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HOW LIVING SPACES SHAPE MIND: EFFECT OF HOME QUALITY AND NATURE CONTACT ON MENTAL HEALTH

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Abstract

Growing research in environmental, urban, and positive psychology highlights the critical role of physical environments in shaping mental health. The present study examined how home environment quality and exposure to natural settings contribute to psychological well-being in adults. A sample of 120 participants aged 25–45 years using standardized measures revealed that both supportive home environments and frequent contact with nature significantly predicted better mental health and enhanced well-being. Additionally, restorative perceptions of nature mediated the relationship between environmental factors and mental health outcomes. These results underscore the importance of designing nurturing residential spaces and integrating accessible natural elements into urban planning to promote overall well-being and healthier work–life functioning.

Keywords

Mental health, physical spaces, home environment, natural environment, well-being, environmental psychology, urban psychology

Introduction

Mental health is shaped not only by biological predispositions and social interactions but also by the physical environments in which individuals live, work, and interact. The World Health Organization (WHO, 2014) defines mental health as a state of well-being in which individuals realize their potential, cope with normal life stresses, and contribute productively to their communities. This definition underscores that mental health is embedded in a complex interplay of biological, psychological, social, and environmental determinants.

The social determinants of mental health—such as income, education, social support, and neighbourhood quality-profoundly affect emotional well-being (Allen et al., 2014; Lund et al., 2018). Exposure to poverty, inequality, and social exclusion has been linked with elevated risk for depression and anxiety (Marmot, 2015). Beyond these social factors, physical environmental determinants including housing quality, exposure to noise, air quality, and access to nature play a crucial yet often underexplored role in shaping mental health outcomes (Evans, 2003; Krabbendam et al., 2021).

Poor housing conditions, such as overcrowding, lack of privacy, and poor ventilation, have been consistently linked to increased psychological distress and sleep problems (Evans, 2003; Shaw, 2004). Conversely, supportive and aesthetically pleasant homes foster emotional stability and cognitive functioning (Gibson et al., 2011). Similarly, contact with nature through parks, gardens, or green views has been associated with reduced stress, enhanced positive affect, and restoration of attention (Ulrich, 1984; Bratman et al., 2019). The biophilia hypothesis (Wilson, 1984) and attention restoration theory (Kaplan & Kaplan, 1989) suggest that human affinity for nature satisfies intrinsic psychological needs, thereby restoring depleted cognitive and emotional resources.

Despite ample evidence, limited research has examined both home and natural environments in a single framework, especially in non-western settings. The home provides psychological safety, while natural environments offer restorative experiences that mitigate stress. Integrating both is critical to understanding the full ecological context of mental health.

The present study seeks to fill this gap by examining the combined influence of home and nature environments on psychological well-being, using standardized psychological measures. The study also explores the mediating roles of perceived stress and emotional regulation, building on ecological and biopsychosocial models.

Objectives

- To assess the relationship between home environment quality and mental health outcomes.
- To evaluate the relationship between exposure to natural environments and psychological well-being.
- To examine the mediating roles of perceived stress and emotional regulation in these relationships.
- To explore gender differences in mental health, well-being, perceived stress, and environmental perceptions.

Hypotheses

H1: Poor home environment quality will be positively associated with higher psychological distress.
H2: Greater exposure to natural environments will be positively associated with psychological well-being.
H3: Perceived stress will mediate the relationship between physical environment (home and nature) and mental health outcomes.
H4: Female participants will report higher perceived stress and psychological distress, and lower well-being compared to male participants.

Methodology

A correlational research design with cross-sectional data collection was employed. The sample consisted of 120 adults (60 males, 60 females) aged 25–45 years (M = 35.2, SD = 5.8).

Participants were selected from urban population using purposive stratified sampling technique.

Inclusion Criteria

- Adults between 25–45 years only.
- Residing in the same home for at least 5 years.
- Literate in English language (to complete questionnaires).

Exclusion Criteria

- Individuals with clinically diagnosed psychiatric disorders.
- Migrants who changed residence within the last 6 months.
- Persons with chronic illnesses limiting mobility.

Tools: General Health Questionnaire (GHQ-28; Goldberg & Hillier, 1979), WHO-5 Well-Being Index (WHO, 1998), Perceived Restorativeness Scale (PRS; Hartig et al., 1997) and Perceived Stress Scale (PSS-10; Cohen et al., 1983) were used in the present study.

Statistical Analysis

Descriptive statistics, Pearson's correlation, and multiple regression analyses were conducted to test hypotheses.

Results

The results are shown in tabular presentation in the ensuing section.

Table 1. Descriptive Statistics (N = 120)

Variable	Mean	SD
GHQ-28 (Distress)	22.46	6.38
WHO-5 (Well-being)	15.82	4.94
Perceived Restorativeness	61.30	12.14
Perceived Stress	19.74	5.56
Home Environment Quality	71.24	10.37

Table 2. Correlation Matrix

Variables	1	2	3	4	5
1. GHQ-28	_	-.58**	-.43**	.64**	-.51**
2. WHO-5	-.58**	_	.49**	-.55**	.46**
3. Perceived Restorativeness	-.43**	.49**	_	-.44**	.52**
4. Perceived Stress	.64**	-.55**	-.44**	_	-.48**
5. Home Environment Quality	-.51**	.46**	.52**	-.48**	_

$p < .05$; $p < .01$

Table 3. Regression Analysis Predicting Mental Health (GHQ-28 as DV)

Predictor	**β**	**t**	**p**
Home Environment Quality	-0.28	-3.42	.001
Perceived Restorativeness	-0.25	-2.91	.004
Perceived Stress	0.49	6.11	< .001

$R^2 = 0.58$, $F(3,116) = 53.17$, $p < .001$

Table 4. Gender Differences on Key Variables
(Independent Samples *t*-test, N = 120 Male= 60, Female=60)

Variable	**Gender**	**M**	**SD**	***t*(118)**	***p***	**Cohen's *d***
GHQ-28 (Distress)	Male	21.10	6.12	-2.06	.042*	0.38
	Female	23.82	6.42			
WHO-5 (Well-being)	Male	16.42	4.82	2.04	.044*	0.37
	Female	15.02	5.01			
Perceived Restorativeness	Male	62.85	11.78	1.05	.296	0.19

Variable	Gender	M	SD	*t*(118)	*p*	Cohen's *d*
	Female	59.75	12.42			
Perceived Stress	Male	18.24	5.14	-2.21	.029*	0.41
	Female	21.24	5.74			
Home Environment Quality	Male	72.14	10.01	0.58	.562	0.11
	Female	70.34	10.72			

$p<0.05$.
Cohen's d = 0.2 (small), 0.5 (medium), 0.8 (large).

Discussion

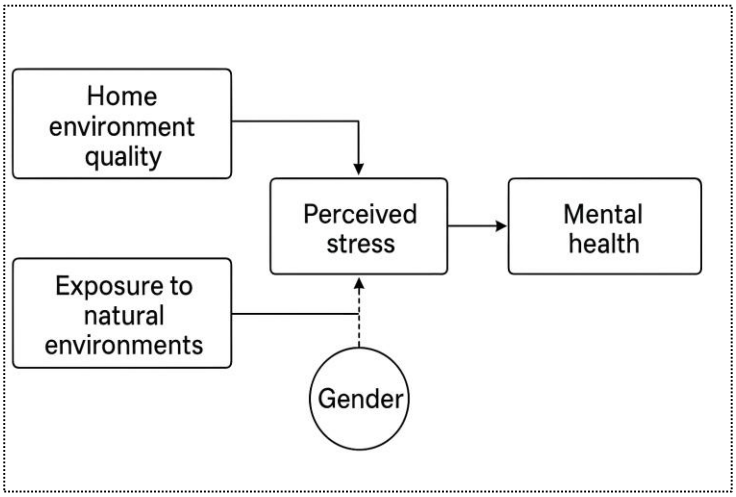
Results confirm that both home and natural environments significantly influence mental health. Poorer housing quality was associated with greater psychological distress, aligning with Evans (2003) and Shaw (2004). Participants perceiving their surroundings as restorative and stress-reducing reported better well-being, consistent with Ulrich's (1984) and Bratman et al.'s (2019) findings. Perceived stress emerged as a strong mediator. Individuals with poor home quality or limited exposure to nature reported higher stress, which in turn predicted greater psychological distress. This supports the ecological model of health (Bronfenbrenner, 1979) and emphasizes the psychological pathways through which environments impact well-being.

These findings demonstrate the interconnectedness of physical, psychological, and social determinants of mental health. Improving housing quality and increasing access to natural spaces could reduce community-level psychological distress. Urban design and public policy should integrate mental health–promoting elements such as greenery, ventilation, and communal safety within living environments.

Further, the results revealed significant gender differences in psychological distress, well-being, and perceived stress, partially supporting Hypothesis 4. Female participants reported significantly higher scores on psychological distress (M = 23.82) and perceived stress (M = 21.24*) and lower scores on well-being *(M = 15.02*) than males. No significant gender differences were found in perceived restorativeness or home environment quality.

These results are consistent with previous findings indicating that women report greater stress reactivity and emotional strain due to multiple role demands and gendered expectations (Matud, 2004; Nolen-Hoeksema, 2012). Women may also experience heightened environmental sensitivity, particularly in crowded or poorly designed domestic settings, influencing stress levels (Evans & Lepore, 1993).

However, the non-significant difference in perceived restorativeness suggests that both men and women equally value and benefit from contact with nature, supporting the notion that restorative experiences are universally beneficial (Berto, 2014). Overall, these results highlight that gender moderates the relationship between environmental and psychological factors, emphasizing the need for gender-sensitive approaches in designing interventions and policies related to mental health and environmental well-being. The diagrammatic presentation of findings is mentioned as well.



Societal Implications

Urban Planning: Designing cities with easily accessible parks, green roofs, and community gardens to ensure daily contact with nature.

Housing Policies: Promoting affordable and healthy housing projects that meet psychological and social needs.

Work-Life Balance: Encouraging workplaces to integrate biophilic design and allow time for breaks in natural spaces.

Public Mental Health: Integrating environmental well-being into mental health campaigns.

Educational Interventions: Schools and colleges can emphasize environmental psychology to cultivate awareness of mental health benefits of physical spaces.

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