

The Impacts of Living Environment on People's Mental Health in Vavuniya Urban Council, Special Reference to Thandikulam GND

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Abstract

This study identifies the impact of the living environment factors that affect people's mental health in Vavuniya Thandikulam GND. Housing characteristics, neighborhood characteristics and built environment characteristics are the key factors that affect the people's mental health in Vavuniya Thandikulam GND. The sample was chosen using stratified random sampling. The sample size of the study is 150 participants, and information from the chosen respondents was gathered via a questionnaire survey. Collected data were analyzed using descriptive and multiple regression analysis in SPSS. The study has revealed living environment factors have significant impacts on people's mental health. The findings of this study emphasize the significance of considering different contexts in the development of policies related to housing, neighborhoods, the built environment, and mental health. By recognizing and addressing the unique needs and challenges of diverse communities, policymakers can foster environments that promote mental well-being and enhance the overall quality of life for individuals.

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Keywords: Living environment, Housing characteristics, Neighborhood characteristics, Built environment characteristics, Mental health.

Introduction

The notion that features of the living environment are related to psychological stress and mental health has a long history. In the past few decades, there has been growing interest in the epidemiology and public health literature about how residential environments may have influenced a variety of health outcomes, and evidence has revealed that the living environment has a significant impact on people's mental health (Zihan et al, 2022). People's mental health appears as a growing problem in the world. While common mental health disorders are generally linked to living environment factors but the interaction is not much known (Ingrid et al, 2021). There are numerous spatial scales in which the living environment can influence mental health. Housing is the core element of the living space at the micro level. One of the people's necessities in any community is to live in a suitable housing environment (Jiboye, 2014). People spend between 80 and 90 percent indoors with about two-thirds of the time spend at home (Zihan et al, 2022). The neighbourhood is another component of the living environment. According to a study done in an Italian metropolitan region, neighbourhood characteristics had a larger impact on mental health for persons who spent more time in the neighbourhood (Zihan et al, 2022). However, the knowledge about aspects of the neighbourhood that are most important to mental health is limited (Zihan et al, 2022). The term "built environment" describes the surroundings created by human activities. These surroundings can range in size from structures and green spaces to neighbourhoods and cities (Kaklauskas, 2016).

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Objectives of the Study

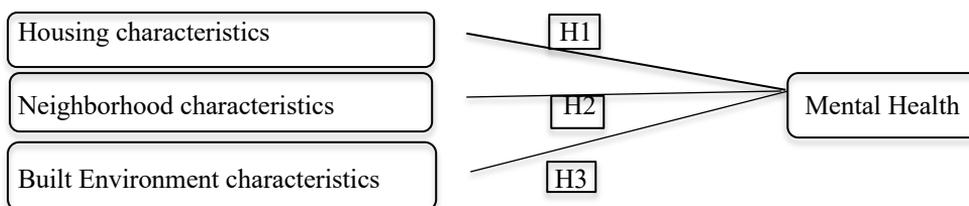
- To identify the factors of living environment that impact people’s mental health.
- To analyze the impact of the living environment on mental health.
- To make suggestions for improving the living environment in Vavuniya Thandikulam GND.

Literature Review

Disorders of mental health are rising issue in contemporary civilizations, particularly in urban regions. While there is a broad correlation between living environment and mental health issues. As cities continue to grow, more and more people are exposed to stressors, which could lead to more stress and worsen mental health. Therefore, it’s critical to pinpoint certain aspects of the urban living environment that might have an impact on people’s mental health (Ingrid et al, 2021). The living environment is one of the elements that most affects each person’s existence and is made up of the “physical and social qualities in which individuals live” (Guglielmo et al, 2020). On the one hand, a variety of pathological determinants present in the environment can have a direct impact on people’s health (Guglielmo et al, 2020). Numerous epidemiological studies have discovered that living in a privileged environment is linked to better health, whereas living in a disadvantaged environment is linked to worse health (Benjamin et al, 2019). As a result, the living environment is a crucial aspect of public health since it exacerbates socioeconomic and health disparities (Benjamin et al, 2019).

The studies have shown that both the social and economic factors of housing, such as affordability, tenure, and congestion, as well as the physical features of housing, such as building design and housing quality, have an impact on mental health (Bonney, 2007). The geographical area immediately surrounding a family’s home can be described as the neighborhood (Guglielmo et al, 2020). This area is defined by environmental physical features like roads, rivers, and shops (Guglielmo et al, 2020). Neighborhood security has been cited in numerous studies as a key indicator of residential satisfaction (Cook et al , 1988). Various aspects of the neighborhood, like the amount of crime, the absence of services, industrial growth, or the proximity of the workplace, have been identified as sources of dissatisfaction (Fried, 1982). The built environment is defined as the area of the environment that has been created or modified by humans and is used for habitation and daily activities (Guglielmo et al, 2020). It consists of structures, public areas (parks, leisure areas), and infrastructures (transportation systems). Built-environment elements have an impact on people’s lives, health behaviors, and social interactions, which is related to their mental health (Zihan et al, 2022). Building density, green space availability and sky view factor are the factors used in this study to evaluate built-environment aspects (Zihan et al, 2022).

Figure 01: Conceptual Framework



Source: Author (2022)

Table 01: Hypothesis

Hypothesis	Statement
H1	There is a significant relationship between housing characteristics and people's mental health
H2	There is a significant relationship between neighborhood characteristics and people' mental health
H3	There is a significant relationship between built environment characteristics and people's mental health

Source: Author (2022)

Methods

The families who are living in urban context in Thandikulam GND are the total population. The population of the Vavuniya urban council, with special reference to Thandikulam GND study area is 964 families and sample size is 150 families. The sample size for the study is selected using a stratified random sampling method. This study is unique as it is following quantitative methods to investigate the factors affecting people's mental health. Questionnaire surveys are used for the collection of primary information. Secondary data is collected from websites, journal papers and research books. Quantitative data can be analyzed using the SPSS. The data will be analyzed descriptively and also using multiple regression analysis. The regression analysis is used to determine how living environment factors impact on a person's mental health.

Results and Discussion

Central tendency and dispersion measures for housing characteristics

Table 02 displays the ratings that the respondents gave for each of the items that made up these constructs. The average score ranged from 3.75 (± 0.904) to 4.30 (± 1.008). The highest result for liking to spend time at home under the housing characteristics is 4.30 (± 1.008).

Table 02: Central tendency and dispersion measures for housing characteristics

Housing characteristics	Valid	Missing	Mean	Median	Mode	Std. Deviation	Variance
Spending time	150	0	4.30	5.00	5	1.008	1.017
Comfortable living	150	0	4.03	4.00	4	0.908	0.824
Room space	150	0	3.80	4.00	4	1.023	1.047
Privacy	150	0	4.27	5.00	5	1.231	1.515
Satisfaction of house	150	0	3.82	4.00	4	0.963	0.927
Housing interior design	150	0	3.75	4.00	4	0.904	0.818

Source : Survey Data, (2022)

Central tendency and dispersion measures for Neighborhood characteristics

Table 03 displays the ratings that the respondents gave for each of the items that made up these constructs. The average score ranged from 3.70 (± 0.873) to 4.10 (± 0.730). The highest result for availability of health service under the neighborhood characteristics is 4.10 (± 0.730).

Table 03: Central tendency and dispersion measures for Neighborhood characteristics

Neighborhood characteristics	Valid	Missing	Mean	Median	Mode	Std. Deviation	Variance
Safety	150	0	3.70	4.00	4	0.873	0.762
Availability of health service	150	0	4.10	4.00	4	0.730	0.534
Quality of road construction	150	0	3.79	4.00	4	0.846	0.715
Satisfaction of travel distance	150	0	3.94	4.00	4	0.884	0.782
Happy with neighborhood	150	0	3.93	4.00	4	0.825	0.680

Source: survey data, (2022)

Central tendency and dispersion measures for Built Environment characteristics

Table 04 displays the ratings that the respondents gave for each of the items that made up these constructs. The average score ranged from 3.75 (± 0.998) to 4.03 (± 0.827). The highest result for green space availability and relax from green space under the built environment characteristics is 4.03 (± 0.827).

Table 04 : Central tendency and dispersion measures for Built Environment characteristics

Built Environment characteristics	Valid	Missing	Mean	Median	Mode	Std. Deviation	Variance
Building density	150	0	3.87	4.00	4	0.862	0.742
Sky view factor	150	0	3.83	4.00	4	0.988	0.976
Green space availability	150	0	4.03	4.00	4	0.827	0.684
Relax in a green space	150	0	4.03	4.00	4	0.827	0.684
Noise	150	0	3.75	4.00	4	0.998	0.996
Air pollution	150	0	3.75	4.00	4	0.998	0.996

Source: Survey data, (2022)

Regression Analysis

Table 05 shows that the model has a strong positive linear relationship ($R=0.965$) between the independent and dependent variables. The model explains a substantial amount of the variance in the dependent variable ($R^2 = 0.936$), indicating a good fit. The Adjusted R-Square value (0.931) suggests that the model is still reliable even after considering the number of predictors.

Table 05: R- square and Adjusted R square

R	R Square	Adjusted R Square	Std. Error of the Estimate
.965 ^a	.936	.931	.23392

Source: Survey data, (2022)

ANOVA

As per table 06, the regression model as a whole is statistically significant, as indicated by the very low p-value ($P < .001$). The model explains a significant amount of the variation in the dependent variable, as evidenced by the large F-value (668.261). The residuals, representing the unexplained variation, have a relatively small sum of squares (7.989), indicating that the model accounts for most of the variability in the data.

Table 06: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	109.703	3	36.568	668.261	.000 ^b
Residual	7.989	146	.055		
Total	117.692	149			

Coefficients

The beta value of Housing characteristics (H) is +.611, which means that housing characteristics have significant impact on people's mental health. The beta value of Neighborhood characteristics (N) is +.249, which means that neighborhood characteristics have a significant impact on people's mental health. The beta value of Built environment characteristics (B) is +.188, which means that built environment has a significant impact on people's mental health.

Table 07 : Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.184	.111		-1.654	.100
H	.611	.074	.613	8.306	.000
N	.249	.074	.197	3.353	.001
B	.188	.083	.174	2.264	.025

Source: Survey data, (2022)

Hypothesis

The study's findings suggest that Housing Characteristics (+.611), Neighborhood Characteristics (+.249) and Built Environment Characteristics (+.188) have significant impact on people's mental health. Past studies showed significant associations between built environment and mental health (Zihan et al, 2022) . But this study has shown that housing characteristics play a major role on people's mental health.

Table 08 : Hypothesis Result

Hypothesis	Sig.	B-coefficients	Result
H1: There is a significant relationship between housing characteristics and people's mental health	.000	.611	Accept
H2: There is a significant relationship between neighborhood characteristics and people's mental health	.001	.249	Accept
H3: There is a significant relationship between built environment characteristics and people's mental health	.025	.188	Accept

This study examined the impacts of living environment on people's mental health in Vavuniya Urban Council special reference to Thandikulam GND. The housing characteristics have shown that the strong impact on people's mental health. Housing design methods should be concentrated on creating larger and more livable living spaces because it positively impacts people's mental health. Privacy, like spending time at home and housing interior design strongly impacts mental health. Results of the study showed that neighborhood characteristics can induce stressors that are harmful to mental health. The availability of health services, satisfaction of travel distance and perceived safety are all strongly linked to mental health. For example, If the availability of health services increases, mental health also positively increases. In addition to providing physical infrastructure, planners and policymakers should pay more attention to the neighborhood social environment and concentrate on building socially cohesive communities. The quality of the built environment is another factor in determining mental health condition, and is influenced by site planning, air, noise pollution and greenery.

Conclusion

This study attempts to evaluate the impacts of living environment on people's perception of their living conditions. To describe how aspects of the living environment affect mental health and to speculate on how environmental modifications or enhancements can be advantageous for mental health. The study's findings highlight the value of taking many settings into account when formulating policy for housing, neighborhoods, the built environment, and mental health. Policymakers may create environments that support mental health and improve people's overall quality of life by acknowledging and addressing the particular demands and difficulties that diverse populations face. This study may be helpful to architects and city planners by giving them background knowledge that will help them when planning residential environments in Vavuniya Urban Council.

The researcher ran into certain challenges while doing the research. These are the study's limitations. There are many elements that affect people's mental health, but this study just looks at a few of them. when the researcher considers a broad analytical domain, the results and conclusions could vary. but due to time and nation's current circumstances, it was not possible to gather a bigger sample than was used. This study will be beneficial for the future generation who continue similar activities with similar studies to foresees problems and handle concerns. In the future studies can do a quantitative study with random sampling approach. future studies can examine additional aspects of the living environment that impact people's mental health. This study's population is limited to the Thandikulam GND region. Other regions can be studied in future studies.

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