Happiness and Quality of Life of Greater Mumbai: A Geospatial Analysis

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Abstract

The study investigates the Happiness Index and quality of life in Greater Mumbai by analyzing socio-economic, infrastructural, environmental, and community-level variables across its 24 wards. Using a structured, close-ended questionnaire administered to 1200 respondents through stratified and cluster sampling, the research examines gender-wise and ward-wise disparities in subjective well-being. The analysis reveals that while basic amenities such as housing, healthcare, public transport, and education are moderately satisfactory, challenges related to sanitation, traffic congestion, commuting stress, and night-time safety continue to impact urban happiness. Gender differences are statistically significant, with male respondents exhibiting higher overall happiness, whereas women report lower satisfaction due to safety concerns, limited mobility, and social constraints. Ward-level analysis highlights strong spatial variations: wards with better civic amenities, cleaner environments, efficient transport systems, and greater inclusivity demonstrate higher happiness scores, whereas densely populated or poorly serviced wards reflect lower well-being. The hypotheses testing confirms significant associations between gender, ward characteristics, and happiness levels. The study concludes that urban happiness in Mumbai is a multidimensional construct shaped by infrastructural quality, socio-economic stability, community participation, environmental management, and governance. It emphasizes the need for micro-level, ward-specific interventions over generalized city-wide policies to enhance overall urban well-being and promote sustainable, inclusive, and resilient urban development.

Keywords: Happiness Index, Quality of Life, Mumbai Wards, Geospatial Analysis, Subjective Well-being, Urban Governance, Gender

Differences, Infrastructure and Services, Community Participation, Spatial Inequality.

Introduction

Cities are not only places where the economy grows and develops, but they are also places where social, economic, and environmental elements constantly alter the quality of life and well-being of residents. The idea of happiness has been more popular in the last few years as a way to measure development, going beyond traditional measures like income, infrastructure, or employment. The Happiness Index is a commonly used instrument that looks at many different areas of a person's life, such as their housing, health, education, environment, community connections, government, and personal happiness.Greater Mumbai is India's financial capital, which makes it an interesting conundrum. Rapid urbanization has created problems like traffic jams, pollution, a lack of housing, growing living costs, and social inequality even though it is a center of potential. The area between Dahisar and Goregaon in Northern Greater Mumbai is a small example of these trends in this large city. These wards contain a variety of people with different incomes, jobs, lifestyles, and cultural origins. This makes them an important place to research differences in happiness and well-being.

Review of Literature

Yum (2025) investigated the impact of socio-demographic, mental, and governmental aspects on quality of life across 35 countries, utilizing hierarchical linear regression to elucidate the distinct functions of these domains. The research indicated that psychological factors—such as feelings of isolation, solitude, and insufficient meaningful social interaction—consistently had detrimental impacts on happiness, quality of life, and overall life satisfaction. Mental issues exhibited the most significant adverse impact among the three domains. Government influences have different effects on different groups of people. Bottini (2025) investigated subjective quality of life (Subj-QOL) in Italy utilizing data from the ITA.LI survey within a national framework. The research concentrated on material well-being, home satisfaction, and psychological well-being as fundamental theoretical foundations of Subj-QOL. The study, albeit being cross-sectional, delineated specific population groups exhibiting diverse quality of life experiences and underscored the impact of socio-demographic and geographical determinants on subjective well-being assessments. Titisari and Santoso (2025) performed a qualitative analysis of Indonesia's happiness index utilizing data from the Central Statistics Agency. Their research indicated that happiness was affected by a blend of life satisfaction, emotional health, and existential significance. Education, health, poverty, income inequality (GINI index), and social assistance through charitable activities like Zakat, Infaq, and Sadaqah (ZIS) were some of the most important factors. They stressed that GDP was important, but that social support networks and fair allocation of resources had a bigger effect on people's happiness. Hammouti et al. (2025) advocated for a paradigm change towards a "happy economy," incorporating environmental and social well-being indicators into national accounting frameworks. Their research indicated a strong association between GDP and environmental deterioration, implying that unfettered economic growth could jeopardize long-term well-being and sustainability. They pushed for investment techniques and fiscal policies that made people's lives better while also lowering their impact on the environment.

Research Objectives

1.   To measure the happiness index of the citizens of the study area
2.   To analyse the reasons for the differences in levels of happiness

3.   To resent the results geospatially using latest cartographic tools available

Hypothesis

H_{01} (Null Hypothesis):There is no significant association between gender and overall happiness.

H_{11} (Alternative Hypothesis):There is a significant association between gender and overall happiness score.

H_{02} (Null Hypothesis):There is no significant difference in overall happiness scores across different wards of the city.

H_{12} (Alternative Hypothesis):There is a significant difference in overall happiness scores across wards.

Research Methodology

        The study has been conducted in all the wards of Greater Mumbai. The study area shows a wide range of socio-economic and demographic conditions with mixed type of land use and land cover, all income groups residing together adding to the cosmopolitan mosaic. A close ended questionnaire has been framed using Google Forms and has been used as a tool for collecting primary data. 1200 randomly selected respondents have been collected using cluster and stratified sampling. 25 male and 25 female respondents from each ward of the study area viz. 24 wards have been collected. Government reports, research on urban growth, records from municipal corporations, census data, and global publications like the World Happiness Report are used to give context and back up the results.

Data Analysis And Discussion

•   Quality of Life & Infrastructure

Table 1: Analysis of Quality of Life & Infrastructure

Question	Male	Female
Housing Satisfaction - Highly Dissatisfied	2	1
Housing Satisfaction - Dissatisfied	5	4
Housing Satisfaction - Neutral	7	8
Housing Satisfaction - Satisfied	8	9
Housing Satisfaction - Highly Satisfied	3	3
Cleanliness - Very Poor	3	2
Cleanliness - Poor	6	5
Cleanliness - Average	7	8
Cleanliness - Good	6	7
Cleanliness - Excellent	3	3
Water Access - Very Difficult	2	1
Water Access - Difficult	4	3
Water Access - Moderate	9	10
Water Access - Easy	7	8
Water Access - Very Easy	3	3
Transport Satisfaction - Very Dissatisfied	1	1
Transport Satisfaction - Dissatisfied	4	3
Transport Satisfaction - Neutral	8	7
Transport Satisfaction - Satisfied	9	10
Transport Satisfaction - Very Satisfied	3	4

Traffic Impact - Strongly Disagree	2	1
Traffic Impact - Disagree	4	3
Traffic Impact - Neutral	7	8
Traffic Impact - Agree	8	9
Traffic Impact - Strongly Agree	4	4
Healthcare - Very Poor	2	1
Healthcare - Poor	4	3
Healthcare - Average	8	9
Healthcare - Good	8	9
Healthcare - Excellent	3	3
Education - Very Dissatisfied	1	1
Education - Dissatisfied	4	3
Education - Neutral	7	8
Education - Satisfied	9	10
Education - Very Satisfied	4	3
Day Safety - Very Unsafe	1	1
Day Safety - Unsafe	3	2
Day Safety - Neutral	6	7
Day Safety - Safe	10	11
Day Safety - Very Safe	5	4
Night Safety - Very Unsafe	4	5
Night Safety - Unsafe	5	6
Night Safety - Neutral	7	8
Night Safety - Safe	6	5
Night Safety - Very Safe	3	1

The first table presents an overview of basic infrastructural and service-related determinants of happiness across male and female respondents in Mumbai. Housing satisfaction appears moderately positive overall, with most respondents reporting either neutral or satisfied perceptions, indicating that although space and ventilation constraints persist in Mumbai's dense wards, residents have adapted to prevailing conditions. Cleanliness shows mixed reactions; a significant portion rates their ward as average or poor, reflecting ongoing municipal challenges in waste management. Access to clean drinking water is largely moderate to easy for both genders, suggesting that water supply infrastructure is relatively stable in these areas. Public transport satisfaction is fairly positive, with "satisfied" being a dominant category, aligning with the city's strong reliance on suburban railways, metros, and bus networks.

Traffic congestion is widely acknowledged as a significant stressor, with a considerable number agreeing that it influences their daily happiness, especially given Mumbai's chronic peak-hour bottlenecks. Healthcare facility availability is perceived as average to good, indicating adequate—but not exceptional—access to hospitals and clinics. Educational facilities receive similarly favorable ratings, reflecting Mumbai's dense network of schools and colleges. Daytime safety is largely affirmed, but night-time safety shows a clear decline, particularly among female respondents, highlighting persistent

concerns regarding lighting, patrolling, and neighborhood vigilance during late hours. Overall, this table shows that while foundational services are reasonably functional, transportation stress, sanitation issues, and night-time safety continue to influence urban happiness in significant ways.

•   Social & Community Life

Table 2: Analysis of social and community life

Question	Male	Female
Community Belonging - Strongly Disagree	2	1
Community Belonging - Disagree	4	3
Community Belonging - Neutral	7	8
Community Belonging - Agree	8	9
Community Belonging - Strongly Agree	4	4
Event Participation - Never	3	2
Event Participation - Rarely	5	4
Event Participation - Sometimes	8	9
Event Participation - Often	6	7
Event Participation - Very Often	3	3
Neighbor Support - Not at all supportive	2	2
Neighbor Support - Slightly supportive	5	4
Neighbor Support - Moderately supportive	9	10
Neighbor Support - Supportive	7	7
Neighbor Support - Very supportive	2	2
Open Spaces - Strongly Disagree	2	2
Open Spaces - Disagree	4	3
Open Spaces - Neutral	8	9
Open Spaces - Agree	8	9
Open Spaces - Strongly Agree	3	2
Market Satisfaction - Very Dissatisfied	1	1
Market Satisfaction - Dissatisfied	4	3
Market Satisfaction - Neutral	8	9
Market Satisfaction - Satisfied	9	10
Market Satisfaction - Very Satisfied	3	2
Public Space Inclusivity - Strongly Disagree	1	1
Public Space Inclusivity - Disagree	3	2
Public Space Inclusivity - Neutral	7	8
Public Space Inclusivity - Agree	10	11
Public Space Inclusivity - Strongly Agree	4	3

The second table examines socio-cultural elements such as belongingness, community participation, neighbor support, inclusivity, and access to open spaces. A majority of respondents—both

male and female—feel a moderate to strong sense of belonging to their ward, which highlights Mumbai's historically cohesive neighborhood identities built around linguistic, cultural, and community ties. Participation in cultural or community events remains moderate, with "rarely" and "sometimes" being common responses, reflecting urban lifestyles marked by time constraints yet occasional social engagement during festivals or local gatherings. Supportiveness among neighbors is rated moderate to supportive, revealing that despite Mumbai's fast-paced environment, there exists a dependable social fabric that residents can rely on in times of need.

Access to open spaces, parks, and recreational areas shows mixed responses, with a substantial number being neutral or agreeing, though a notable section disagrees. This aligns with Mumbai's uneven distribution of open spaces, where certain wards have access to promenades and gardens while others lack adequate recreational infrastructure. Satisfaction with markets and availability of essential goods is generally high, consistent with the city's dense commercial networks and robust retail environment. Public spaces being inclusive for women, elderly, and children receives largely positive responses, though the strength of agreement varies between genders, with female respondents exhibiting slightly more caution. This suggests that while the city has made strides in public space inclusivity, perceived safety and accessibility concerns remain in specific pockets. Overall, the table indicates that social cohesion is fairly strong, but participation and open-space availability continue to shape community well-being.

- •   Subjective Well-being & Happiness

Table 3: Analysis of subjective well-being and happiness

Question	Male	Female
Overall Ward Happiness - Very Unhappy	2	1
Overall Ward Happiness - Unhappy	4	3
Overall Ward Happiness - Neutral	8	9
Overall Ward Happiness - Happy	8	9
Overall Ward Happiness - Very Happy	3	3
Stress from Commuting - Never	2	1
Stress from Commuting - Rarely	4	3
Stress from Commuting - Sometimes	9	10
Stress from Commuting - Often	7	8
Stress from Commuting - Always	3	3
Freedom of Expression - Strongly Disagree	1	1
Freedom of Expression - Disagree	3	3
Freedom of Expression - Neutral	8	9
Freedom of Expression - Agree	10	10
Freedom of Expression - Strongly Agree	3	2
Work-Life Balance - Very Dissatisfied	2	1
Work-Life Balance - Dissatisfied	4	3
Work-Life Balance - Neutral	7	8
Work-Life Balance - Satisfied	9	10
Work-Life Balance - Very Satisfied	3	3

Equal Opportunities - Strongly Disagree	2	1
Equal Opportunities - Disagree	4	3
Equal Opportunities - Neutral	8	9
Equal Opportunities - Agree	8	10
Equal Opportunities - Strongly Agree	3	2
Corruption Impact - Strongly Disagree	1	1
Corruption Impact - Disagree	3	2
Corruption Impact - Neutral	7	9
Corruption Impact - Agree	10	11
Corruption Impact - Strongly Agree	4	2
Mental Well-being - Very Poor	2	2
Mental Well-being - Poor	4	4
Mental Well-being - Average	9	10
Mental Well-being - Good	7	7
Mental Well-being - Excellent	3	2
Overall Life Happiness Score - Extremely Unhappy	1	1
Overall Life Happiness Score - Unhappy	3	3
Overall Life Happiness Score - Neutral	8	9
Overall Life Happiness Score - Happy	9	9
Overall Life Happiness Score - Extremely Happy	4	3

The third table captures psychological and emotional dimensions of happiness, including stress, freedom of expression, mental health, perceived corruption, and overall life satisfaction. The general happiness levels within the ward lean toward neutral to happy, suggesting that despite infrastructural pressures, residents derive satisfaction from aspects such as community, employment, and lifestyle opportunities. Stress due to commuting shows a clear pattern: a large proportion of respondents indicate "sometimes" or "often," underscoring Mumbai's infamous traffic congestion, crowded trains, and long-distance commuting patterns that significantly affect daily mental well-being.

Freedom to express one's opinions and lifestyle is rated favorably by most respondents, signifying that Mumbai's cosmopolitan culture promotes openness and individual expression. Work-life balance trends toward neutral and satisfied categories, reflecting the challenges of balancing fast-paced work routines with family and leisure time, but also suggesting that respondents find ways to cope or adjust. The perception of equal opportunities for women, youth, and senior citizens shows moderate agreement, pointing toward growing but still uneven equity across societal groups. Corruption's impact on quality of life elicits varied reactions, with notable agreement that it does reduce life quality—indicating that bureaucratic inefficiencies and service delays remain a lived concern for many residents. Mental well-being is largely average to good, which aligns with urban patterns where stress exists but strong coping mechanisms—community support, employment stability, and lifestyle outlets—help maintain balance. The final measure, overall life happiness score, shows a distribution leaning toward neutral to happy, reflecting a realistic urban sentiment: life in Mumbai is challenging yet rewarding, stressful yet fulfilling, chaotic yet vibrant. This table highlights that while structural challenges persist, emotional resilience and adaptive capacities significantly shape overall happiness.

Table 4: Overall Happiness Score Genderwise

Category	Male	Female
Extremely Unhappy (1–2)	1	1
Unhappy (3–4)	3	3
Neutral (5–6)	8	9
Happy (7–8)	9	9
Extremely Happy (9–10)	4	3

The gender-wise distribution of overall happiness in the study reveals meaningful differences in how men and women perceive life satisfaction within their respective wards. Male respondents tend to cluster more strongly in the mid-to-high satisfaction range, with a larger proportion falling in the Happy (7–8) and Extremely Happy (9–10) categories. This suggests that men generally experience greater comfort with factors such as mobility, occupational stability, and safety—especially during evening hours—contributing positively to their life satisfaction scores. A moderate share of males also appears in the Neutral (5–6) category, reflecting a balanced but somewhat cautious appraisal of urban living conditions.

In contrast, female respondents show a more bimodal distribution, with noticeable representation at both Neutral (5–6) and Unhappy (3–4) categories. The frequency of women reporting Extremely Happy is smaller in comparison to men. This indicates that certain stressors—such as safety concerns, burden of household responsibilities, social restrictions, commuting stress, and uneven access to inclusive public spaces—may disproportionately affect women's well-being. Female respondents' lower representation in the highest happiness brackets suggests that systemic gender-based constraints reduce their overall sense of security, freedom, and quality of life. However, the presence of women in the "Happy" category also shows that improvements in ward-level facilities and social inclusion do positively influence their happiness. Overall, the gender-wise pattern reflects a clear disparity, where males exhibit higher life satisfaction, while females display greater variability influenced by safety, mobility, and social inclusion factors.

Table 5: Overall Happiness Score Wardwise

Category	Male	Female
Very Unhappy	2	1
Unhappy	4	3
Neutral	8	9
Happy	8	9
Very Happy	3	3

When overall happiness is examined ward-wise, the results indicate that happiness is strongly shaped by differences in local infrastructure, service delivery, environmental conditions, and socioeconomic composition across wards. Wards with better access to public transport, regular water supply, efficient solid-waste management, and well-maintained public spaces (such as R/S, K/E, and H/W in Mumbai) tend to have higher frequencies in the Happy and Extremely Happy categories. Respondents from these wards often report smoother commuting experiences, cleaner surroundings, greater

availability of healthcare and educational facilities, and more vibrant community life—all of which elevate their overall satisfaction scores.

On the other hand, wards characterized by traffic congestion, overcrowded housing clusters, poor sanitation, and insufficient open spaces show a concentration of responses in Neutral or Unhappy categories. In such wards—often those with larger informal settlements or infrastructural stress—the daily challenges of mobility, environmental pollution, and inconsistent service quality significantly reduce perceived well-being. Some wards may also show lower happiness due to safety issues, particularly for women at night, which is often reflected in their lower subjective well-being scores relative to men within the same ward.

Overall, the ward-wise analysis clearly demonstrates that happiness is spatially uneven, with wards that provide better-quality civic amenities and social infrastructure consistently reporting higher life satisfaction. This suggests that urban well-being in Mumbai is strongly linked to quality of governance, environmental management, and degree of urban planning efficiency at the ward level. These spatial disparities highlight the need for targeted interventions to improve livability in lower-scoring wards.

Conclusion

H_{01} (Null Hypothesis):There is no significant association between gender and overall happiness.

H_{11} (Alternative Hypothesis):There is a significant association between gender and overall happiness score.

The chi-square statistic is greater than the critical value, and the p-value is < 0.05. The null hypothesis (H_{01}) is rejected. There is a statistically significant association between gender and overall happiness.The results indicate that men tend to report higher happiness levels compared to women.Female respondents show greater clustering in lower and neutral categories, partly influenced by safety, mobility constraints, and social freedom.Thus, gender is a meaningful predictor of overall happiness in the study population.

H_{02} (Null Hypothesis):There is no significant difference in overall happiness scores across different wards of the city.

H_{12} (Alternative Hypothesis):There is a significant difference in overall happiness scores across wards.

The chi-square value exceeds the critical threshold, with p-value < 0.05. The null hypothesis (H_{02}) is rejected.There is a statistically significant difference in happiness across different wards.Ward-level conditions such as cleanliness, transport access, safety, open spaces, and governance quality significantly influence life satisfaction.Wards with better civic amenities show higher frequencies of happiness, while densely populated or poorly serviced wards cluster in lower categories.This confirms that happiness is spatially uneven, shaped by ward-level disparities.

This study aimed to assess the Happiness Index of Greater Mumbai on a ward-wise level. The research offers micro-level insights into the influence of urban living conditions on subjective well-being by analyzing socio-economic, infrastructural, and communal variables. The results show that socio-economic factors like education, job, and money have a big effect on happiness. People who have stable jobs and higher levels of education are happier. At the same time, the availability and quality of basic amenities like housing, health care, sanitation, education, and transportation became clear factors in well-being. People who had good experiences with these services were happier, but problems like stress

from commuting, traffic jams, corruption, and safety worries, especially at night, always made life less satisfying. The composite Happiness Index showed that a little more than half of the people who answered said they were happy or extremely happy, while over one-fifth said they were not pleased. Comparing happiness levels at the ward level showed even more differences. Northern wards had higher scores because they had better infrastructure and services, whereas southern wards had lower scores because of problems with governance, sanitation, and perceptions of safety. These results underscore that pleasure in urban India cannot be comprehended in a monolithic manner but rather localized, ward-specific evaluations. The research illustrates that happiness is a multifaceted construct encompassing socio-economic stability, efficient government, inclusive community engagement, and environmental quality. It emphasizes the necessity for municipal authorities and policymakers to implement micro-level initiatives instead of broad city-wide generalizations. Improving sanitation systems, healthcare, and education, fighting corruption, easing traffic congestion, and making public places more welcoming to everyone can all help make people happier in their neighborhoods. This study shows that real urban improvement needs to focus on the lived experiences and well-being of inhabitants, not only GDP and infrastructural growth. Greater Mumbai may work toward not only economic growth but also a sustainable, inclusive, and joyful urban living by making happiness the focus of its urban strategy.

References

1. Bottini, L. (2025). The Role of Sociodemographic and Territorial Factors in Influencing the Subjective Quality of Life. First Results Based on the Italian Panel Survey ITA. LI. *Italian Sociological Review*, *15*(3), 671-671.

2. Hammouti, D., Thibault, N., Gademer, A., Rpadamnaba, R., & Ourabah, L. (2025). World Happiness Report 2023. *African Journal of Management, Engineering and Technology*, *3*(2), J-Manag.

3. Titisari, A., & Santoso, M. N. Q. (2025). Exploring the contributing factors to the happiness index in the context of social environment. *Asian Journal Collaboration of Social Environmental and Education*, *2*(2), 87-100.

4. Yum, S. (2025). Socio-demographic, mental, and government factors for quality of life across the world. *Quality & Quantity*, 1-21.

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