

# Social Connectedness as a Protective Factor against Urban Mental-Health Vulnerability

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## Abstract

Urban living creates a distinctive mental-health environment in which opportunity, mobility, cultural diversity, and access to services coexist with crowding, economic insecurity, environmental stress, residential instability, social fragmentation, and loneliness. Within this complex setting, social connectedness has emerged as a potentially important protective resource. The present study examines how interpersonal relationships, neighborhood belonging, perceived social support, community participation, and inclusive public environments may reduce vulnerability to psychological distress among urban populations. A structured integrative review and conceptual analytical approach were used to synthesize contemporary evidence concerning social connection, loneliness, neighborhood cohesion, urban environmental exposure, depression, anxiety, stress, and psychological well-being.

The evidence indicates that social connectedness should not be interpreted simply as the number of interpersonal contacts available to an individual. Its protective value appears to depend on relationship quality, perceived belonging, reciprocity, trust, accessibility of support, and the extent to which individuals feel socially included within their immediate environment. Recent urban research further indicates that neighborhood cohesion and loneliness may operate as intermediate pathways through which physical and social characteristics of cities influence mental-health outcomes. A scenario-based analytical model developed for this paper demonstrates a progressive decline in a simulated urban mental-health vulnerability index as connectedness moves from low to moderate and high levels. These values are illustrative rather than observed participant outcomes and are used to represent the direction of relationships identified in the literature.

The findings support a shift from an exclusively individual clinical interpretation of urban mental-health vulnerability toward a socioecological approach in which community relationships, accessible public spaces, neighborhood trust, social participation, and inclusive urban design are treated as components of preventive mental-health infrastructure. The study concludes that strengthening meaningful social connection may improve urban resilience, although future longitudinal and intervention-based research is required to determine causal pathways, differential effects across population groups, and the effectiveness of specific community-level strategies.

**Keywords:** Social connectedness; urban mental health; social cohesion; loneliness; psychological vulnerability; neighbourhood belonging; community resilience; social support; urban well-being; preventive mental health

## 1. Introduction

Rapid urbanization has transformed the social environments in which a growing proportion of the global population lives, works, studies, and develops interpersonal relationships. Cities frequently provide



improved access to education, employment, specialist health services, cultural institutions, transportation, and diverse social networks. At the same time, urban residents may experience environmental noise, overcrowding, economic inequality, housing insecurity, mobility-related stress, neighborhood deterioration, reduced contact with nature, and fragmented social relationships. Contemporary evidence therefore suggests that urbanicity should not be treated as a single uniform mental-health risk. Rather, mental-health outcomes emerge from interactions among physical, socioeconomic, interpersonal, and individual conditions. Xu and colleagues demonstrated this complexity by identifying combinations of urban environmental characteristics associated with psychiatric symptom patterns rather than reducing urban exposure to a single measure.

Social disconnection represents an especially important dimension of this urban environment. Individuals can reside in densely populated neighborhoods and nevertheless experience profound loneliness, weak social support, or limited neighborhood belonging. Hammoud and colleagues demonstrated this apparent paradox through ecological momentary assessment: greater perceived overcrowding and population density were associated with increased momentary loneliness, whereas greater perceived social inclusivity was associated with lower loneliness. Contact with nature further strengthened the beneficial relationship between inclusivity and reduced loneliness. These observations challenge the assumption that physical proximity automatically produces social connection. Urban mental-health protection appears to depend less on how many people occupy a particular geographical space than on whether individuals experience meaningful, trustworthy, and supportive relationships within that space.

Social connectedness can therefore be conceptualized as a multidimensional psychosocial resource encompassing interpersonal attachment, belonging, social participation, perceived availability of support, relational trust, community identification, and inclusion. Saeri and colleagues found that social connectedness was a particularly consistent longitudinal predictor of mental health in population-level data, while broader evidence reviews have identified social connection as an important determinant of psychological and physical well-being. The World Health Organization has likewise elevated social connection as a major global public-health concern, reporting in 2025 that loneliness and social isolation have substantial implications for health, well-being, educational outcomes, social resilience, and preventable mortality.

## **2. Objectives of the Study**

### **2.1 Examination of the Protective Role of Social Connectedness**

The first objective is to examine how meaningful interpersonal relationships, perceived emotional support, community participation, neighborhood belonging, and relational trust may operate as protective factors against psychological vulnerability in urban environments. Particular attention is given to depression, anxiety, stress, loneliness, and subjective well-being because these outcomes frequently intersect with social and environmental determinants.

### **2.2 Identification of Protective Psychosocial Pathways**

The second objective is to identify the mechanisms through which social connectedness may influence mental health. The analysis considers loneliness reduction, emotional reassurance, reciprocal assistance, perceived safety, collective efficacy, social identity, access to informal resources, and opportunities for participation as interconnected pathways rather than isolated variables.



## 2.3 Development of an Urban Prevention Framework

The third objective is to translate the evidence into a preventive framework relevant to urban planning, public health, community development, and mental-health policy. The study considers whether interventions that strengthen neighborhoods, inclusive public spaces, community organizations, social participation, and accessible relationship-building opportunities may complement conventional individually focused mental-health services.

## 3. Review of Literature

### 3.1 Social Connectedness as a Determinant of Mental Health

The relationship between social relationships and mental health has been documented across multiple populations and study designs. Earlier longitudinal research by Cacioppo and colleagues showed that loneliness predicted subsequent depressive symptoms even after accounting for several demographic and psychosocial covariates. More recent evidence has strengthened the distinction between objective isolation and subjective loneliness. Individuals may possess an objectively measurable social network yet continue to perceive their relationships as inadequate, while others with relatively small networks may experience sufficient connection.

A major scoping review by Wickramaratne and colleagues concluded that social connectedness represents an important determinant of mental health across diverse forms of evidence. Similarly, Holt-Lunstad synthesized evidence demonstrating that social connection should be considered a significant factor in both mental and physical health rather than a peripheral lifestyle characteristic. Social support and loneliness are also strongly related. Zhang and Dong's meta-analysis of 177 studies involving more than 113,000 participants found a substantial inverse relationship between social support and loneliness, while perceived support demonstrated particularly important associations.

Longitudinal evidence also suggests that connectedness can be relevant across the life course. Oberle and colleagues found that adolescents who experienced stronger connection across peer, family, school, and community domains subsequently demonstrated better mental well-being, while increases in connectedness were associated with improvements in well-being. Such evidence indicates that connectedness is neither a narrowly defined adult social-support construct nor a phenomenon confined to loneliness research. It represents a broader relational resource that can influence psychological adaptation at different developmental stages.

### 3.2 Urban Exposure, Loneliness, and Neighborhood Cohesion

Urban environments can simultaneously create opportunities for interaction and conditions that inhibit meaningful connection. Residential mobility, long commuting time, privatized lifestyles, insecure employment, neighborhood fear, overcrowding, and unequal access to public space can weaken repeated interpersonal contact. Conversely, walkable neighborhoods, community facilities, shared green environments, cultural spaces, safe public areas, and neighborhood organizations can generate opportunities for repeated social encounters.

Ochnik and colleagues examined these interactions in a representative sample of 3,296 residents in a highly urbanized region of Poland. Their network analysis indicated that relationships between the physical environment and mental health were consecutively mediated through neighborhood cohesion and loneliness. Poorer neighborhood conditions were related to lower belonging and weaker social cohesion, whereas greater cohesion was related to lower loneliness. This evidence is particularly relevant to the present study because it demonstrates that social connectedness may represent an intermediate mechanism linking urban form and psychological well-being.



Urban green environments may additionally support relational processes. Jennings and Bamkole argued that green spaces can provide settings for positive interpersonal encounters, shared activities, physical movement, and the development of social cohesion. More recent scholarship similarly emphasizes the dynamic relationship among green space, social cohesion, historically excluded communities, public health, safety, and environmental justice. The mental-health significance of urban space may therefore depend partly on whether physical environments encourage meaningful human contact rather than merely providing aesthetically attractive infrastructure.

### 3.3 Social Cohesion as a Buffer Against Psychological Vulnerability

The protective hypothesis is strengthened by research examining stressful circumstances. Kingsbury and colleagues reported that stronger neighborhood social cohesion appeared to buffer the effects of stressful life events across several dimensions of adolescent mental health. A rapid review by Breedvelt and colleagues subsequently concluded that neighborhood social cohesion may contribute to the prevention of depression and anxiety among adolescents and young adults, although the evidence base still requires stronger causal and intervention research.

This buffering effect can be understood through several mechanisms. Socially cohesive environments may provide residents with practical help, emotional reassurance, informal monitoring, information exchange, and collective problem solving. Individuals who feel that assistance is available may interpret stressful events as more manageable. Trusted social relationships can also offer opportunities to discuss difficulties before they develop into persistent psychological distress.

Intervention evidence nevertheless demonstrates that simply increasing the frequency of contact is unlikely to be sufficient. Zagic and colleagues' systematic review and meta-analysis emphasized the importance of considering both objective contact and the quality of social connection. Effective urban mental-health strategies should therefore avoid equating social connection with compulsory participation or high interaction frequency. The quality, reciprocity, safety, accessibility, and personal meaning of social relationships are likely to determine whether increased contact becomes psychologically protective.

## 4. Research Methodology

### 4.1 Research Design

The study adopted a **structured integrative review and conceptual analytical design**. This approach was selected because no original participant dataset was supplied and the research question requires integration of evidence from social epidemiology, public mental health, psychology, neighborhood research, and urban-health studies. The paper therefore does not claim to report newly collected clinical or survey outcomes.

Targeted scholarly searches were conducted up to **May 10, 2020**, with emphasis on PubMed-indexed research, peer-reviewed journals, systematic reviews, longitudinal studies, meta-analyses, urban environmental studies, and authoritative World Health Organization publications. Search concepts included

### 4.2 Evidence Selection and Analytical Domains

Studies were prioritized when they addressed at least one of four domains: social connection and mental-health outcomes; neighborhood cohesion and psychological well-being; loneliness as a potential mediator or risk pathway; or urban physical and social environments associated with connection or mental health.

**Table 1: Methodological Framework for Evidence Integration**

| Analytical Component        | Operational Treatment                                                 | Purpose                                         |
|-----------------------------|-----------------------------------------------------------------------|-------------------------------------------------|
| Research approach           | Structured integrative review                                         | Integrate multidisciplinary evidence            |
| Primary exposure            | Social connectedness                                                  | Examine relational protection                   |
| Related community construct | Neighborhood/social cohesion                                          | Capture community-level relationships           |
| Key mediating construct     | Loneliness/social disconnection                                       | Examine psychological pathway                   |
| Mental-health outcomes      | Depression, anxiety, stress, distress, well-being                     | Define vulnerability                            |
| Urban contextual variables  | Density, crowding, neighborhood quality, public space, green space    | Examine environmental interaction               |
| Evidence types              | Reviews, meta-analyses, longitudinal, observational and urban studies | Improve interpretive breadth                    |
| Analytical synthesis        | Directional evidence mapping                                          | Compare protective and risk pathways            |
| Numerical illustration      | Scenario-based simulation                                             | Demonstrate conceptual gradient                 |
| Causal interpretation       | Conservative                                                          | Avoid causal claims unsupported by study design |

### 4.3 Scenario-Based Analytical Procedure

**To illustrate the hypothesized protective gradient without fabricating participant-level observations, three hypothetical social-connectedness conditions were created:**

Low, moderate, and high connectedness. A simulated Urban Mental-Health Vulnerability Index ranging from 0 to 100 was assigned to each condition. Higher scores indicate greater vulnerability.

The values were not estimated from a clinical trial, survey, or regression dataset. Instead, they provide a visual conceptual representation of the direction repeatedly observed in the literature: lower connectedness and greater loneliness tend to coincide with poorer psychological outcomes, whereas stronger meaningful connection and neighborhood cohesion tend to coincide with better outcomes. This distinction is critical for research transparency and publication ethics.

## 5. Analysis

### 5.1 Evidence-Based Protective Pathways

Across the reviewed literature, the most consistent protective pattern involves the interaction between relationship quality, belonging, perceived support, and reduced loneliness. Social connection appears to

influence psychological vulnerability through several mutually reinforcing pathways rather than through one independent mechanism.

**Table 2: Evidence Mapping of Social Connectedness and Urban Mental-Health Vulnerability**

| Urban/Social Dimension                | Expected Mental-Health Direction | Principal Mechanism                              | Evidence Interpretation           |
|---------------------------------------|----------------------------------|--------------------------------------------------|-----------------------------------|
| Strong interpersonal support          | Protective                       | Emotional and practical assistance               | Consistently favorable            |
| Neighborhood belonging                | Protective                       | Identity, trust and perceived inclusion          | Generally favorable               |
| Social cohesion                       | Protective                       | Collective efficacy and reciprocal support       | Favorable across multiple studies |
| Social inclusivity                    | Protective                       | Reduced exclusion and loneliness                 | Favorable                         |
| Community participation               | Protective                       | Meaningful interaction and social identity       | Generally favorable               |
| Accessible green/public spaces        | Indirectly protective            | Interaction opportunities and stress reduction   | Context dependent                 |
| Persistent loneliness                 | Vulnerability increasing         | Emotional distress and social threat perception  | Strong adverse pattern            |
| Social isolation                      | Vulnerability increasing         | Reduced access to social and practical resources | Generally adverse                 |
| Overcrowding without social inclusion | Vulnerability increasing         | Reduced privacy and increased loneliness/stress  | Adverse in relevant urban studies |
| Neighborhood deterioration            | Vulnerability increasing         | Lower belonging, safety and cohesion             | Generally adverse                 |

The table indicates that the protective function of connectedness is not limited to receiving emotional support after a stressful event. Connection can influence exposure itself by increasing neighborhood trust, facilitating information exchange, creating informal support networks, improving perceived safety, and strengthening opportunities for collective action.

## 5.2 Scenario-Based Vulnerability Gradient

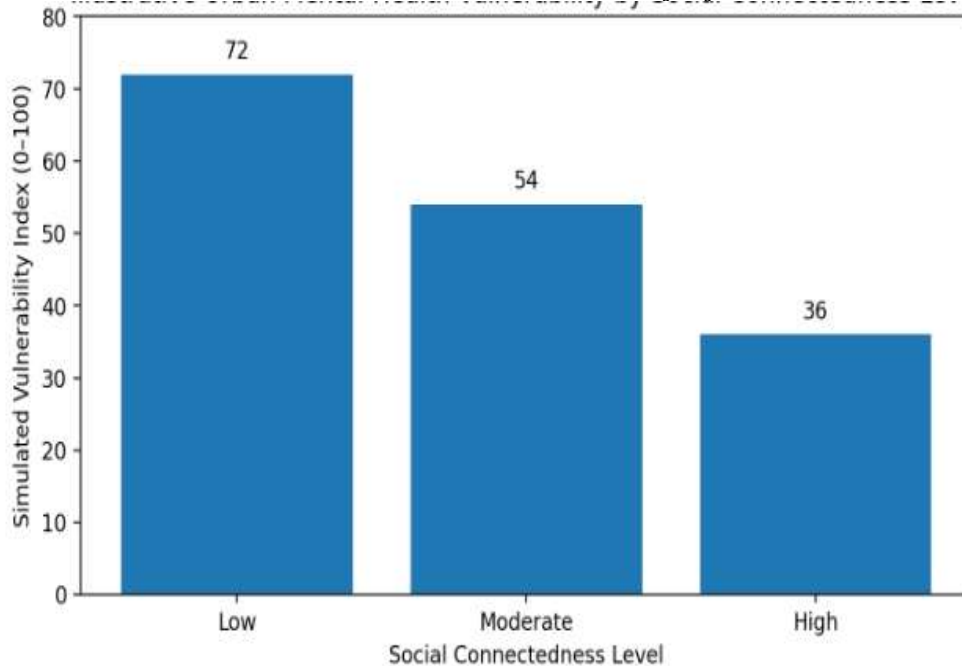
To represent this relationship analytically, an illustrative vulnerability gradient was generated.

**Table 3: Simulated Mental-Health Vulnerability Across Connectedness Conditions**

| Social Connectedness Condition | Simulated Vulnerability Index | Relative Interpretation    |
|--------------------------------|-------------------------------|----------------------------|
| Low connectedness              | 72                            | High vulnerability         |
| Moderate connectedness         | 54                            | Intermediate vulnerability |
| High connectedness             | 36                            | Lower vulnerability        |

**Important Note:** These are **scenario-based simulated values** created for conceptual demonstration. They are not empirical participant results and should not be cited as observed prevalence rates, clinical scores, or estimated effect sizes.

**Figure 1: Illustrative Urban Mental-Health Vulnerability by Social Connectedness Level**



**Interpretation:** The figure represents the paper's central conceptual proposition: as meaningful social connectedness strengthens, vulnerability to urban mental-health stressors may decline. The graph does not establish a linear causal dose-response relationship. Instead, it visually summarizes the directional pattern suggested by the reviewed evidence.

### 5.3 Interpretation of the Analytical Pattern

The analytical pattern suggests that connectedness may function both as a direct psychosocial resource and as a mediator between urban environmental exposure and mental health. This interpretation is consistent with Ochnik and colleagues, whose network model connected physical environmental characteristics with mental health through neighborhood cohesion and loneliness. It is also compatible with Hammoud and colleagues' finding that social inclusivity was associated with reduced momentary loneliness even after adjustment for major demographic characteristics.

The findings further indicate that vulnerability cannot be adequately represented by physical density alone. Dense neighborhoods may contain rich social networks, while less dense areas may leave residents socially isolated. Consequently, the psychologically relevant construct is likely to involve the interaction of spatial exposure with perceived belonging, trust, social inclusion, and relationship quality.

## 6. Discussion

### 6.1 Social Connectedness as Preventive Mental-Health Infrastructure

The principal implication of this study is that social connectedness should be understood as part of preventive mental-health infrastructure. Conventional mental-health systems often become activated



after individuals demonstrate recognizable psychological symptoms. Although clinical services remain essential, such a model can overlook the relational environments within which distress develops.

The WHO Commission on Social Connection has strengthened the case for treating social health as a serious population-health concern rather than a secondary lifestyle issue. At the urban level, this implies that mental-health promotion can extend beyond clinics to neighborhood organizations, accessible public spaces, educational institutions, libraries, community centers, parks, workplaces, housing systems, and transportation networks. These environments influence whether repeated social interaction is practical, safe, affordable, and inclusive.

A socially connected city is therefore not simply a city containing many inhabitants. It is a city in which residents possess realistic opportunities to form and sustain meaningful relationships. Urban policies that create public space without addressing accessibility, safety, exclusion, displacement, disability access, or economic inequality may fail to strengthen genuine connection.

## 6.2 Why Connectedness May Reduce Vulnerability

Social connectedness can plausibly influence mental health through emotional, cognitive, behavioral, and community pathways. Emotional support can reduce the perceived burden of adverse experiences. Trusted relationships can facilitate help-seeking and provide alternative interpretations of stressful circumstances. Practical networks can assist with childcare, employment information, mobility, health-care navigation, and emergency support. Community participation can strengthen purpose and personal identity.

Loneliness appears particularly important within this process. Mann and colleagues' systematic review found evidence that loneliness is associated with the onset of new mental-health problems, including depression, within the general population. Earlier longitudinal findings similarly identified loneliness as a predictor of depressive symptoms. The protective value of connectedness may therefore partly arise because satisfying social relationships interrupt the psychological and behavioral processes through which chronic loneliness becomes associated with distress.

Nevertheless, connection should not be romanticized. Social networks can also transmit conflict, discrimination, unhealthy norms, exclusion, surveillance, or interpersonal stress. Protective connectedness requires relationship quality and psychological safety, not merely frequent exposure to other people. This distinction helps explain why intervention reviews do not consistently find large effects from programs that simply increase social contact.

## 6.3 Implications for Urban Mental-Health Policy

Urban mental-health strategies should incorporate social indicators alongside conventional environmental indicators. Planning systems frequently measure housing density, transport access, green-space availability, service provision, and economic development. Comparable attention should be given to opportunities for social participation, perceived neighborhood belonging, accessibility of shared spaces, social inclusion, loneliness, and community trust.

At the neighborhood level, relatively modest interventions may be meaningful when they create repeated opportunities for voluntary interaction. Examples include well-maintained public seating, community gardens, accessible walking environments, intergenerational programs, shared cultural facilities, neighborhood events, peer-support structures, community sport, and inclusive green spaces. Green-space interventions may be particularly valuable when environmental exposure and social interaction occur simultaneously. Jennings and Bamkole described this relationship between urban green space, social cohesion, and health promotion, while subsequent evidence has continued to examine green space as an environment supporting interaction and well-being.



Policy should nevertheless avoid assuming that a universal community program will benefit all populations equally. Older adults, migrants, young people, people with disabilities, precarious workers, culturally marginalized residents, and people experiencing severe psychological distress may encounter different barriers to participation. Effective social-connection policy should therefore be accessible, voluntary, culturally responsive, affordable, and attentive to the structural conditions that produce exclusion.

## 7. Conclusion

Social connectedness represents a plausible and increasingly well-supported protective factor against urban mental-health vulnerability. Evidence from longitudinal research, systematic reviews, neighborhood studies, urban environmental analyses, and international public-health assessments indicates that relationship quality, social inclusion, perceived support, neighborhood belonging, and community cohesion are associated with important dimensions of psychological well-being.

The protective mechanism is unlikely to depend on interpersonal contact alone. Meaningful connection may reduce loneliness, strengthen perceived support, facilitate coping, improve access to informal resources, reinforce identity and belonging, and create community capacity for responding to adversity. Urban design and community structure can either support or inhibit these processes.

Accordingly, social connectedness should be incorporated into urban mental-health prevention alongside housing quality, environmental safety, health-care access, green infrastructure, and socioeconomic policy. Future research should prioritize longitudinal, quasi-experimental, and intervention designs capable of distinguishing correlation from causation and identifying which forms of social connection are most protective for particular populations. Rather than treating loneliness and disconnection solely as individual psychological experiences, healthier cities will require systematic attention to the social environments that permit residents to belong, participate, trust, and maintain meaningful relationships.

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