 Have Children	11	8.94

Table 1. Demographic Summary of the Characteristics for Working people Participating in the Survey. (Continued)

General data	Groups	n	Percentage
6. Family	6.1 Alone 6.2 Parent 6.3 Relatives 6.4 Friend 6.5 Pet	5 99 13 1 5	4.065 80.49 10.57 0.81 4.065
7. Housemate	7.1 Living alone 7.2 Living with 1-2 people 7.3 Living with 3-4 people 7.4 Living with 5 people or more	36 35 34 18	29.27 28.46 27.64 14.63
8. Type of residential	8.1 Condominium 8.2 Single House 8.3 Townhouse 8.4 Other	44 53 15 11	35.77 43.09 12.20 8.94
9. Income	9.1 Income less than 15,000 THB per month 9.2 Income 15,000-35,000 THB per month 9.3 Income 35,000 -65,000 THB per month 9.4 Income more than 65,000 THB per month	24 61 27 11	19.51 49.59 21.96 8.94
Total		123	100.00

5.2 The Results of the Grouping of Wellness Factors

This analysis aims to quantify the wellness factors of working people. Using Exploratory Factor Analysis with SPSS, the data were derived from responses to 50 questions regarding the perceived importance of wellness. The sample consisted of 123 participants, with the following details:

Finding the optimal number of variable groups: Using the Principal Component Analysis method, it was determined that the 50 observed variables (questions) could be grouped into nine factors. These factors explain 72.407% of the variance in the wellness components for working people, with an initial eigenvalue of 1.085.

The grouping of questions is an analysis to find out which groups or factors all 50 observed variables belong to, using the Varimax Rotation analysis method. The results of the analysis of clustering and grouping of observed variables (questions) indicate that the wellness of working people is divided into nine main factor groups, as presented in Table 2.

Table 2. The Grouping of 9 Wellness Factors.

Factors	Details of observable variables (questions)	Mean	SD.
Factor 1 Environment conducive to living	Having a pleasant environment Having a clean and organized environment Having a private environment Having a safe environment Having an environment that promotes positive energy Having an environment that promotes your self-image Having an environment that promotes ease of living Having an environment conducive to living	7.81	1.44

Table 2. The Grouping of 9 Wellness Factors. (Continued)

Factor 2 Mental balance	The ability to handle stress and anxiety Emotionally stable and resilient to disappointment Having good mental health and a clear mind Sleep soundly Having self-esteem and confidence Having self-assurance Concentration and mindfulness Work life balance Having positive energy	7.68	1.51
Factor 3 Openness to learning	Can work in any situation Can learn fast Having technology skills Can solve any problem Lifelong Learning Having a vision or an open perspective Awareness of environmental impacts Work that promotes potential Having financial knowledge	7.92	1.22
Factor 4 Stability in work	Achieved success in work Debt-free and manageable Happy at work Having money and not being in poverty Having stability in life and family Having enthusiasm at work Having goals in life Having flexibility and independence at work	7.65	1.44
Factor 5 Good relationship with co-workers	Having a job Teamwork Having a good relationship with co-workers Working efficiently	8.43	1.18
Factor 6 Good relationship with the community	Participation in community development and society Having good relationships with people around	6.23	2.33
Factor 7 Good health	Having strong health for age Self-care to prevent diseases Self-reliant	8.16	1.31
Factor 8 Freedom to live	Having the authority and rights to make decisions about every aspect of one's own life Acceptance from family Can be a refuge for family and others Having an equal and just society	8.04	1.36
Factor 9 Self-care from diseases	Having a congenital disease but it does not affect daily life The brain is not forgetful or fuzzy Self-care to prevent contagious diseases	7.24	1.72

*Scale 1-10

The naming and definition of the factors, derived from analyzing the common characteristics among the observed variables (questions), are as follows:

Factor 1: Environment conducive to living refers to having a pleasant, clean, and organized environment that provides privacy and safety. It also means having an environment that promotes positive energy, enhances self-image, and facilitates ease of living.

Factor 2: Mental balance refers to having good mental health and a clear mind, sleeping soundly, having the ability to handle stress and anxiety, being emotionally stable and resilient to disappointment, maintaining positive energy, concentration, and mindfulness, having self-esteem and confidence, possessing self-assurance, and achieving work-life balance.

Factor 3: Openness to learning refers to having an open vision or perspective, being aware of environmental impacts, commitment to lifelong learning, the ability to learn fast, having financial knowledge, possessing skills in various fields such as technology and problem-solving, being adaptable to various situations, and being capable of working in any environment to promote personal growth.

Factor 4: Stability in work refers to having life goals, achieving success at work, finding happiness in work, having enthusiasm at work, having flexibility and independence at work, including the ability to work from anywhere, achieving stability in personal life and family, and having financial security, thereby avoiding poverty.

Factor 5: Good relationship with co-workers refers to having a job, working efficiently, fostering positive interactions with co-workers, engaging in teamwork, and being able to communicate and exchange opinions with others.

Factor 6: Good relationship with the community refers to participating in community development and society, as well as fostering good relationships with people such as family members, co-owners, juristic persons, and neighbors.

Factor 7: Good health refers to having strong health suitable for one's age, actively practicing self-care to prevent diseases, and being self-reliant in maintaining overall well-being.

Factor 8: Freedom to live refers to having the authority and rights to make decisions about every aspect of one's own life, acceptance from family, being able to provide refuge for family and others, and living in an equal and just society.

Factor 9: Self-care from diseases refers to self-management and rehabilitation strategies for optimal health. This includes having a congenital disease that does not affect daily life, maintaining cognitive sharpness without forgetfulness or fuzziness, and the ability to prevent contagious diseases.

It was found that working people perceived the importance of good relationship with co-workers as the highest (mean = 8.43), while the importance of good relationship with the community was perceived as the lowest (mean = 6.23). Overall, the perceived importance of wellness among working people is relatively high.

5.3 The Analysis of the Mean Differences in the Importance of Wellness among Working People in Condominiums, Single Houses, and Townhouses

An analysis of mean differences in perceptions of the importance of wellness among three groups of working people: residents of condominiums, single houses, and townhouses was conducted using one-way ANOVA. The results revealed significant differences in perceptions of wellness among the groups specifically, in Factor 1 (environment conducive to living), Factor 6 (good relationship with the community), and Factor 7 (good health).

Post Hoc tests were conducted to identify which groups differed in their perceptions of the importance of wellness for Factors 1, 6, and 7. The analysis revealed that residents of condominiums perceived the importance of wellness to be significantly higher than residents of townhouses across all three factors. However, residents of single houses did not show a significant difference in their perception of wellness compared to either condominium or townhouse residents. Detailed results are presented in Table 3.

Table 3. The Analysis of the Mean Differences in the Importance of Wellness among Working People in Condominiums, Single Houses, and Townhouses.

		n	Mean	SD.	F	Post Hoc Test
Factor 1 Environment conducive to living	A Condominiums	44	8.07	1.16996	3.188*	A>C
	B Single Houses	53	7.90	1.51595		
	C Townhouses	15	7.00	1.75573		
Factor 2 Mental balance	A Condominiums	44	7.80	1.29019	2.774	-
	B Single Houses	53	7.78	1.72386		
	C Townhouses	15	6.79	1.53930		
Factor 3 Openness to learning	A Condominiums	44	8.00	1.13451	2.965	-
	B Single Houses	53	8.06	1.30190		
	C Townhouses	15	7.22	1.05242		
Factor 4 Stability in work	A Condominiums	44	7.70	1.31104	2.365	-
	B Single Houses	53	7.84	1.59343		
	C Townhouses	15	6.93	1.19323		
Factor 5 Good relationship with co-workers	A Condominiums	44	8.51	1.09033	1.357	-
	B Single Houses	53	8.54	1.29755		
	C Townhouses	15	7.98	1.05419		
Factor 6 Good relationship with the community	A Condominiums	44	6.66	2.11246	3.229*	A>C
	B Single Houses	53	6.30	2.48135		
	C Townhouses	15	4.90	2.33146		
Factor 7 Good health	A Condominiums	44	8.27	1.13570	4.220*	A>C
	B Single Houses	53	8.30	1.37228		
	C Townhouses	15	7.22	1.58698		
Factor 8 Freedom to live	A Condominiums	44	8.20	1.20834	1.676	-
	B Single Houses	53	8.13	1.57094		
	C Townhouses	15	7.47	1.13337		
Factor 9 Self-care from diseases	A Condominiums	44	7.34	1.52072	0.039	-
	B Single Houses	53	7.26	1.90326		
	C Townhouses	15	7.22	1.64107		

* P < 0.05

5.4 The Analysis of the Mean Difference in the Importance of Wellness among Working People with Different Incomes

Birley (2000, as cited in Setthetham et al., 2004) stated that good health depends on various forms of health capital, particularly financial capital, such as income. Higher income and social status are linked to better health. The greater the gap between the richest and poorest people, the greater the differences in health (World Health Organization, 2024). Therefore, income should be considered when comparing the perceived importance of wellness.

An analysis of mean differences in perceptions of the importance of wellness among four income groups:

those with incomes not exceeding 15,000 THB per month, those with incomes 15,001-35,000 THB per month, those with incomes 35,001-65,000 THB per month, and those with incomes more than 65,000 THB per month was conducted using one-way ANOVA. The results indicated statistically significant differences in perceptions of wellness across every factor, except for Factors 6 and 7.

Post Hoc tests revealed that people with incomes not exceeding 15,000 THB per month perceived the importance of wellness to be lower compared to other income groups across Factor 1 (environment conducive to living), Factor 2 (mental balance), Factor 3 (openness to learning), Factor 4 (stability in work), and Factor 5 (good relationship with co-workers). Detailed results are presented in Table 4.

Table 4. The Analysis of the Mean Difference in the Importance of Wellness among People with Different Incomes

		n	Mean	SD.	F	Post Hoc Test
Factor 1 Environment conducive to living	A 0-15000	24	6.99	1.41705	5.464*	A<C&D
	B 15001-35000	61	7.81	1.46640		
	C 35001-65000	27	8.09	1.26520		
	D > 65000	11	8.86	0.65061		
Factor 2 Mental balance	A 0-15000	24	6.99	1.83071	4.176*	A<D
	B 15001-35000	61	7.58	1.41580		
	C 35001-65000	27	8.13	1.30552		
	D > 65000	11	8.59	0.94815		
Factor 3 Openness to learning	A 0-15000	24	7.19	1.48951	5.058*	A<B&D
	B 15001-35000	61	7.99	1.08357		
	C 35001-65000	27	8.11	1.17589		
	D > 65000	11	8.69	0.69534		
Factor 4 Stability in work	A 0-15000	24	6.72	1.81227	7.298*	A<C&D
	B 15001-35000	61	7.63	1.31735		
	C 35001-65000	27	8.11	1.11086		
	D > 65000	11	8.74	0.54902		
Factor 5 Good relationship with co-workers	A 0-15000	24	7.24	1.38995	13.546*	A<B&C&D
	B 15001-35000	61	8.64	0.99218		
	C 35001-65000	27	8.81	0.87523		
	D > 65000	11	8.93	0.57108		
Factor 6 Good relationship with the community	A 0-15000	24	5.44	2.14837	1.387	-
	B 15001-35000	61	6.30	2.47382		
	C 35001-65000	27	6.54	2.11190		
	D > 65000	11	6.86	2.19193		
Factor 7 Good health	A 0-15000	24	7.76	1.81374	1.955	-
	B 15001-35000	61	8.08	1.29050		
	C 35001-65000	27	8.51	0.85420		
	D > 65000	11	8.64	0.75210		

Table 4. The Analysis of the Mean Difference in the Importance of Wellness among People with Different Incomes (Continued)

Factor 8 Freedom to live	A 0-15000	24	7.30	1.74141	3.666*	No difference finding
	B 15001-35000	61	8.11	1.15156		
	C 35001-65000	27	8.30	1.38508		
	D > 65000	11	8.64	0.83937		
Factor 9 Self-care from diseases	A 0-15000	24	6.40	1.85196	3.136*	No difference finding
	B 15001-35000	61	7.51	1.74013		
	C 35001-65000	27	7.10	1.43763		
	D > 65000	11	7.88	1.40849		

* P < .05

6. Discussion and Conclusions

6.1 Project Type and Income Impact the Perceived Importance of Wellness of Working People

The study identified nine key wellness factors of working people: 1) environment conducive to living, 2) mental balance, 3) openness to learning, 4) stability in work, 5) good relationship with co-workers, 6) good relationship with the community, 7) good health, 8) freedom to live, and 9) self-care from diseases. These factors reflect the unique challenges and needs of working people. In comparison, general wellness definitions by Swarbrick (2006), UCDAVIS (2019), and the Global Wellness Institute (2020) are broader in scope. The wellness factors identified in this study are context-specific, focusing on the direct impact of work and environment on personal wellness. This highlights the need for environments that foster both professional success and personal growth, making wellness for working people a more targeted approach to improving quality of life.

Overall, working people perceived “good relationships with co-workers” as the most important wellness factor, while “good relationships with the community” was rated as the least important. Due to changing lifestyle and the COVID-19 pandemic, which has led to the rise of the hybrid working trend between working from home and working from the office (Ditto Data Intelligence, 2024), a survey by Upwork found that, despite the end of the COVID-19 pandemic, over 61.9% of companies still intend to continue supporting the increase of remote work (True Virtual World, 2023). Therefore, work and housing have become increasingly interconnected. Working from home while maintaining good relationships with co-workers and others is considered crucial. Housing projects, both vertical and horizontal, therefore, must integrate work-friendly environments, providing at least an efficient workspace, such as quiet rooms and stable Wi-Fi to support video calls (Demeter, 2021). Many housing developments now focus on communal areas designed as workspaces and co-working spaces, which encourage interaction, foster business connections, stimulate creativity through varied work settings, and offer essential work-related amenities like power outlets and reliable internet access (True Virtual World, 2023).

Project type significantly impacts perceptions of the importance of wellness. Residents of vertical housing (condominiums) place a greater emphasis on wellness compared to residents of horizontal housing (townhouses) in three key factors: 1) environment conducive to living, 2) good health, and 3) good relationship with the community. This suggests that different living environments influence wellness perceptions. For instance, in terms of an environment conducive to living, condominiums often have an advantage over townhouses due to their prime locations in the heart of downtown, offering ease of commuting. They provide convenient access

to sources of jobs, supported by the extensive coverage of urban transit systems, which reduces additional travel time. In contrast, townhouses typically are located in areas near the city. Although condominiums generally offer less private living space compared to townhouses, they compensate by providing shared spaces, such as co-working areas within the building or leisure activities in common areas, thereby reducing need to go out (Siam Commercial Bank [SCB], 2018). Condominiums will have a variety of attractive amenities that can be shared with other residents. Additionally, they typically provide 24/7 security features, including CCTV surveillance and gated access, ensuring a higher level of safety. This level of security often is superior to that of townhouses (Lazudi, 2022).

Income is another variable that impacts the perceived importance of wellness. People with lower incomes (not exceeding 15,000 THB per month) place a lower importance on wellness than those in other income groups, with the largest gap in wellness perception occurring between low-income and high-income people (more than 65,000 THB per month). across five factors: 1) environment conducive to living, 2) mental balance, 3) openness to learning, 4) stability in work, and 5) good relationships with co-workers. Only good health and good relationships with the community were fundamental factors perceived as equally important across all income groups. The impact of income differences on the perceived importance of wellness can be explained by Maslow's hierarchy of needs (1943), which states that human needs are divided into hierarchies. Humans will have higher-level needs once their basic needs are met. Those with higher financial resources are better able to meet their basic needs, enabling them to focus on higher-level needs in a sequential manner. Developers should prioritize promoting good health and good relationships within the community in housing projects, as these are fundamental wellness factors perceived as important across all income groups. To attract higher-income target groups, developers may need to intensify efforts to enhance factors such as an environment conducive to living, mental balance, openness to learning, stability in work, and good relationships with co-workers.

6.2 Wellness Factors of Working People for Housing Design and Development

In practice, the design and development of wellness housing projects can incorporate factors that have a coherent concept. Based on the analysis of the common characteristics of observed variables within the nine identified factors, it is possible to summarize the wellness factors of working people that can be used as criteria or guidelines for designing and developing housing projects as follows: 1) environment conducive to living, 2) mental balance, 3) openness to learning, 4) good relationship with the community, 5) freedom to live, 6) stability and positive working relationships, combining stability in work and good relationships with co-workers, are key aspects of occupational wellness. According to JobsDB's Happy Meter (2015), poor co-worker relationships are a leading cause of job dissatisfaction and resignation, underscoring their strong link to job stability. 7) health resilience is the ability to recover and adapt to health challenges while managing daily life. It integrates good health, focusing on wellness and disease prevention, and self-care from diseases, emphasizing self-management and rehabilitation. According to the World Health Organization (2024), developing resilient health systems enables countries to effectively prevent, prepare for, detect, adapt to, respond to, and recover from public health threats.



Figure 3. Incorporate Factors based on the Analysis of Common Characteristics

The study underscores the importance for developers, designers, and policymakers to integrate wellness-oriented design and policies that address the diverse needs of working people, considering various project types and income levels. By providing a thorough understanding of the wellness requirements of working people, the study offers crucial insights for project planning and development. Developers can use these insights to design projects that effectively meet the specific wellness needs of their target group. Designers can apply the findings to create environments that promote better health and overall well-being. Furthermore, the study's results can guide both government and private sector stakeholders in shaping community development policies that cater to different income groups and housing types, ultimately improving quality of life for a broader population.

Future research should further explore the physical factors and project management practices associated with the wellness of working people. This will help refine and enhance the effectiveness of wellness-focused design and policy-making.

Author Contributions

Conceptualization, D.S.; methodology, D.S. and T.J.; formal analysis, D.S. and T.J.; investigation, D.S. and T.J.; data curation, D.S.; writing-original draft preparation, D.S.; writing-review and editing, D.S.; visualization, D.S. and S.K.; supervision, D.S., S.K., and T.J.; project administration, D.S. All authors have read and agreed to the published version of the manuscript.

Human Subjects

All research procedures involving human participants adhered to ethical standards, ensuring voluntary participation, informed consent, and confidentiality of data with no identification of participants disclosed.

Use of Generative Artificial Intelligence (AI) and AI-Assisted Technologies

During the preparation of this manuscript, ChatGPT was used to check the grammatical accuracy of the text. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

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