

From nature to design: the role of nature connectedness in shaping biophilic design preferences, attitude, and behaviour

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ABSTRACT

Nature connectedness (NC) is crucial in shaping an individual's environmental awareness, as well as attitude and behaviour towards nature and the environment. Biophilic design can positively impact an individual's health and well-being. However, the impact of NC on biophilic design has yet to be explored. This study aims to investigate the role of NC in shaping biophilic design preferences, attitude, and behaviour. The objective is to examine the relationship between NC and biophilic design preferences, attitude, and behaviour. Questionnaires were distributed online to 123 respondents using convenience sampling. Data were analysed using mean score, standard deviation, and correlation analysis. The results indicate that people have a more positive attitude towards Nature in Space than Nature Analogues. Respondents also prefer Nature in Space over Nature Analogues, and these features have a greater impact on well-being. Furthermore, as the NC level increases, preferences, attitude, and behaviour towards biophilic design also become more positive. The R^2 values highlight the important role of NC in predicting responses to biophilic features: 34% of the variance in preferences, 29% in attitudes, and 33% in behaviour toward biophilic design. Overall, the study suggests that NC is vital and needs to be developed, especially from childhood, through direct and indirect exposure to nature in the built environment and environmental education. Subsequently, a higher level of NC will shape positive attitude and behaviour towards nature, specifically biophilic design, which further contributes positively to health, well-being, and the sustainability of future generations. Further research directions have also been outlined.

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1. INTRODUCTION

In an increasingly urbanized and technological world, human disconnection from nature has become a growing concern (Zhong et al., 2024). As awareness grows about the positive impact of nature on human health and well-being, reconnecting human with nature in the built environment has become a critical focus (Nijole et al., 2025; Cacique et al., 2022; Aristizabal et al., 2021). Biophilic design, introduced in the early 21st century and rooted in the biophilia hypothesis, aims to restore this connection by integrating natural elements into the built environment in architectural, interior, and landscape contexts (Zhong et al., 2024). Biophilic design approaches have been shown to benefit human health and well-being by enhancing psychological comfort, reducing stress, and promoting a sense of overall well-being (Khajehpasha et al., 2024). Studies have shown that biophilic design in settings such as schools (Mustapa et al., 2024), offices (Aristizabal et al., 2021), and healthcare facilities

(Zakaria et al., 2024) improves mood, reduces mental fatigue, enhances cognitive performance, and supports well-being (Zhong et al., 2024). Studies have also indicated that biophilic design positively impacts the connection between people and nature in the building environment (Aristizabal et al., 2021; Zhong et al., 2022; Latini et al., 2024). Although prior research has shown the importance of biophilic design for well-being, less is known about how individuals develop preferences, attitudes, and behaviour towards biophilic environments.

Many studies have demonstrated that nature connectedness (NC) is important in developing a positive attitude and behaviour towards the environment. Indeed, NC has positively influenced people's environmental concerns and behaviours (Tang et al., 2025; Mohammadi et al., 2024). Previous studies have also shown that NC is associated positively with other specific attitudes towards nature and the environment, including wildlife (Zhang et al. 2014b), tourism (Tang et al., 2025), and the landscape (Kaltenborn & Bjerke

2002). Another study by Lin et al. (2017) found that people with high NC planted more trees in their yards and spent more time there. As a result, they get more ecosystem benefits, such as noise reduction, as well as physical, health, and well-being benefits from their yard as they frequently spend more time there.

Given the positive outcome of NC on individuals' attitude and behaviour towards nature and the environment, there is still a scarce understanding of how NC shapes an individual's biophilic design preferences, attitude, and behaviour, as biophilic design remains a relatively new trend. In the Malaysian context, studies on biophilic design and well-being have increasingly gained attention across various settings, including schools (Mustapa et al., 2024), offices (Zulkifli et al., 2024; Ahmad Zharif & Azmi, 2024), higher education institutions (Sakip et al., 2024), and residential environments (Che Wil & Ismail, 2025). As biophilic design continues to be integrated into urban planning and architecture, its core principles are also meaningfully applied at the individual level, enabling people to embed biophilic elements into their surroundings and spaces to support their well-being. However, limited research has examined how NC shapes individuals' biophilic design preferences, attitudes, and behaviours. Hence, a growing understanding of the connection between NC and biophilic design preferences, attitude, and behaviour is vital to foster more sustainable, health-promoting environments. Therefore, this study aims to investigate the role of NC in shaping biophilic design preferences, attitude, and behaviour. The objective of this study is to examine the relationship between NC and biophilic design preferences, attitude, and behaviour.

2. LITERATURE REVIEW

2.1 Nature connectedness

NC has been defined as a disposition towards nature and is rooted in the biophilia hypothesis that emphasises the human-nature connection. The term "biophilia" was coined by evolutionary biologist Edward O. Wilson in 1984. He defined biophilia as "the innate tendency to focus on life and lifelike processes" (Wilson, 1984, p. 1). In other words, biophilia refers to a love of nature, an attraction to it, and a sense of connection to the natural world (Kellert & Wilson, 1993). Wilson (1984) has claimed that humans' connection to nature is genetically based, and later, Kahn (1999) proposed that culture, social experiences, and direct experiences with nature can influence people's biophilia tendencies. A considerable number of studies have demonstrated that additional experiences with nature increase children's biophilia score, affinity towards nature, and NC (Collado et al., 2013; Zhang et al., 2014b).

The notion of being connected to nature is a psychological one and has been conceptualized in various ways involving three psychological domains, specifically, cognitive, affective, and behavioural domains. The cognitive domain includes meanings, beliefs, thoughts, and knowledge about nature (Perrin, 2009), and the affective domain includes feelings and emotions related to nature (Cheng and Monroe, 2010). Meanwhile, the behavioural domain involves behavioural inclinations, intentions, commitment, and actions with respect to nature (Clayton, 2003). The behavioural domain can also be referred to as past behaviours (Huskinson & Haddock, 2006) related to nature.

2.2 Biophilic design

Biophilic design originates from the concept of biophilia. At the beginning of the 21st century, the notion of biophilia was adapted to the built environment. There are three main frameworks or conceptualizations of nature-based or biophilic design: two dimensions, six elements, and 72 attributes of biophilic (Kellert, 2008); three experiences and 25 attributes of biophilic design (Kellert, 2018); and three categories and 15 patterns of biophilic design (Browning & Ryan, 2020). Most researchers used frameworks by Kellert (2018) and Browning and Ryan (2020), as both complement each other and are measurable and practical to be applied in architectural design. Kellert's (2018) framework is a simplification of his 2008 framework.

Kellert (2018) framework include Direct Experiences of Nature (light, air, water, plants, animals, landscapes, weather, views and fire), Indirect Experiences of Nature (images, materials, texture, colour, shapes and forms, information richness, change of time, geometrics, stimulated natural light and air and biomimicry), experience of space and place (prospect and refuge, organized complexity, mobility, transitional spaces, place and integrating parts to create wholes).

On the other hand, Browning and Ryan (2020) framework includes Nature in the Space (visual connection with nature, non-visual connection with nature, non-rhythmic sensory stimuli, thermal & airflow variability, presence of water, dynamic and diffuse light, connection to natural systems), natural analogues (biomorphic forms & patterns, material connection with nature, complexity and order) and nature of the space (prospect, refuge, mystery, risk/ peril, awe).

Kellert's (2018) attributes represent a subset of elements of nature from Browning and Ryan's (2020) framework for biophilic design. In Browning and Ryan (2020), Nature in the Space corresponds to Kellert's Direct Experiences of Nature, while Nature Analogues corresponds

to Kellert's Indirect Experience of Nature. Experience of Space and Place corresponds to the Nature of the Space. The mapping of Browning and Kellert is presented in Table 1.

Table 1: Mapping of Browning's and Kellert's biophilic categories and attributes.

Kellert (2018)	Browning & Ryan (2020)
Direct Experiences of Nature: Light, air, water, plants, animals, landscapes, weather, views, fire	Nature in the Space: Visual connection with nature, non-visual connection with nature, non-rhythmic sensory stimuli, thermal & airflow variability, presence of water, dynamic and diffuse light, connection to natural systems
Indirect Experiences of Nature: Images, materials, texture, colour, shapes & forms, information richness, change of time, geometrics, stimulated natural light & air, biomimicry	Natural Analogues: Biomorphic forms & patterns, material connection with nature, complexity & order
Experience of Space and Place: Prospect & refuge, organized complexity, mobility, transitional spaces, place, integrating parts to create wholes	Nature of the Space: Prospect, refuge, mystery, risk/peril, awe

This study combines the frameworks of Browning and Ryan (2020) and Kellert (2018), following the approach suggested by Mustapa et al. (2024). However, the Experience of Space category was excluded as it is difficult to measure at the individual level. Only attributes that are measurable and suitable for individual-level application were selected. For Direct Experiences (Nature in the Space), only natural lighting, plants, natural ventilation, and view towards nature were included, as previous studies demonstrated that these elements have the greatest impact on well-being (Mustapa et al., 2025; Mustapa et al., 2024). As for Indirect Experiences (Nature Analogues), material, texture, colour, pattern, and image were selected, as they are the most measurable attributes and have been shown to influence well-being (Mustapa et al., 2025). The final combination of biophilic attributes of both frameworks is illustrated in Figure 1.

3. MATERIALS AND METHODS

3.1 Research Design

This study used a quantitative approach involving the distribution of a questionnaire to 123 respondents. Questionnaires were distributed online through Google Forms to the respondents. Using convenience sampling, the chosen respondents were adults aged 20 years and above. The respondents took 20 minutes to answer the questionnaire. The questionnaire was designed as a closed-ended questionnaire. A pilot study with 40 respondents was first conducted before the actual study to ensure the respondents

understood the questionnaire. Face and content validity were also conducted to validate the instrument. Face validity was conducted with three experts who validated the questions and also the suitability of the analysis to be used. A few amendments have been made by deleting a few items that are redundant. The results of the pilot test indicated that all variables were reliable, with values of Cronbach's alpha ranging from 0.8 to 0.9.

All respondents voluntarily completed the online questionnaire after reading the study information and providing informed consent on the first page of the Google Form. The respondents were also informed that they could withdraw at any time without facing consequences. No personal identifiable information was collected.

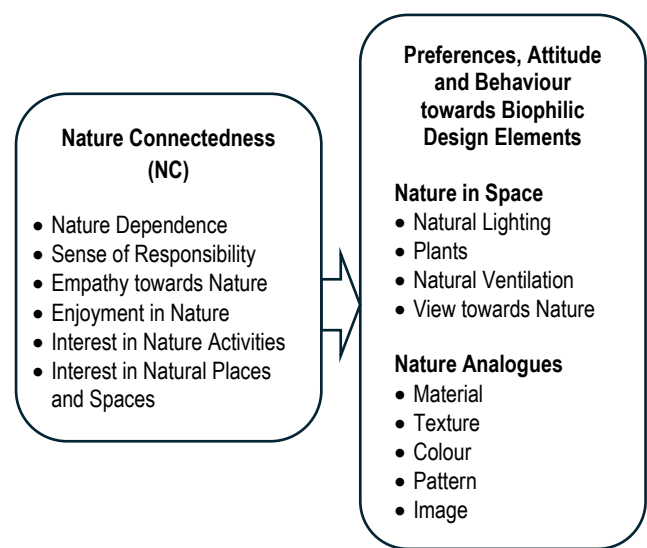


Figure 1: Conceptual framework

3.2 Questionnaire development

3.2.1 Nature connectedness

NC was measured through six constructs, which are nature dependence, sense of responsibility, empathy towards nature, enjoyment in nature, interest in nature activities, and interest in natural places and spaces. The items were adapted from previous instruments by Mustapa et al. (2019). This study employed a five-point Likert scale (1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, and 5=strongly agree). Overall, there were 26 items.

Nature dependence was measured by four items. The examples of the items for nature dependence were "Nature is important for my life" and "I need to survive". Meanwhile, a sense of responsibility was constructed by six items, and the examples of items were "I will take care of nature". Empathy towards nature was measured by three items. The examples of items for empathy towards nature were "I feel sad seeing forests being cleared" and "I feel sad

seeing nature being destroyed". Enjoyment in nature was measured through eight items. The examples of items for enjoyment in nature were "I feel happy being in natural places such as waterfalls, rivers, and the beach". For interest in natural spaces, six items were used to measure intention to be in spaces that have natural elements. Examples of items for this construct were "I want to own a house that has green areas". As for interest in nature activities, four items were used as examples: "I want to join camping near natural places".

3.2.2 Preferences towards Biophilic Design

Preferences towards Biophilic Design were measured using nine constructs, which are natural lighting, plants, natural ventilation, view towards nature, material, texture, colour, pattern, and image. Overall, there were 61 items.

3.2.3 Attitude towards Biophilic Design

Attitude towards Biophilic Design was measured using nine constructs, which include attitude towards natural lighting, plants, natural ventilation, view towards nature, material, texture, colour, pattern, and image. Examples of items are "I feel happy being in a room with natural lighting coming in", "I like to be in spaces that have indoor plants", "Fresh air calms me down when I feel stressed", "I feel happy when my spaces have a view towards nature", "Natural material calms me down when I feel stress", "Nature texture in space helps to reduce my stress". Overall, there were 56 items.

3.2.4 Behaviour towards Biophilic Design

Behaviour towards Biophilic Design was measured using eight items. Examples of items are "I always include biophilic design elements in my spaces", "I always ensure that my spaces have biophilic design elements", and "I have influenced my friends to also include biophilic design elements in their spaces".

3.3 Analyses

The data were analyzed using IBM SPSS Statistics Version 22. Descriptive analysis using mean score and standard deviation was used to categorize the level of NC into low, moderate, and high-level groups. Also, frequency and percentage were used for cross-tabulation of the groups of low, moderate, and high levels of NC by demographic and background characteristics. Meanwhile, inferential analyses, including correlation and linear regression, were used to examine the relationship between NC and preferences, attitude, and behaviour towards biophilic design.

4. RESULT AND DISCUSSION

4.1 Nature connectedness level

This study used a cut-off point of one standard deviation (1SD) away from the mean (Mean + 1SD). Value more than Mean + 1SD is categorized into the high-level groups, values less than Mean - 1SD are categorized into the low-level group, and value between both is classified into the moderate group. All three groups (low, moderate, and high level) are of unequal sizes. The means for each group are as follows: low level ($M \leq 3.83$), moderate level ($3.83 < M < 4.81$), and high level ($M \geq 4.81$). The descriptive analyses for each group are shown in Table 2.

Table 2: Descriptive analysis for low, moderate, and high levels of nature connectedness (NC)

Nature connectedness (NC) level	Frequency	Percentage
Low level ($M \leq 3.83$)	15	12.2%
Moderate level ($3.83 < M < 4.81$)	99	80.5%
Low level ($M \geq 4.81$)	9	7.3%

As shown in Table 2, more than one-third (80.5%) of the respondents have a moderate level of NC, followed by 12.2% with a high level of NC, and 7.3% with a low level of NC. The results show that most of the respondents have a moderate level of NC. These findings suggest that while moderate levels of NC are common among the population studied, fewer people show either a strong connection or a strong disconnection with nature. The distribution shows a bell-shaped pattern, which aligns with psychological and attitudinal measures in general populations. This is consistent with previous studies (e.g., Mayer & Frantz, 2004), where moderate levels of NC were typical, and only a minority showed extreme values.

As shown in Table 3, differences in demographics and background across groups indicate that NC varies slightly by age, gender, upbringing, place settings, and residential types. The highest proportion of moderate NC levels was found in younger adults aged 20 to 29. This may reflect growing awareness of environmental issues and a connection to nature among youth. Interestingly, groups aged 30 to 39 and 40 to 49 also maintained relatively high moderate NC levels, while the smallest group (50+) showed a bit more variation with smaller samples. In terms of gender, females (82.3%) had a slightly higher proportion of moderate NC compared to males (77.3%). This supports earlier research suggesting that women may feel a stronger emotional and psychological connection to nature (Zelezny et al., 2000). Looking at upbringing, individuals from suburban backgrounds had the highest percentage of moderate NC (86%), followed by rural (77.4%) and urban (76.2%) environments. This might

indicate that suburban settings provide a balance between natural and built environments, promoting a moderate connection with nature. Current living situations (place settings) also affected NC, with suburban (82.4%) and urban (78.8%) residents showing higher moderate NC levels compared to rural residents (80%). Finally, those living in bungalows, which often have better access to green spaces, had the highest proportion of moderate NC (80.5%). This indicates that accessibility or view towards nature affect people's NC. These findings support that there are various factors that can influence NC (Collado et al., 2013; Zhang et al., 2014a).

Table 3: Descriptive analysis for demographic and background characteristics

Demographic and background		Group			
		Low	Moderate	High	
Age	20-29	13	87	8	108
		12%	80.6%	7.4%	100%
	30-39	2	6	0	8
		25%	75%	0.0%	100%
	40-49	0	3	0	3
		0.0%	100%	0.0%	100%
	50-59	0	1	1	2
		0.0%	50.0%	50.0%	100%
	60-69	0	2	0	2
		0.0%	100%	0.0%	100%
Gender	Male	6	34	4	44
		13.6%	77.3%	9.1%	100%
	Female	9	65	5	79
		11.4%	82.3%	6.3%	100%
Grew up	Urban	5	32	5	42
		11.9%	76.2%	11.9%	100%
	Suburban	6	43	1	50
		12%	86%	2%	100%
	Rural	4	24	3	31
		12.9%	77.4%	9.7%	100%
Place settings	Urban	5	41	6	52
		9.6%	78.8%	11.5%	100%
	Suburban	7	42	2	51
		13.7%	82.4%	3.9%	100%
	Rural	3	16	1	20
		15%	80%	5%	100%
Residential types	Bungalow	10	62	5	77
		13%	80.5%	6.5%	62.6%
	Flat	0	0	2	2
		0.0%	0.0%	100%	100%
	Apartment	1	13	0	14
		7.1%	92.9%	0.0%	100%
	Condominium	3	16	1	20
		10%	80%	5%	100%
	Other	3	16	1	20
		15%	80%	11.1%	100%

4.2 Preferences towards Biophilic Design

Table 4 shows that elements with higher mean scores for preferences towards biophilic design are Nature in Space with Natural Lighting ($M=4.22$, $SD=0.73$), View towards Nature ($M=4.25$, $SD=0.79$), Material ($M=4.18$, $SD=0.86$), and Plants ($M=4.03$, $SD=0.9$). This is followed by Pattern ($M=3.93$, $SD=0.88$), Image ($M=3.89$, $SD=0.83$), Natural Ventilation

($M=3.85$, $SD=0.90$), Texture ($M=3.81$, $SD=1.02$) and Colour ($M=2.95$, $SD=1.02$). These results showed a similar trend that people have preference towards Nature in Space.

Participants favoured Nature in Space, like View towards Nature, Natural Lighting, and Plants, over most Nature Analogues. However, Material from the Nature Analogues category scored higher than expected, possibly due to its tactile and visual presence in design environments. Interestingly, Colour received the lowest mean score, suggesting that while colour schemes inspired by nature exist in biophilic design, they may not significantly affect personal preference. These results further indicate that authentic nature experiences, such as light, air, and views, are prioritized over mimetic or symbolic features in both attitude and preference, consistent with Mustapa et al.'s (2025) study.

Table 4: Mean and standard deviation for preferences towards biophilic design

Biophilic elements	Minimum	Maximum	Mean	Std. deviation
Nature in space (Direct experience)				
Natural lighting	1.80	5.00	4.2228	.73114
Plants	1.00	5.00	4.0268	.90247
Natural ventilation	1.00	5.00	3.8482	.89753
View towards nature	1.80	5.00	4.2520	.79169
Nature analogues (Indirect experience)				
Material	1.40	5.00	4.1837	.86521
Texture	1.00	5.00	3.8103	1.01723
Colour	1.00	5.00	2.9526	1.01929
Pattern	1.29	5.00	3.9315	.87975
Image	1.40	5.00	3.8927	.82672

4.3 Attitude towards Biophilic Design

As shown in Table 5, it is clear that elements with higher mean scores for attitude towards biophilic design are Nature in Space with Natural Lighting ($M=4.32$; $S=0.64$), followed by View towards Nature ($M=4.29$, $SD=0.71$) and Natural Ventilation ($M=4.28$, $SD=0.72$) and Plants ($M=4.23$, $SD=0.69$). This is followed by Nature Analogues with Colour ($M=4.18$, $SD=0.76$), Image ($M=4.08$, $SD=0.79$), Material ($M=4.07$, $SD=0.74$), Pattern ($M=3.97$, $SD=0.78$) and Texture ($M=3.97$, $SD=0.82$).

The findings show that participants have the most positive attitudes towards elements in the Nature in Space category, especially Natural Lighting, View towards Nature, and Natural Ventilation. These elements are directly perceived and experienced, which may account for their stronger impact on individuals' psychological responses. The presence of Plants also ranked high, highlighting the importance of visible natural features in built environments. In contrast, attitudes towards Nature Analogues such as Colour, Material, and Image were moderately positive but scored lower overall. This

suggests that people respond more favorably to direct encounters with nature than to symbolic or artificial representations, an observation supported by Kellert's (2008) biophilic design theory. This finding also highlights that people perceive Nature in Space to have a greater impact on their well-being, aligning also with previous study by Mustapa et al. (2025).

Table 5: Mean and standard deviation for attitude towards biophilic design

Biophilic Elements	Minimum	Maximum	Mean	Std. deviation
Nature in space (Direct experience)				
Natural lighting	1.00	5.00	4.3194	.64021
Plants	1.00	5.00	4.2285	.69312
Natural ventilation	1.00	5.00	4.2822	.72416
View towards nature	1.00	5.00	4.2938	.70989
Nature analogues (Indirect experience)				
Material	1.00	5.00	4.0685	.74171
Texture	1.00	5.00	3.9686	.81524
Colour	1.00	5.00	4.1789	.76025
Pattern	1.00	5.00	3.9710	.77730
Image	1.00	5.00	4.0755	.78637

4.4 Correlation between nature connectedness (NC) with preferences, attitude, and behaviour towards biophilic design

As shown in Table 6 and Figures 2, 3, and 4, there was a positive correlation between NC and preferences, attitude, and behaviour towards biophilic design, with $p < 0.001$.

Table 6: Correlation analysis for nature connectedness (NC) and preferences, attitude, and behaviour towards biophilic design

		Preferences	Attitude	Behaviour
Nature Connectedness (NC)	Pearson Correlation	.583**	.534**	.572**
	Sig. (2-tailed)	<.001	<.001	<.001
	N	123	123	123

Then, a simple linear regression analysis was conducted to evaluate the extent to which NC could predict Preferences, Attitude, and Behaviour towards Biophilic Design. As for NC and Preferences towards Biophilic Design, a significant regression was found ($F ([1],[121]) = [62.348], p = [< .001]$). The R^2 was [.34], indicating that NC explained approximately 34% of the variance in Preferences towards Biophilic Design. Similarly, NC and Attitude towards Biophilic Design, a significant regression was found ($F ([1],[121]) = [48.297], p = [< .001]$). The R^2 was [.29], indicating that NC explained approximately 29% of the variance in Attitude towards Biophilic Design. Also, for NC and Behavioural towards Biophilic Design, a significant regression was found ($F ([1],[121]) = [58.882], p = [< .001]$).

The R^2 was [.33], indicating that NC explained approximately 33% of the variance in Behavioural towards Biophilic Design.

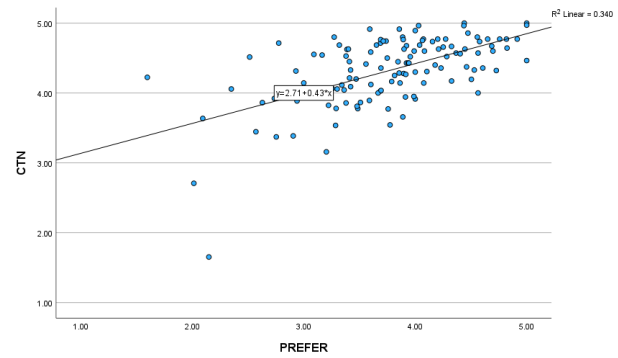


Figure 2: The scatter plot between nature connectedness (NC) and preference towards biophilic design

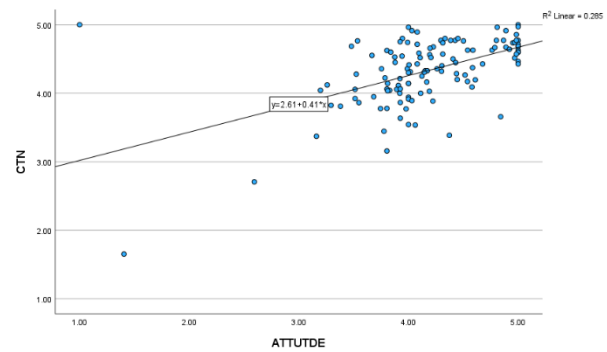


Figure 3: The scatter plot between nature connectedness (NC) and attitude towards biophilic design

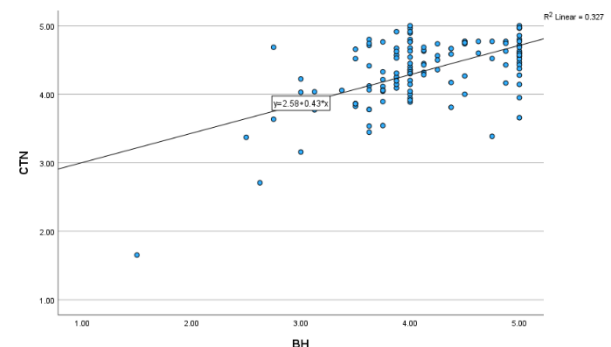


Figure 4: The scatter plot between nature connectedness (NC) and behaviour towards biophilic design

The correlation analysis showed a significant, positive relationship between NC and preferences, attitudes, and behaviour toward biophilic design ($p < .001$). Pearson correlation coefficients ranged from $r = .534$ to $r = .583$, indicating moderate to strong associations. The data suggest that individuals who feel more connected to nature are also more likely to value, prefer, and engage with biophilic elements in their surroundings. In other words, those with a stronger emotional and psychological bond with nature are more likely to appreciate spaces that include natural features and to exhibit a positive attitude and behaviour towards biophilic design. Regression analysis confirmed these associations. NC accounted for 34% of the variance in

preferences, 29% in attitudes, and 33% in behaviour toward biophilic design.

These R^2 values highlight the important role of NC in predicting responses to biophilic features. This finding supports and builds on earlier research showing that connection to nature affects how people perceive and interact with the natural world (Lin et al., 2017; Tang et al., 2025). When people feel connected to nature, they are not only more likely to act in ways that help the environment but also to prefer natural settings and design elements. Subsequently, people who have a strong NC will have a strong tendency towards biophilic design and may also respond more positively, experiencing better health and well-being. The findings indicate that improving NC through education, exposure, or childhood experiences could play a key role in promoting sustainable and health-focused design practices.

5. CONCLUSION

In conclusion, this study highlights the important role of NC in shaping people's views and engagement with natural elements in built environments. People with a stronger NC are more likely to have positive preferences, attitudes, and behaviour regarding nature, which includes a greater appreciation for biophilic design. This, in turn, can help create healthier, more sustainable, and supportive environments. These findings also emphasize the need to develop a strong connection to nature through various initiatives that include direct nature experiences, social experiences, and learning experiences, especially during childhood, particularly nowadays when people are disconnected from direct nature experiences. Including natural elements in everyday environments within the built environment and education can create lasting emotional bonds with the natural world. These responses lead to better mental and physical health outcomes and support sustainable development goals, specifically SDG 3 Good Health and Well-being for future generations.

Given these findings, future research should investigate how different types of nature exposure and other factors affect NC in various age groups, cultures, and settings. Future research should also examine how individuals' design backgrounds influence their preferences, attitudes, and behaviour. Longitudinal studies are especially important for understanding how early experiences with nature shape preferences and behaviours toward biophilic design in adulthood, which can later support good health and well-being. This study makes a significant contribution to the body of knowledge on the NC role in shaping biophilic design preferences, attitude, and behaviour. NC works in a cyclical relationship. When people feel more connected to nature, they

are more likely to support biophilic design. In return, being exposed to biophilic design strengthens their connection to nature.

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