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Urban Sanity

Understanding Urban Mental Health Impacts and How to Create Saner, Happier Cities

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Summary

This report examines how urban living affects residents' mental health and happiness, and ways to use this information to create saner and happier cities. Some often-cited studies suggest that urban living increases mental illness and unhappiness, but a critical review indicates that much of this research is incomplete and biased, and the issues are complex, often involving trade-offs between risk factors. City living may increase some forms of psychosis and mood disorders, drug addiction, and some people's unhappiness, but tends to reduce dementia, alcohol abuse and suicide rates, and many people are happier in cities than they would be in smaller communities. This report examines specific mechanisms by which urban living can affect mental health and happiness, and identities practical strategies that communities and individuals can use to increase urban mental health and happiness. This analysis suggests that it is possible to create sane and happy cities.

Parts of this report are summarized in the book,
Urban Mental Health, Oxford University Press (https://bit.ly/36CNYnj).

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Executive Summary

Does urban living threaten our mental health and happiness? Popular culture is rife with stories suggesting that city environments, including living in apartments and using public transit, cause emotional stress and unhappiness, and some scientific studies also find higher mental illness and depression rates in urban areas. Are these claims credible? What are their implications? How can communities and individuals respond to maximize urban mental health and happiness?

These are important and timely questions. The world's population is in the middle of a transition from approximately 80% rural in 1920 to 80% urban by 2060. Decision-makers and individuals need practical guidance on how to maximize sanity and happiness when planning cities and choosing where to live. This report explores these issues.

This research can be challenging because mental health and happiness are difficult to measure, and much of the research is incomplete and biased, focuses on a particular impact or group, and fails to consider confounding factors that would differentiate between *association* (a condition is more common in cities) and *causation* (city living causes a condition). It is also challenging because mental illness and social problems are emotional issues. Urban environments tend to be crowded and noisy, which can stimulate stress and fear, and city residents may seem unfriendly, particularly for newcomers. In addition, many people work in cities, live in suburbs and recreate in rural areas, and so associate cities with responsibilities and stress, suburbs with home and family, and rural areas with relaxation and enjoyment. These factors can contribute to negative emotions about city living.

Another challenge is confusion concerning what constitutes *urban*. The term invokes images of skyscrapers, crowded subways and concentrated poverty; although such conditions exist, they are not representative of the overall urban experience. *Urban* includes communities ranging from city centers to suburban villages. Most urban neighborhoods are moderate-density, have both automobile and public transit, and include a mix of low-, middle- and high-income households. High-rise apartments, crowded streets and car-free lifestyles are atypical examples.

When considering how environments affect human sanity and happiness it is important to keep in mind people's tremendous diversity and adaptability. Humans live successfully in a wide range of environments, from frozen tundra to dry deserts, and from single-family houses in sprawled suburbs to city center high-rises. Many of us will adapt to various environments during our lifetime. We shouldn't assume that our personal preferences are universal or unchangeable.

This review indicates that city living has various mental health impacts. Credible research suggests that urban residency can *increase* psychosis and mood disorder risks, addiction to some drugs, and some people's unhappiness, but *reduces* dementia, some types of substance abuse and suicide rates, and increases many people's happiness, particularly those who are poor or alienated. Urban living also tends to *improve* mental health by increasing economic and social opportunities, fitness and health, and access to mental health services, and higher mental illness rates in cities may reflect better reporting. Table ES-1 summarizes these impacts.

Table ES-1 **Urbanization Mental Health Impacts**

Increased Risks	Reduced Risks
• Self-reported unhappiness (in affluent countries) • Psychosis (e.g. schizophrenia) and mood disorders (e.g., stress and depression) • Cocaine and heroin addiction	• Self-reported unhappiness (in poor countries) • Dementia and Alzheimer disease • Alcohol and methamphetamine abuse • Suicide rates

Urbanization tends to increase some and reduce other mental illness risks.

This study explores mechanisms by which city living affects mental health and happiness. Higher mental illness and unhappiness rates in cities may largely reflect the concentration of people with elevated risk factors, such as poverty, disability and minority status, due to more economic opportunities, services and tolerance. This can create a self-reinforcing cycle of concentrated poverty, mental illness and associated social problems in certain urban areas, called *social drift*. As a result, the *association* between cities and mental illness does not necessarily indicate that cities *cause* these problems, or that a typical person will become less sane or happy by moving to a typical urban neighborhood. In fact, many mentally ill and unhappy people are better off overall in cities than in smaller communities that offer less opportunity and support.

Urban households tend to be smaller and more mobile than in rural areas, which can increase isolation and depression, but urban residents also tend to have larger social networks than in smaller communities, reflecting cities' greater social opportunities. Urban conditions, such as noise, toxic pollution, crime and social over-stimulation, seem to increase some mental illness risk factors, but these impacts are declining or can be reduced with appropriate planning. It is hyperbola to claim, as some researchers do, that cities cause "relentless" stress. Urban newcomers may be stressed by the additional noise, stimulation, and interactions with culturally diverse neighbors, but over time most learn to accommodate these factors. For visible minorities, the cultural diversity of cities can *reduce* stress and increase happiness.

Many international surveys find *higher* self-reported happiness (also called *life satisfaction*) in cities than rural areas. In the U.S., rural residents report slightly (up to three percentage points) higher average happiness ratings than in large cities, but this may reflect confounding factors, and so does not necessarily indicate that people who move from rural to urban areas become less happy. Rural areas tend to have much higher (about double) suicide rates than urban areas, which suggests that city living increases overall mental health and happiness. If urban living double residents' lifetime psychosis risk, from about 1% to 2%, as some researchers suggest (others estimate much smaller effects) this approximately equals the higher rural suicide rates. Since psychosis is generally treatable and transitory, while suicides are devastating and permanent, cities' increased psychosis risk is generally preferable to higher rural suicide risk.

Huge worldwide rural-to-urban migrations and high costs of living in cities offer empirical evidence that billions of people consider themselves better off overall in urban conditions and willingly bear these costs. Although given unlimited resources many people say that they prefer a large suburban home and automobile commuting over an urban apartment and public transit commuting, when confronted with realistic trade-offs, a major portion of households will choose

more compact housing and more resource-efficient travel modes in order to gain the benefits of city living. Much of the evidence that consumers dislike cities, and that cities increase mental illness and unhappiness, are specific to North America where public policies are anti-urban and cities have severe social problems; as a result, such evidence does not apply to economically successful, well designed urban neighborhoods.

Table ES-2 summarizes various mechanisms by which urban environments can affect mental health and happiness, considers whether these are actually caused by urbanization, and identifies specific response strategies.

Table ES-2 **Summary of Urban Mental Health Impact Mechanisms**

Mechanism	Causation or Association	Mental Health and Happiness Strategies
Concentrated mental illness risks (poverty, addiction, etc.)	*Mainly association.* Concentration may exacerbate some problems but reduce others by improving economic opportunity and treatment services.	Improve mental health and welfare support services. Recognize that cities tend to attract people with mental health risks, and so should provide appropriate services.
Substance abuse.	*Mainly association.* Cities have more cocaine and heroin addiction, rural areas more prescription drug, meth and alcohol abuse.	Provide targeted substance abuse prevention and treatment programs.
Social isolation and loneliness	*Mixed.* Urban households tend to be smaller and more mobile, but these differences are declining. Rural residents tend to be superficially friendly, but cities offer more social opportunities.	Encourage *community cohesion* (positive interactions among neighbors) and programs to welcome newcomers.
Noise and light pollution	*Increases with density*, but can be minimized with policy and design changes.	Regulations and designs that reduce noise and light pollution.
Toxic pollution	*Increases with density*, but can be reduced.	Pollution reduction strategies.
Excessive stimulation and stress	*Mixed.* New urban residents often experience stress, but this usually declines over time.	Support programs that help people to become more comfortable with diversity.
Crime	*Mixed.* Some cities have high crime rates, but this is declining.	Support crime reductions and more accurate crime risk information.
Crowding	High housing costs can increase crowding, but this occurs in rural as well as urban areas.	Increase affordable housing supply in cities, including larger units for families.
Economic stress	*Mixed.* Urban areas tend to have high living costs, but better economic opportunities.	Support affordability and economic opportunities.
Transport conditions	*Mixed.* Urban living has both positive and negative impacts.	Improve walking, cycling and public transit, and support Smart Growth policies.
Inadequate access to nature	*Mainly causation*, but can be reduced.	Increase greenspace and opportunities to visit natural areas.

Urban living can affect mental health and happiness in several ways. Some are inherent to urban conditions, but many are associations related to confounding factors.

This suggests that better policies can increase urban mental health and happiness. The following planning and design strategies can help create saner and happier cities:

- *Targeted social service.* Recognize that cities tend to attract people with elevated mental illness risks, and provide appropriate mental health, housing and substance abuse treatment services.
- *Affordability*. Improve affordable urban housing and transportation options (walking, cycling, public transit, taxi, etc.) to reduce residents' financial stress.
- *Independent mobility.* Provide independent mobility options for diverse community members, including those who are poor, have disabilities or impairments, adolescents or seniors.
- *Pro-social places*. Create public spaces that promote community and encourage positive interactions among residents. Involve residents in creating public places and activities that meet their needs.
- *Community safety*. Create communities that minimize dangers including traffic, crime and harassment, and pollution exposure with traffic safety and community security programs, including crime prevention through environmental design.
- *Design for physical activity*. Integrate physical activity by providing good walking and cycling conditions, high quality public transit, compact and mixed neighborhoods, local parks and recreational facilities, plus appropriate community sports and recreation programs.
- *Pollution reductions.* Implement noise, air, light and toxic pollution reduction programs.
- *Greenspace*. Design cities with appropriate greenspaces, including local and regional parks, green infrastructure, and out-of-city wilderness access programs.

The following strategies are particularly important in suburban and rural areas:

- Rising suburban and rural poverty and substance abuse rates increase the need for appropriate social services, affordable housing and transport options.
- Because residents are isolated, residents are vulnerable to loneliness and depression, and so require suitable places to socialize, and options for accessing those places.
- Because some smaller communities can be exclusive and oppressive, they may require targeted programs to include minorities and non-conformists.
- Because transport systems more automobile-dependent, it is particularly important to improve walking and cycling conditions.

This is not to suggest that everybody should live in dense cities; some people are unsuited due to their lifestyle or temperament, for example, because they own large pets, engage in noisy activities, or are uncomfortable with cultural diversity. However, because cities tend to improve economic and social opportunities, many people benefit from urban living overall, because their economic and social gains more than offset any additional mental stress, particularly over the long run as they become accustomed to urban environments. Since urban living reduces per capita land consumption and transport costs, it tends to provide additional, indirect benefits.

Many people may find this research reassuring: it suggests that most people can take advantage of urban living benefits without sacrificing their sanity or happiness.

Introduction

Does urban living threaten our mental health and happiness? Popular culture is rife with stories suggesting that urban environments, apartment living and public transit travel cause emotional stress and unhappiness. Some scientific studies also find higher mental illness and depression rates in urban areas. Are these claims credible? What are their implications? How can communities and individuals maximize urban mental health and happiness?

These are important and timely questions. The human experience is increasingly urban; the world's population is currently transitioning from being approximately 80% rural in 1920 to 80% urban in 2060. Many people whose grandparents lived in traditional villages have children who will live in large, industrial cities. Decision-makers and individuals need practical guidance on how to maximize sanity and happiness when planning cities and choosing where to live.

Abundant empirical evidence indicates that people can benefit overall from city living. Many people migrate from rural to urban areas to achieve healthier, wealthier and more satisfying lives. Public policies to discourage urbanization, such as China's *hukou* registration system which limits rural-to-urban migrations, and restrictions on building density and height common in many cities, are often unsuccessful, indicating that many people prefer city living overall.

Of course, migrating can be stressful, and urban living can impose certain physical and emotional stresses. However, humans are adaptable. Most migrants eventually adapt successful to their new communities. Rural and urban environments each offer advantages and disadvantages, and some people are more suited to one or the other, but there is little evidence that most people cannot adapt to urban conditions.

This analysis is challenging. Much research concerning urban mental health impacts is incomplete and biased, focusing on specific impacts or groups, and guidance for improving urban mental health and happiness is often vague and unrealistic. There are many possible ways to define and measure mental health and urban conditions, and various factors to consider when evaluating these impacts, making quantification difficult.

This report investigates these issues. It examines scientific evidence concerning the mental health risks of urban living, identifies specific mechanisms that explain these impacts, and describes practical strategies that communities and individuals can use to improve urban mental health and happiness. This research should be useful to local officials, public health professionals, planners, and individual households.

Research Challenges

Evaluating urban mental health impacts is challenging for reasons described below.

First, these are emotional and political issues, so many sources provide incomplete and biased information. For example, Okulicz-Kozaryn's 2015, book *Happiness and Place: Why Life is Better Outside of the City*, and Recsei's 2013 blog, *Health, Happiness, and Density*, assume that most experts are irrationally biased *in favor* of cities, which they attempt to correct by describing urban social problems, while Kunstler's 1994 book, *The Geography Of Nowhere*, and Glaeser's 2011 book, *The Triumph of the City*, argue that policies are irrationally biased *against* cities, which they attempt to correct by providing information on urban social and economic benefits. To avoid bias, it is important to consult diverse information sources and critically evaluate evidence to obtain comprehensive and objective information (Meyer 2015).

Second, mental health and urbanity are difficult to quantify. Studies can measure incidents or rates of mental illnesses such as schizophrenia, suicide rates (which can be considered an indication of mental illness and unhappiness), and self-reported happiness. Similarly, urbanity can be measured by neighborhood type (downtown, urban neighborhood, inner or outer suburb, and exurban), density (people and jobs per acre/hectare), crowding (people per square foot/meter in a home), or multi-facetted indices (Ewing and Hamidi 2014). Many reported urban mental health impacts only apply to a subset of conditions, such as distressed neighborhoods, high-rise buildings or crowded residences, and so should not be generalized to all city living.

Another challenge is that, because they offer superior economic opportunities and services, cities tend to attract people with elevated mental illness risks including poverty, homelessness, disability, addiction and social alienation, so *associations* between urban living and mental illness do not necessarily indicate *causation*. Although these groups may have high rates of mental illness and unhappiness, they are often better off in cities than in smaller communities with fewer opportunities and services. Despite extensive research showing associations between urbanity and some mental illnesses, the mechanism that explain this have not been identified or measured, so it is possible that these associated reflect confounding factors that affect the types of people who live in cities (Golembiewski 2017; Gruebner, et al. 2017).

These omissions and biases emphasize the importance of properly defining and measuring these effects. For example, a widely-cited *Scientific American* article, "Population Density and Social Pathology" (Calhoun 1962) described how rats in extremely crowded colonies demonstrated sexual deviation, cannibalism, child abandonment, frenetic over-activity and pathological withdrawal, which the author claimed demonstrates human urban mental health risks. Critics point out that *crowding* is very different from *density*, the degree of crowding in the study was many times greater than what is commonly associated with urban living, and humans respond to problems differently than rats (1000 Friends 1999). More appropriate research finds little or no correlation between urban densities and mental health problems (Ramsden 2009; Schmitt, Zane and Nishi 1978). Research on crowding may be useful for evaluating prison, submarine and space travel conditions, but has little relevance to common urban planning issues.

Understanding Causation

A key issue in this analysis is the degree that urban living actually *causes* mental illness and unhappiness, and therefore increases total problems and harms people who move to cities, in contrast to cities attracting people with elevated mental illness and unhappiness risks. To explore this, risk factors are categorized in three ways:

1. *Self-selection* factors reflect the types of people who locate in urban areas. People experiencing poverty, disability, mental illness, addiction, immigrant status, alienation, and personal crises often locate in cities due to their better services and opportunities. These conditions tend to increase mental illness and unhappiness regardless of where people live; in fact, people with these risks are often saner and happier than in smaller communities with fewer opportunities and services.

2. *Economic and social factors* reflect geographic variations in how people work, interact and live. As mentioned above, communities of people with elevated mental illness risk factors often concentrate in cities. For example, many cities have neighborhoods where poverty and associated social problems are concentrated and tolerated. Living in such neighborhoods can increase mental illness and unhappiness, but those factors often apply only to certain neighborhoods and change over time.

3. *Environmental factors* reflect inherent urban factors such as more interactions with unfamiliar people, more cultural diversity, increased noise and air pollution exposure, and reduced interactions with nature. These mechanisms can be considered to actually *cause* mental illness and unhappiness, although they can change. For example, new technologies and management practices can reduce urban noise and air pollution, and planning changes can increase urban residents' access to nature.

Table 1 summarizes these categories.

Table 1 **Factors Affecting Urban Mental Health**

Self-Selection	Economic and Social	Environmental Factors
Differences in the types of people who locate in different community types. Does not reflect causation.	*Differences in how people live and interact. May reflect causation, but often changes over time.*	*Factors innate to urban locations. These do reflect causation, but can change over time.*
• Poverty and income • Age and life stage • Mobility (duration of residency) • Family & community connections	• Higher incomes and disparities • Higher costs of living • More subcultures • Higher crime rates	• More interactions with strangers • More racial and cultural diversity • Noise and air pollution • Less interaction with nature

This table categorizes factors that affect urban mental health. Most factors are associations; only a few may actually cause cities to increase mental illness and unhappiness.

Although many urban mental health studies try to account for confounding factors, it is infeasible to consider them all (Bell 2016; Sariaslan, et al. 2016). For example, people often move from rural to urban areas following a family breakup, job loss or disability, which tend to increase stress and unhappiness regardless of location, yet few studies can incorporate all of these factors in their analysis. This suggests that many studies exaggerate the degree that urban living actually causes mental illness and unhappiness, and results may only apply to certain conditions or people. For example, it would be wrong to apply research findings from distressed neighborhoods to affluent and stable urban areas.

Summary of Previous Research

This section summarizes research concerning urban impacts on mental health and happiness.

Overviews

The American Psychological Association report, *Toward an Urban Psychology* (APA 2005), offers guidance on urban mental health issues for practitioners and policymakers. In this context *urban* refers primarily to poor and minority communities, so the report mainly explores the effects of poverty and minority status, plus neighborhood decay, disorder and gentrification.

Urbanity and Mental Illness

Some studies suggest that urban living increases mental illness (Kwon 2016). Milgram (1970) describes specific ways that urban living affects residents' daily experiences, social relationships and mental health, and suggests that cognitive overload, excessive social interactions and fear often leads to defensive behaviors such as unfriendliness and distrust. A meta-analysis by Peen, et al. (2010) concluded that city living increases anxiety disorders approximately 21%, mood disorders 39%, and roughly doubles schizophrenia rates. Similarly, a meta-analysis by Vassos, et al. (2012) found 2.37 times higher psychosis risk in urban compared with rural areas.

Such studies correlate mental illness, substance abuse or depression rates with urban locations. Critics argue that such studies do not account for all significant confounding factors, such as the possibility that cities attract poor and mentally ill people due to better services and opportunities, or have better mental illness reporting (Bell 2016; Sariaslan, et al. 2016). A critical review of ten such studies by Gong, et al. (2016) concluded that there is evidence of *associations* between urban environment and psychological distress, but all studies were cross-sectional and so could not indicate the direction of causation, that is, whether this may reflect the tendency of urban environments to attract higher-risk residents.

The study, "Higher Depression Risks in Medium- Than on High-Density Urban Form Across Denmark" (Chen, et al. 2023) examined the relationship between urban form and mental illness using sophisticated mapping of 75,650 cases of depression. It found that, adjusting for other factors, the highest depression rates occurred in sprawling suburbs and the lowest was in dense multistory buildings located near open space, and in rural areas. The researchers found that many previous studies of the mental health impacts of urban form overlooked key confounding factors such as parental history of mental disease, age, gender, income, employment status, and education); accounting for these factors significantly reduced the estimated risks from high-density housing. They conclude that multistory buildings interspersed with large green spaces provide mental health benefits compared with low-rise urban housing.

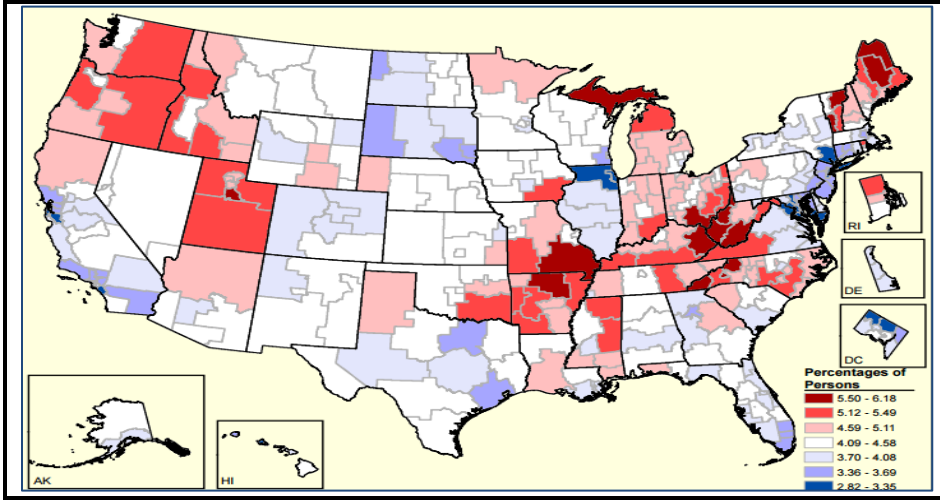
Using data from 156,075 UK Biobank participants, Xu, et al. (2023) found that social deprivation, air pollution, street network and urban land-use density were positively correlated with mental illness symptoms, while greenness and generous destination accessibility were negatively correlated. Their findings suggest that certain urban environmental profiles may influence specific psychiatric symptom groups through distinct neurobiological pathways.

Using Israeli draft board data, Weiser, et al. (2007) found that schizophrenia tends to increase with urban density for people with a genetic liability. MRI brain scans by Abbott (2012) and Lederbogen, et al. (2012) suggested that growing up in a city increases psychotic conditions such as schizophrenia, but these studies were small and other researchers challenge their methods (Eklund, Nichols and Knutsson 2016; Scicurious 2011). Analyzing British twins (which separates genetic from environmental factors), Newbury, et al. (2016) found that children in deprived urban neighborhoods were ~80% more likely to experience psychotic symptoms than those in non-urban neighborhoods, but this primarily reflected increased social disorder and crime risk in deprived neighborhoods, and so does not apply to affluent urban areas.

Some research finds that urban environments provide mental health benefits. The study, "A Comparative Analysis of Selected Mental Health Disorders Among Older Residents of Suburbs Versus Neighborhoods" (Iravani, Moghtaderi and Iravani 2021) surveyed one hundred U.S. retirees living in traditional walkable neighborhoods and one hundred living in automobile-oriented suburbs. The surveys investigated various mental health factors including the level of somatic symptoms, anxiety, insomnia, social dysfunction and severe depression. The result revealed that traditional neighborhoods provide greater sense of community and therefore positive impacts on residents' mental health compared to conventional suburbs. The authors conclude that these result from differences in the amount that people walk in their neighborhoods. Using various data sets that account for various demographic and geographic factors, Stier, et al. (2021) found that depression rates decline with city size, which they attribute to increased social interactions and social connectivity in larger cities. Huth, et al. (2022) challenge those assumptions based on smaller scale geographic analysis.

Figure 1 illustrates results from the U.S. *National Survey on Drug Use and Health*. It indicates that mental illness rates tend to be higher in rural than urban areas, with particularly low rates in many large and dense urban regions including Los Angeles, San Francisco, Chicago and New York, and particularly high rates in many rural areas. Although some urban neighborhoods have high mental illness rates, this suggests that they are offset by less mental illness in other urban areas.

Figure 1 **Serious Mental Illness During the Past Year** (Samhsa 2014)



Many rural areas have higher mental illness rates than urban areas.

These results are consistent with other behaviors associated with denser socioeconomic networks and suggest that larger cities provide a buffer against depression. A recent study of U.S. maternal-infant interactions and parenting stress, found that, accounting for socioeconomic factors such as income and education, urban mothers demonstrated significantly more responsiveness and reciprocity than their rural counterparts, and rural mothers rated their infants significantly higher in negative affectivity and distress (Neumann, et al. 2020), which suggests that urban environments support children's mental health. In a detailed survey of 6,630 people over 60 years of age, Tien, et al. (2015) found that in China, urban elderly had better mental health and fewer psychological disorders than rural elderly. An Ontario College of Family Physician's study concludes that sprawled, automobile-dependent development can harm mental health by eroding social capital, creating unhealthy lifestyles, increasing commuting stress and degrading natural environments (OCFP 2005). Melis, et al. (2015) conclude that improving local mobility and increased neighborhood density in cities tends to improve non-drivers' mental health by improving their access to services and social activities.

Overall, the evidence that urban living *causes* mental illness is inconclusive and biased by self-selection, that is, the tendency of people with elevated mental health risks to live in urban areas due to their greater economic and social opportunities. As a result, these studies almost certainly exaggerate any contribution of urban living to mental illness.

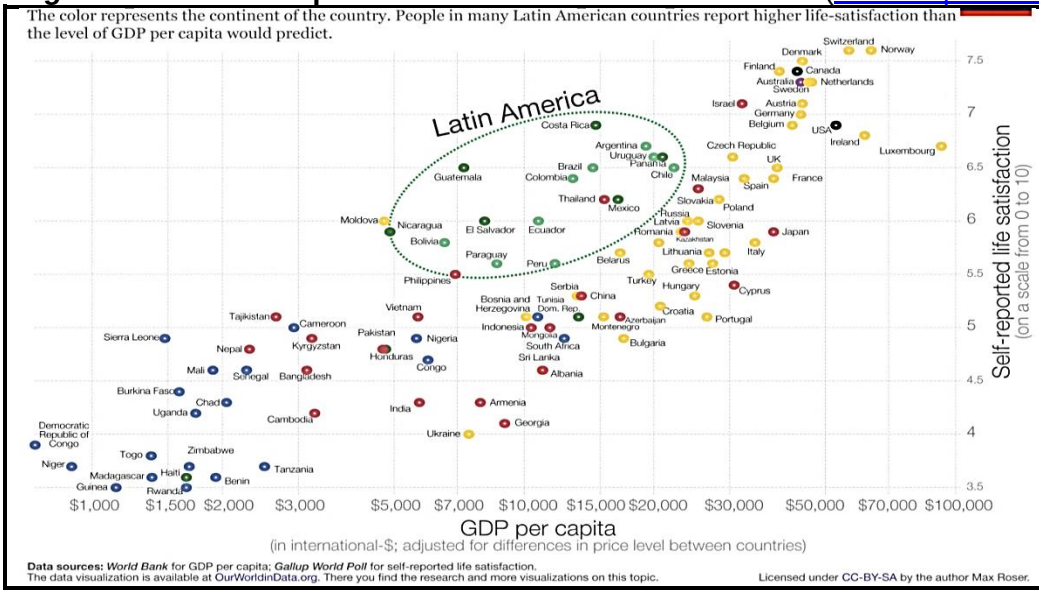
Urbanity and Self-Reported Happiness

Studies (Ballas 2013; Helliwell, Layard and Sachs 2015; Shekhar, Joshi and Sanwal 2014; Sharpe, et al. 2011) indicate that self-reported happiness (or *life satisfaction*) tends to increase with:

1. Financial situation (incomes relative to living costs and peers' incomes).
2. Family status (being in a stable family).
3. Work status (having a secure and satisfying job).
4. Health (being healthy and physically active).
5. Community connections and close friends (also called community cohesion or social capital).
6. Social inclusiveness (being a visible minority tends to reduce happiness).
7. Personal freedom and security (having civil rights and feeling safe).
8. Positive attitudes and belief in a higher power.

Ortiz-Ospina and Roser (2018) use international life satisfaction data to identify factors that affect happiness. They find that happiness tends to increase with wealth, but with diminishing marginal benefit (i.e., a $1,000 income gain increases happiness more for poorer than wealthier people), and tends to increase with health, although this is confounded with wealth. Happiness seems to be increasing overall as the world becomes more urban, affluent and socially open. Residents of some areas tend to be happier at lower incomes than elsewhere. For example, Costa Ricans have the same level of happiness as in the U.S., despite having much lower average incomes, making Coast Rica more than four times as efficient at providing happiness per dollar.

Figure 2 **Self-Reported Life Satisfaction Versus GDP** (Ortiz-Ospina and Roser 2018)



Although life satisfaction tends to increase with income, there is significant variation. Residents in some countries achieve more happiness per dollar than others.

Geographic factors can affect happiness in many ways (Chauvin, et al. 2016). People tend to gain happiness if they move from poor rural areas to more affluent cities (Ritchie and Roser 2018). In his book, *Triumph of the City*, Glaeser (2011) states that,

> "Across countries, reported life satisfaction rises with the share of the population that lives in cities, even when controlling for the countries' income and education… Cities and urbanization are not only associated with greater material prosperity. In poorer countries, people in cities also say that they are happier. Throughout a sample of twenty-five poorer countries, where per capita GDP levels are below $10,000, where I had access to self-reported happiness surveys for urban and non-urban populations, I found that the share of urban people saying that they were very happy was higher in eighteen countries and lower in seven. The share of people saying that they were not at all happy was higher in the non-urban areas in sixteen countries and lower in nine."

Okulicz-Kozaryn (2016) counters,

> "People are happier in more urbanized countries than in less urbanized countries, but it does not mean that people are happier in cities than in smaller areas. More urbanized countries are simply richer, healthier, better governed, etc., than less urbanized countries. This is one of the most agreed upon findings in happiness literature: In a cross-section of countries, people are happier in more developed areas. Urbanization leads to economic growth, but economic growth does not lead to much happiness over time, especially in developed countries."

Using data from the *Quality of Life Survey*, which asked residents in 10 major cities (New York, London, Paris, Stockholm, Toronto, Milan, Berlin, Seoul, Beijing and Tokyo) to rate their happiness, Leyden, Goldberg and Michelbach (2011) conclude that happiness tends to increase if cities have efficient public transport; convenient access to cultural and leisure amenities; are considered affordable, safe, clean and attractive; and foster social connections. Ardeshiri, Willis and Madanipour (2016) used *hedonic pricing* (which infers values based on how consumers

spend money) and Life Satisfaction surveys to measure how various urban environmental and economic factors affect residents' quality of life (QoL). Similarly, Albouy (2012) developed an economic model of location effects on happiness. He concluded that in the U.S.,

> "there is no reason to see urbanization as lowering economic welfare, undermining arguments for policies to disperse the population to mitigate negative urban externalities...that most QOL differences are explained by natural amenities suggests that policy-makers should also consider ways to help households move to places with greater sun, mountains, coastal proximity, or temperate seasons. For instance, they could consider relaxing restrictions to residential development on lands well-endowed by nature, as higher densities are unlikely to reduce, and may even improve, local QOL."

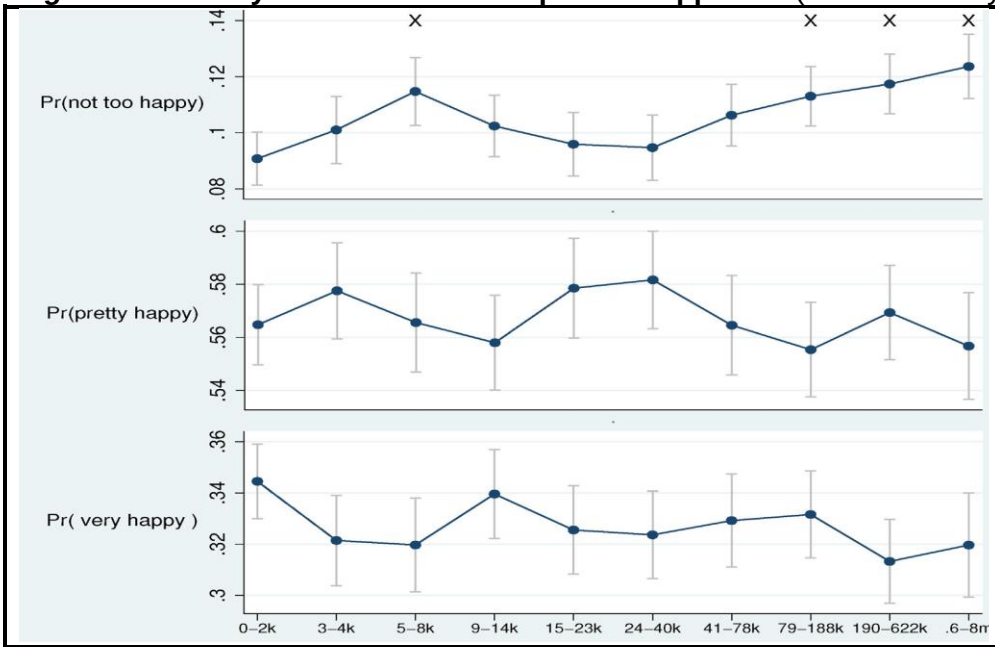
Berry and Okulicz-Kozaryn (2009) used *World Values Survey* (www.worldvaluessurvey.org) data to evaluate how geographic location affects happiness, controlling for personal characteristics such as income, family status and age, and geographic factors such as level of development (regional income). They find that life satisfaction depends primarily on personal characteristics, and no evidence of significant variation between rural and city locations in much of the world. Carlsen and Leknes (2022) examine why residents of large growing cities tend to report relatively low happiness. They find that in Oslo, Norway, a majority of less mobile residents are dissatisfied with city life while a minority of more mobile residents prefer city life and migrate to cities.

Using U.S. subjective wellbeing (SWB) survey results correlated with travel data, the study "Does Car Dependence Make People Unsatisfied With Life? Evidence From a U.S. National Survey," found that driving for more than half of out-of-home trips is associated with significant reductions in life satisfaction (Saadaoui, et al. 2024).

A study by the Happy Cities (2024) organization used a survey of 1,886 residents in 15 municipalities across Metro Vancouver, Canada to examine how urban design factors affect resident's life satisfaction. It found no evidence that population density or denser housing types (duplexes, townhouses or apartments) reduce health, happiness, or social connection, but did find that, accounting for other factors, basement suites and units smaller than 300 sf were associated with less health and happiness, shared apartment building amenity space is linked with stronger social ties among residents, and park access is linked with greater neighbourhood trust. The researchers conclude that amenity-rich, affordable, dense urban environments can support a high quality of life for residents, particularly with appropriate design features.

Exceptions include rapidly-urbanizing Asia, where dissatisfaction (unhappiness) is *lower* in big cities, and in higher income countries, particularly those of Anglo-Saxon heritage, where life dissatisfaction is *higher* in large cities. Similarly, Okulicz-Kozaryn (2015 and 2016) used U.S. *General Social Survey* data, which asked respondents whether they feel "Very Happy," "Pretty Happy" or "Not Too Happy," to evaluate how community size affects happiness. He found that in the U.S., unhappiness ("malaise") peaks at 5,000-8000 residents (i.e., small towns) and above 250,000 (i.e. medium and large cities). Figure 3 shows his results, which suggest that community size significantly affects residents' happiness.

Figure 3 **City Size Versus Self-reported Happiness** (Okulicz-Kozaryn 2016)

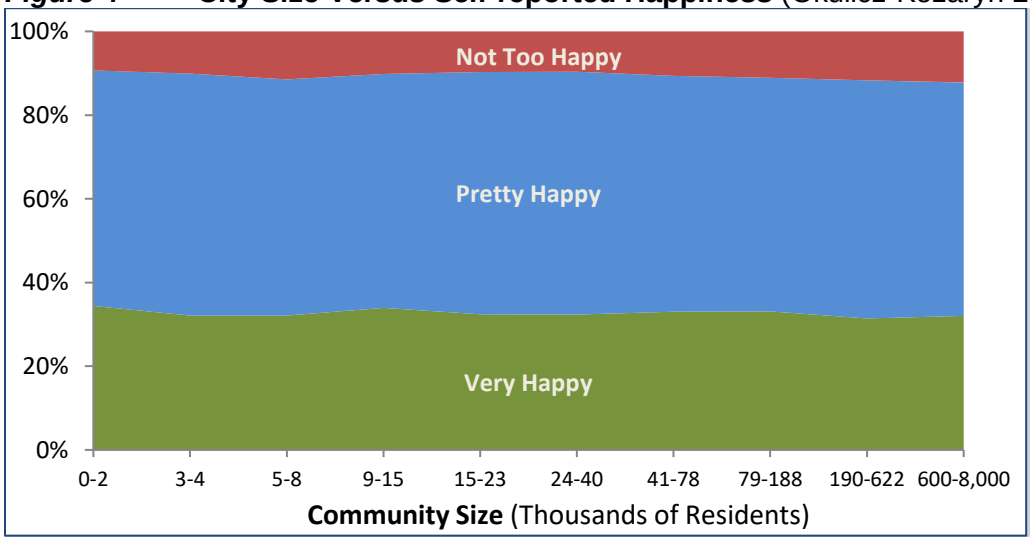


Analysis of the U.S. General Social Survey indicates that unhappiness ("not too happy") tends to increase with community size, and happiness ("very happy") is highest in small rural communities.

Note differences in scales: much smaller portions of respondents report being "not too happy" than "pretty happy" and "very happy," but this is not obvious in the graphs.

Note that Figure 1 uses very different scales for the different ratings, making the variations look large. Figure 4 presents the same results using a constant scale. Viewed this way the variations look small, which suggests that community size has little effect. For example, the portion of residents who consider themselves "not too happy" increases from 9.2% in rural areas to 12.2% in the largest cities, which can be described either as a seemingly large 33% increase or a seemingly small 3.0 point change. The researchers find that poverty and crime significantly affect urban happiness, but overlook other important confounding factors, so they are wrong to claim that the analysis proves that large cities *make* people unhappy; their results may actually reflect unmeasured differences in the types of people who locate in cities.

Figure 4 **City Size Versus Self-reported Happiness** (Okulicz-Kozaryn 2016)



City size has little effect on self-reported happiness. Other demographic and economic factors are more significant, so these results may reflect confounding factors rather than unique North American urban conditions.

Belikow, et al. (2021) used data from a Montreal, Canada travel survey that included questions related to Subjective Well Being (SWB, "How satisfied are you with your life as a whole?"), Quality of Life (QOL, "How satisfied are you with your standard of living?") and perceived health ("How satisfied are you with your health?"), plus demographic and geographic data for 4,148 respondents. It found that population density does not affect SWB or perceived health, but a small inverse relationship between density and QOL. Neighborhood walkability and greenspace significantly increased many respondents' SWB, QOL and perceived health, indicating that urban planning can help offset any negative effects of density.

Using U.S. survey data, Morris (2019) examined how time use and life satisfaction vary by location. He found that demographically similar city and suburban residents have similar out-of-home activity patterns and experience similar degrees of subjective well-being from similar activities, but minor differences in travel-to-activity time ratios, indicating differences in their access time requirements. The most noteworthy difference is that suburbanites have modestly higher feelings of happiness (hedonic affect), sense of meaning (eudaimonic affect), and life satisfaction than demographically similar urbanites, but those could reflect demographic or economic differences factors not considered in the analysis, such as lifetime mobility (not living where they grew up), career orientation and socially connections.

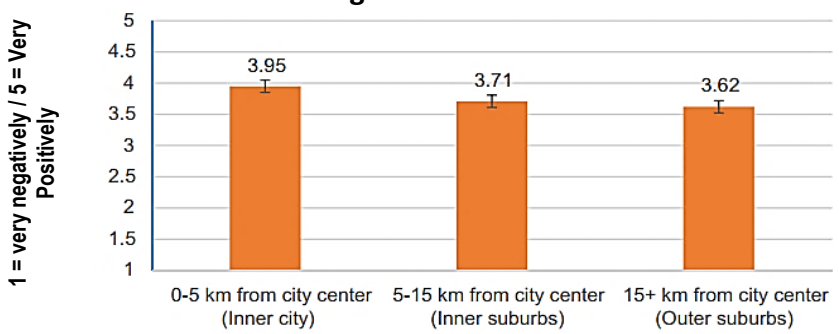
Using U.S. *Behavioral Risk Factor Surveillance System* data, and controlling for various demographic factors, Winters and Li (2016) found that urbanization lowers self-reported life-satisfaction, with as much as 2.6 percentage points lower ratings for residents in the largest and densest metropolitan areas, and natural amenities such as warmer winters increase satisfaction.

Alcañiz, Riera-Prunera and Solé-Auró (2020) investigated how various factors, including home location, affect older residents' mental well-being, using data from the Catalan Health Survey, a Spanish cross-sectional, nationally representative survey data. Their results indicate that later-life mental well-being is associated with physical health, daily physical activity, personal autonomy, adequate social support, economic security and adequate sleep. Living alone, being older (over 85 years of age), female, or caring for somebody with disability, tend to reduce well-being. Overall, rural living was associated with more self-reported well-being. Urban areas were linked to more emotional distress attributable to economic stress or low educational attainment. The researchers conclude that older people's well-being can be increased by preventing urban loneliness, and by allowing older people to 'age in place' by improving rural transport options.

Mouratidis (2017 and 2019) investigated how urban form affects social life in Oslo, Norway. He found significantly more satisfaction with personal relationships in compact neighborhood than lower-density suburbs, and that social wellbeing increases with city center proximity, density, and land use mix. The study found that compact urban forms enable residents to maintain larger social networks, socialize more with friends and family, receive more social support, meet more acquaintances, and enjoy better physical health, but reduces community cohesion and increases

anxiety due to less perceive safety, quiet and cleanliness; after controlling for these factors compact neighborhoods are found to provide significant net increases in life satisfaction.

Figure 5 **Impact of Distance to City Center on Social Life** (Mouratidis 2017)



This study found that social life is positively influenced by proximity to Oslo's city center. This suggests that compact urban forms may increase opportunities to meet new people and enable residents to maintain more close relationships and to socialize more often with friends and relatives.

Florida, Mellander and Rentfrow (2013) found that increased education attainment tends to increase happiness in the U.S. They conclude that this reflects higher incomes, increased sense of control over life, more stable and supportive relationships, more occupational opportunities, more satisfying work and the ability to live in more costly areas with more amenities. A comparison of 66 European cities found less inequality between residents' life satisfaction levels in areas with more mixed development and green space, suggesting that improved access to services and activities helps reduce the gaps between economically-deprived and affluent residents (Olsen et al. 2019). The authors concluded that mixed neighborhoods increase residents' quality of life by responding to residents' diverse demands. When normalized for income, density and commute duration have no significant effect on happiness, and happiness tends to *increase* with housing prices, which probably reflects increased economic opportunities, and improved neighborhood-related amenities, which in turn increase happiness.

Several studies find that long duration commutes tend to reduce workers' wellbeing (Crabtree 2010; Wild, et al. 2021). Using the *American Time Use Survey's Well-Being Module* data, Gimenez-Nadal and Molina (2019) found negative effects from longer duration commutes: a 1% increase in commute duration increased commute time stress 12% and fatigue 13%, and a 1% increase in commute duration increased sadness 5% and fatigue 7% during child care activities that day. Using data from British *Understanding Society* surveys Clark, et al. (2020), found that longer commute durations are associated with lower job and leisure time satisfaction, increased strain and poorer mental health, but have little effect on overall life satisfaction, suggesting that benefits (such as increased incomes or more desirable jobs) tend to offset the costs. It also found that longer commute duration reduces women's job satisfaction more than men, walking to work is associated with increased leisure time satisfaction and reduced strain, and working from home is associated with increased job satisfaction and leisure time satisfaction.

Ma and Ye (2021), used data from a large survey conducted in Victoria, Australia to explore the relationships between the built environment, utilitarian bicycling, and mental wellbeing. They

found that utilitarian bicycling is positively associated with life satisfaction and negatively associated with psychological distress, and highly bikeable neighborhoods are associated with better mental health.

Since education and wages tend to increase with city size, and happiness tends to increase with income (particularly from low to moderate incomes), normalizing for income (comparing people with equal incomes) exaggerates rural happiness and urban unhappiness (Jaffe 2011). Workers who move from poor rural areas to cities with better economic opportunities can gain happiness overall if their higher incomes more than offsets any happiness reduced by city living (Albouy 2012). Okulicz-Kozaryn, argues that people are poor judges of such trade-offs, stating (2015 p. 32), "Cities, like capitalism which they embody, lure us by exploiting our passions. Cities promise or even provide momentary enjoyment and pleasure (just like shopping), but not life satisfaction or happiness." This is speculative, while the evidence that happiness tends to increase with incomes is credible, which suggests that Okulicz-Kozaryn exaggerates urban unhappiness.

Okulicz-Kozaryn and Valente (2018) find that Americans are generally happiest in smaller cities and rural areas but these differences are declining, and Millennials (born 1982–2004), are least happy in small rural areas, much happier in small urban areas, a little less happy in suburbs, and happiest in large metropolitan areas. The authors suggest this reflects changing preferences: previous generations associated suburbs with safety, success and happiness, but cities are now safer, offer better economic opportunities and social amenities, have higher social status, and offer more social diversity, which Millennials tend to value more than older generations.

Sharpe, et al. (2011) used *Canadian Community Health Survey* data to evaluate how various factors affect self-reported life satisfaction. They found that it tends to increase with:

- *Mental health*. A one-unit increase in perceived mental health, measured on a 5-point scale, increases the portion of people who consider themselves very satisfied with life by 17.5 points.
- *Perceived health.* A one-unit increase in health status increases the proportion of people very satisfied with life by 8.8 percentage points.
- *Marital and immigration status.* Married persons are happier compared to people who have never been married. Recent immigrants are less happy compared to non-immigrants.
- *Lower stress levels.* A one-unit decrease in stress increases the proportion of people very satisfied by 7.9 percentage points.
- *Community belonging*. A one-unit increase in sense of belonging increases the proportion of individuals that are very satisfied with life by 6.5 percentage points.
- *Employment and income*. Household income has mixed impacts: a 10% increase raises *very satisfied* ratings by 0.6 points, but average community level income is negatively associated with individual happiness, which suggests that relative income is more important than absolute income.
- *Sense of belonging* had relatively low weight but varies significantly, and so was the largest cause of geographic variation in happiness, while *mental health* had a high weight but less variation.

Fan, et al. (2020) developed a mapping system which can be used to track self-reported happiness by travellers by locations and modes. The results indicate that bicycling is associated with more happiness than other modes. Using various data sets of German residents, including geocoded social media posting, Ahlfeldt, et al. (2020) find that large cities offer particularly vibrant cultural, gastronomic, and nightlife amenities, which increases quality of life, providing benefits that are much larger in magnitude than urban productivity benefit.

Dolan and Metcalfe (2011) use economic psychology research to investigate people's ability to optimize their happiness when making housing decisions. They conclude that many people overestimate the happiness they gain from the larger and more prestigious housing typically found at the urban fringe, which tends to decline over time, and underestimate the unhappiness caused by their longer commutes and social isolation, which tend to be durable. In his 2013 book, *Happy Cities*, Montgomery argues that people *can* be happy in cities provided that they are designed to meet residents' emotional and social, as well as physical needs.

Most of these studies reflect specific times and locations. Urban unhappiness appears to be particularly high in the U.S., where city living tends to be stigmatized and receives less policy support (such as favorable tax policies and investments in public transport) than in most peer countries (Glaeser 2010; Hirt 2014; Renn 2010). This suggests that urban life satisfaction is affected by specific conditions and cannot be considered universal.

Dementia and Alzheimer Rates

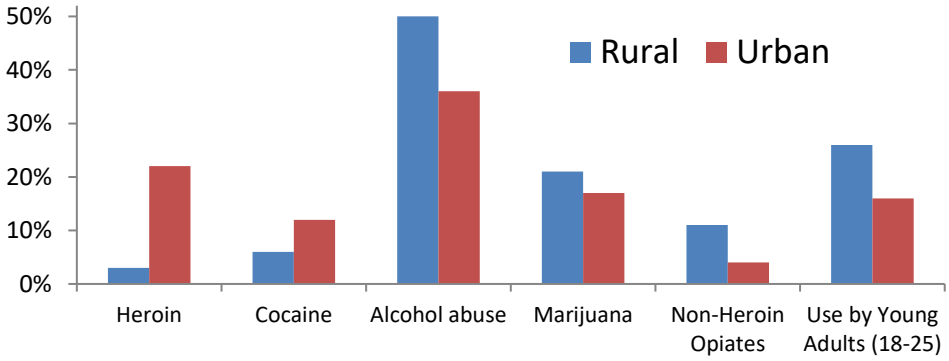
Dementia and Alzheimer Disease rates tend to be higher in rural areas than cities, particularly for rural area natives (Nunes, et al. 2010). A meta-analysis (Russ, et al. 2012) concludes that rural living increases dementia risk more than 10%, and growing up in a rural area approximately doubles Alzheimer Disease risk. Similar results are found in China (Jia, et al. 2014). This may reflect higher rates of dementia risk factors in rural areas including physical and cognitive inactivity, low education, smoking, obesity, depression, diabetes and high blood pressure.

In a detailed study of Shanghai residents 50 years of age, Zhang, et al. (2023) found that cognitive health improved in walkable, moderate-density neighborhoods where they maintain frequent social connections with peers, plus educational or cultural facilities within a 15-minute walking distance, but reduced cognitive health from highrise densities with floor area ratios (FARs) over 2.50.

Alcohol and Drug Abuse Rates

Drug and alcohol abuse rates vary by geography (figures 6 and 7).

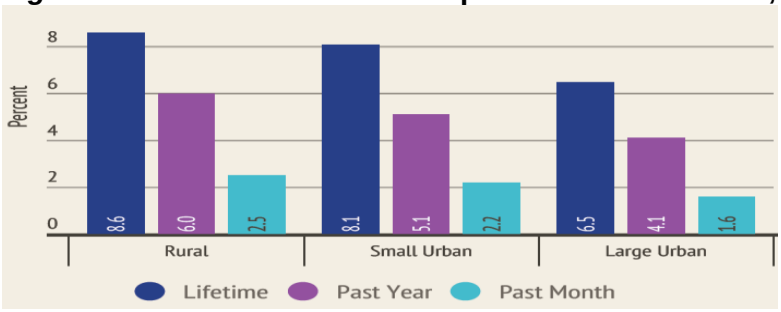
Figure 6 **Rural Vs Urban Drug Abuse** (www.12keysrehab.com/blog/urban-rural-drug-abuse)



Heroin and cocaine use is more common in urban areas, while alcohol abuse, marijuana and non-heroin opiate use are higher in rural areas. Since alcohol and marijuana abuse is more common than heroin and cocaine addiction, total substance abuse rates tend to be higher in rural areas.

Urban areas tend to have more cocaine and heroin addiction, while rural areas tend to have more alcohol, prescription drug and methamphetamine abuse (SAMHSA 2012). Rural youths are significantly more likely to abuse prescription drugs and alcohol (drinking more than four drinks on a single occasion), than suburban and urban youths (Monnat and Rigg 2015; McInnis, et al. 2015). Since alcohol and prescription drug abuse are more common than cocaine and heroin addiction, rural areas tend to have more total substance abuse.

Figure 6 **Adolescent Prescription Painkiller Abuse, 2014** (Monnat and Rigg 2015)

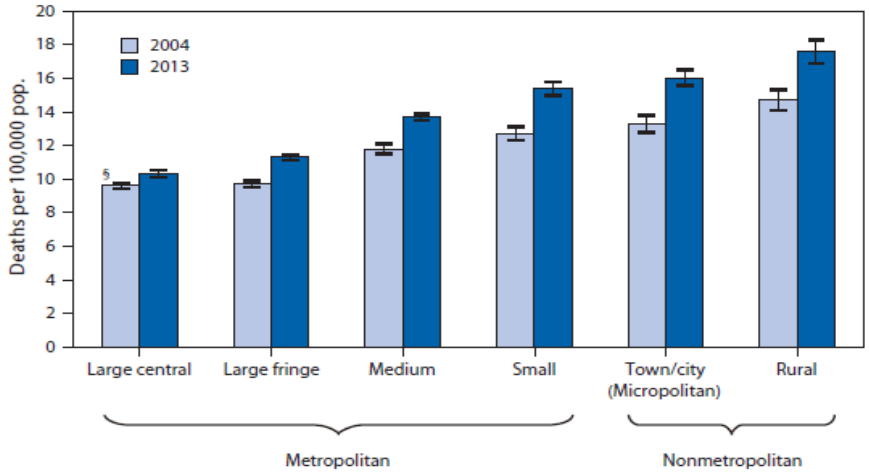


Prescription painkiller abuse is more common among rural than urban adolescents. In 2014, 8.6% of rural adolescents, 8.1% of small urban area adolescents, and 6.5% of large urban area adolescents reported ever abusing prescription pain relievers. Past year and past month use were also higher among rural adolescents.

Suicide Rates

Suicide rates tend to be much higher in rural than urban areas (figures 8 and 9).

Figure 8 **Age-Adjusted Suicide Rates by Location — US 2004 and 2013** (CDC 2015)

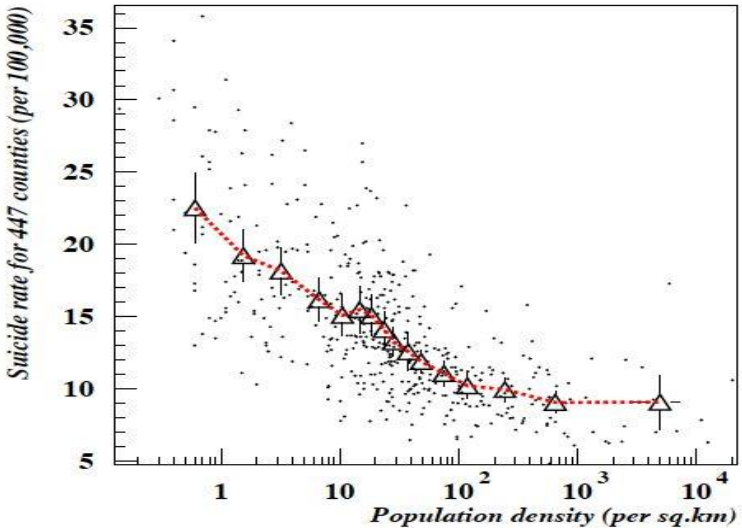


Suicide rates are lowest in large central cities and increase as community size declines. These rates increased significantly during the last decade.

This suggests that mental health and happiness are greater in cities than rural areas.

U.S., rural male youths had 19.9 suicides per 100,000, compared to 10.3 in urban areas, and rural female youth had 4.40 suicides per 100,000 versus 2.39 in urban areas (Fontanella, et al. 2015). Suicide rates are particularly high for men working in rural industries such as farming, fishing and forestry (84.5 per 100,000), which researchers attribute to social isolation and income insecurity (McIntosh, et al. 2016). These patterns occur worldwide: suicide rates are much lower in cities in China and India (Nolan 2012), causing overall suicide rates to decline with urbanization (The Economist 2018). Analysts sometimes suggest that high rural suicide rates reflect greater access to guns and pesticides (Zhang, et al. 2002), but that seems unlikely since urban areas offer many deadly alternatives, including handguns (in the U.S.), tall buildings and vehicle traffic, so these results probably reflect mental illness and unhappiness (Clay 2014).

Figure 8 **Population Density Versus Suicide Rates, U.S. 1989-1998** (Wang, et al. 2013)



Suicide rates tend to decline with density, and are about twice as high in rural areas as in cities.

Suicides can be considered a health problem and an indicator of mental illness and unhappiness.

Summary

This analysis suggests that urban living has both positive and negative mental health effects. Studies citied in this report (e.g., Abbott 2012; Kwon 2016; Lederbogen, et al. 2012; Peen, et al. 2010; Vassos, et al. 2012) indicate that psychosis (e.g. schizophrenia) and mood disorder (e.g., stress and depression) increase with urbanization, but none account for all possible confounding factors such as the tendency of poor, mentally ill and socially alienated people to move to cities in order to access better services, and economic and social opportunities. In addition, urban areas may have better mental illness reporting. As a result, urban environments probably increase mental illness much less than these studies suggest.

Evidence that cities make people unhappy is also incomplete and biased. In many countries, self-reported happiness tends to be *higher* in cities than rural areas, and even in the U.S., geography has a small effect, with only three percentage points between the highest and lowest ratings. These differences may reflect other demographic factors and self-selection, so there is little basis to conclude that city living necessarily makes people unhappy.

Urban and rural areas both have significant but different substance abuse problems. Cocaine and heroin addiction rates are higher in large cities, while alcohol and methamphetamine abuse rates are higher in rural areas. Since alcohol abuse is more common than cocaine and heroin addiction, rural areas probably have higher overall abuse substance rates. Throughout the world, rural areas tend to have higher rates of dementia, particularly Alzheimer disease, and about twice the suicide rates, as in urban areas.

Table 2 summarizes how urban living tends to affect various mental health risks.

Table 2 **Urbanization Mental Health Impacts**

Increased Risk	Reduced Risks
• Psychosis (e.g. schizophrenia) and mood disorders (e.g., stress and depression) • Self-reported unhappiness (in affluent countries) • Cocaine and heroin addiction	• Self-reported unhappiness (in poor countries) • Dementia and Alzheimer disease • Alcohol and methamphetamine abuse • Suicide rates

Urbanization tends to increase some and reduce other mental illness risks.

Many studies on these issues are limited in scope, and do not account for potentially significant confounding factors, so their results may reflect self-selection and cannot be considered universal. Few studies identify the specific mechanisms by which urban living affects mental health or happiness, and so provides little practical guidance for increasing urban sanity and happiness. The following section of this report explores these issues in more detail. It examines possible mechanisms by which urban living may affect mental health, and possible strategies that communities and individuals can apply to help achieve mental health goals.

Urban Mental Health Impact Mechanisms

This section examines specific mechanisms by which urban living may affect mental health, whether these are associated with or actually caused by urban living, and discusses appropriate responses for communities and individuals to help create saner, happier cities.

Concentrated Mental Illness Risks (Poverty, Substance Abuse, etc.)

Many cities areas have concentrations of people with elevated mental illness risk factors including poverty, homelessness, physical and mental disabilities, drug and alcohol abuse, and social alienation (Hartig, et al. 2014; Maxwell, et al. 2021). This occurs, in part, because urban areas offer better services and opportunities, so disadvantaged groups rationally choose to live there (Glaeser, Kahn and Rappaport 2008). This can create a self-reinforcing cycle, called *social drift*, when certain areas have more poverty and mental-illness services, and become more tolerant of deviant lifestyles, which further attracts high-risk residents and repels more affluent households. This concentration of disadvantaged residents, in turn, increases social disorder and crime which further increases mental illness risk (Lederbogen, Haddad, Meyer-Lindenberg 2013).

Some economic, social and policy trends contribute to the concentration of mental illness and poverty in cities, including weakening community networks which reduce traditional social control and support, mental illness deinstitutionalization (new drug therapies allowed many mental patents to be released from institutions, but with inadequate community services and enforcement, many stopped their treatment, resulting in large mentally ill homeless populations), and in some jurisdiction, reduced disability and unemployment support, resulting in more reliance on local services such as food banks.

Mental illness, and associated social problems such as substance abuse and crime, are problems themselves, and tend to reduce happiness. Sharpe, et al. (2011) found that a one-unit increase from the average of perceived mental health increases the proportion of individuals that are very satisfied with life by 17.5 percentage points, indicating a very strong relationship. Described differently, on average a one-unit increase in mental health raises happiness as much as a 309% increase in household income.

Association or Causation?

The concentration of higher risk groups in urban areas appears mainly to be an *association* rather than a *cause* of mental illness. This concentration may exacerbate some mental health problems, for example, vulnerable people may abuse drugs and alcohol more if surrounded by people with that propensity, but on the other hand, they may find more support, including economic opportunities, and specialized drug and alcohol treatment services, that reduce their risks. Although such areas may have higher than average mental illness rates, many residents may be better off than if they located in more isolated areas.

In recent years, some higher-risk people have moved from city centers to suburban areas. To the degree that urban mental illness results from concentrated poverty and associated social problems, suburban areas may experience more mental illness and unhappiness.

Potential Community Responses

Policies and programs can offer more community mental health intervention and support. In some situations it may be appropriate to discourage excessive concentration of social services and poor households in urban neighborhoods.

Cities should recognize that they tend to attract people with mental health risk factors, and so should provide appropriate support services including suitable housing, community-based mental health and addiction services, job training and placement that targets higher-risk groups, and targeted law enforcement.

Potential Individual Responses

Vulnerable people may want to avoid urban neighborhoods with concentrated poverty and social problems.

Alcohol and Drug Abuse

Substance abuse is both a cause and symptom of mental illness. As previously described, alcohol and drug abuse patterns differ by geography: cocaine and heroin addiction is more common in cities, while prescription drug, methamphetamine, and alcohol abuse rates tend to be more common in rural areas. Since alcohol and marijuana abuse is more common than heroin and cocaine addiction, total substance abuse rates tend to be higher in rural areas.

Association or Causation?

The relationships between geography and substance abuse are complex, including cultural traditions (some communities are more accepting of drug and alcohol use), ease of obtaining drugs and alcohol, and access to treatment. The concentration of substance abuse can create a self-reinforcing cycle as that area becomes more tolerant, and attracts more users and related services. To the degree that such areas attract people who would abuse drugs or alcohol regardless of where they live, this is association; to the degree that it enables addiction it may cause substance abuse; and to the degree that such areas attract treatment services it may reduce total abuse. Similarly, since rural areas tend to have high prescription drug, methamphetamine, and alcohol abuse rates, rural living may cause such abuse.

Potential Community Responses

Communities can provide targeted substance abuse prevention and treatment programs. For example, urban areas may focus on cocaine and heroin addiction risks, while rural areas may focus on methamphetamine, prescription drug and alcohol abuse prevention and treatment.

Potential Individual Responses

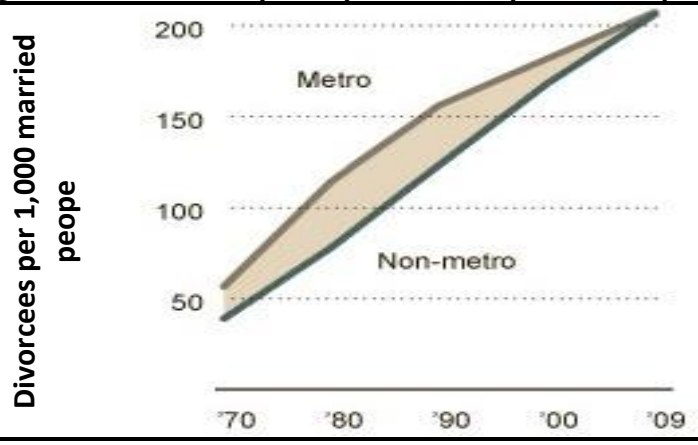
Individuals susceptible to substance abuse may avoid geographic areas with high availability and abuse rates, and may use various personal prevention strategies. For example, somebody prone to cocaine and heroin addiction may avoid living in urban neighborhoods where such drugs are easily available, and somebody prone to methamphetamine or alcohol abuse may avoid living in suburban and rural areas where their abuse is more common.

Social Isolation and Loneliness

Residents of socially connected neighbourhoods report better physical and mental health, and well-being (Kent, Rugel and Bower 2024; Sones 2022). Urban residents, particularly newcomers, sometimes feel isolated, described as "lonely in a crowd," which can contribute to mental illness and unhappiness (Bower, et al. 2023; Griffin 2016; Hammoud, et al. 2021). Several factors may affect this.

Being in a committed relationship and growing up in a stable household tend to increase mental health and happiness. Previously, urban areas had significantly lower marriage rates and higher divorce rates than rural areas, which probably increased urban mental illness and depression, but these differences have virtually disappeared (Figure 10), which should reduce differences in mental illness and unhappiness.

Figure 10 **Urban (Metro) and Rural (Non-Metro) Divorce** (Tavernise and Gebeloff 2011)



Being in a committed relationship, and growing up in a stable household, tends to increase happiness.

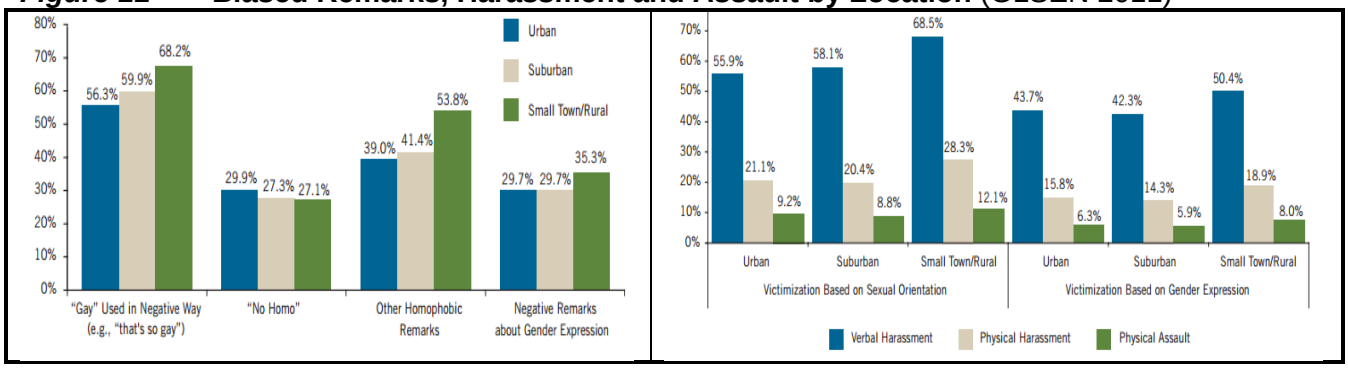
Previously, divorce rates were much higher in cities than rural communities which probably contributed to urban mental illness and unhappiness, but these differences declined during the last few decades.

Urban residents' are more likely to experience interregional migration (moving to a new community) than rural residents. Taylor, et al. (2008) find that only a third of urban residents spend their entire lives in one area, compared with half of rural residents, resulting in fewer local friends and family members: Americans who stay in their hometowns are more likely say they have *many* local friends, 33% compared with 24% for movers, while movers are more likely to say they have a *below-average* number of local friends. Urban residents are also more likely to live alone and be unmarried, which can also contribute to isolation and loneliness (Senior 2016).

Urban residents are often described as less welcoming than in smaller communities, possibly to avoid social overstimulation (Milgram 1970). Some research suggests that most people can only maintain 150-250 close relationships, called *Dunbar's Number* after British anthropologist Robin Dunbar. Urban residents may seem standoffish to avoid social overstimulation, due to fear of crime, and because they are less likely to have future relationships with any individual they meet. However, these effects are probably superficial; urban residents may seem less friendly during incidental interactions such as passing by people on sidewalks, but there is little evidence that urbanites are less friendly to colleagues or peers than rural residents.

On the other hand, smaller communities are often described as exclusive and unfriendly to outsiders, such as minority group members and non-conformists, while cities tend to accommodate more diversity (Lenz 2019). Small towns and rural areas tend to have much higher sexual minority harassment and assault rates (Figure 11), and less commitment to reducing racial injustice (Patten 2013). Many cities contain dozens of language groups and hundreds of subcultures with specific meeting places and activities. Members of these minority groups tend to have much greater social opportunities than they would in smaller communities.

Figure 11 **Biased Remarks, Harassment and Assault by Location** (GLSEN 2011)



Anti-gay remarks, harassment and assaults are more common in rural than suburban and urban schools.

A detailed international literature review concluded that built environment factors can affect loneliness and mental health in various ways, but socioeconomic factors (age, income and community connections) tend to be more important (Bower, et al. 2023). For example, studies found lower levels of loneliness in detached dwellings compared with apartments, but this probably reflects higher incomes in single-family neighborhoods; low-income residents experienced more loneliness in isolated, suburbs and areas that have limited safe, public, and free spaces to socialize. Inadequate natural light, restricted personalization, inferior quality housing, and a lack of common spaces are associated with loneliness, while balconies and windows reduced loneliness for people with dementia by providing views of the outside world.

Most studies showed little direct impact of urbanicity or neighborhood density on loneliness after accounting for demographic and economic factors. High-rises containing common areas and surrounding public space were linked to less loneliness. Using Internet communication technology (ICT) was associated with greater loneliness amongst rural elderly Israelis, but urban residents who used ICT reported less loneliness, implying that digital communication may help overcome disconnection in urban areas, while undermining solidarity in rural communities. A Canadian study found that both rural and urban areas can lack social interaction, but for different reasons: fewer services and mobility issues in rural areas, and greater burdens of poverty, mental health, housing, and food insecurity in urban areas. Living on a city's fringe showed significantly greater odds of social isolation compared to living in central neighborhoods. Multi-racial and multi-generational urban areas reduced loneliness among ethnic-minority residents and new immigrants.

The study found that transport infrastructure affects residents' access to public spaces, particularly for disadvantaged groups such as adolescents, seniors and people with disabilities. The availability and usability of walking, bicycling and public transport provide equitable access to opportunities for public interactions. Subgroups with restricted access to private cars—due to financial, regulatory, or physical constraints—were particularly vulnerable to isolation and loneliness. Some studies demonstrated that social stigma associated with public transport is a barrier to its use by older adults, particularly those in rural areas, and conversely, accessible public transit can provide a sense of independence and perceived control over interactions.

Access to nature, resources for physical activity/walking, and increased community cohesion (positive interactions among neighbors) and perceived safety are significantly associated with lower loneliness. Housing affordability, living costs, and loneliness, several connected living in housing deemed affordable to reduced loneliness, apparently because high housing costs leave less money for social activities that prevent or lessen loneliness or social isolation. Affordable urban housing provided a safety net offering residents immunity from forced relocation due to variations in income or expenditures. Where housing is affordable across an urban area, lower-income households can choose to live in neighborhoods that offer better social connections, comfort and safety, reducing loneliness.

Compact, walkable urban neighborhoods provide more opportunities for frequent informal social interactions which can create ongoing relationships. These are particularly important for people with disabilities and low incomes. For example, describing why he plans to retire to a busy city, Spiegelman (2016) explains, "Chance encounters brighten the day. They're like little love affairs without consequences. They keep you alert. This is what any senior citizen needs." Akhtar (2022) argues that auto-oriented sprawl reduces opportunities for friendship.

Although urban social isolation and loneliness are common themes in popular literature and some academic studies (Milgram 1970), current research finds little evidence that these problems are more severe in cities than in smaller communities (Senior 2008). University of Chicago researcher John Cacioppo reports that city residents consistently rate less lonely than rural residents. He explains, "There's a new sense of community in cities, an increase in social capital, an increase in trust. It all leads to less alienation."

These issues are complex. For example, although rural areas have higher marriage rates, which may reduce loneliness, cities' larger social networks may provide similar benefits. A 1982 study by sociologist Claude Fischer found 40% larger friendship-based social networks in urban cores than in semi-rural areas. A more recent study (McPherson, Smith-Lovin and Brashears 2006) found that although social networks are declining overall, city residents have larger networks than in smaller communities. Jane Jacobs suggested in, *The Death and Life of the Great American Cities*, that high-rise housing reduces community interactions. This concern is frequently repeated, but there is little quantitative research to confirm this hypothesis (Loomans 2014).

Association or Causation?

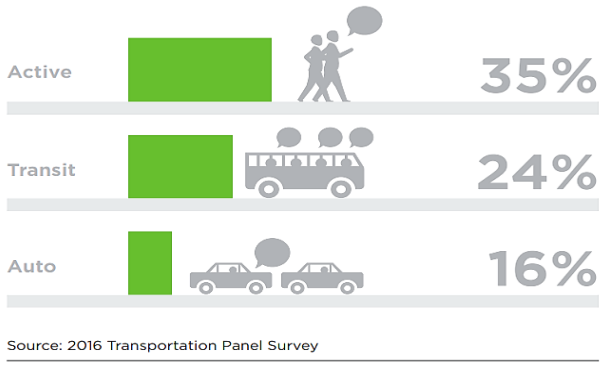
Some of the factors that contribute to urban loneliness are associations. Cities tend to have high rates of interregional migrants (people who moved from other communities), and people living alone, who tend to be vulnerable to these effects regardless of community size. Those people would experience similar isolation and loneliness if they moved to a rural area. Lower marriage rates and higher divorce rates probably reflect a combination of association and causation, but these differences are disappearing. Residents of smaller communities tend to be more welcoming to newcomers, due to less social saturation and fear of crime, but this friendliness can be superficial; smaller communities can be exclusive and oppressive, particularly to visible minorities and non-conformists. Cities offer more social opportunities, including specialized subcultures, which can reduce isolation and loneliness.

Potential Community Responses

Urban communities can encourage community cohesion (positive interactions among neighbors) by creating a welcoming public realm (public spaces where neighbors naturally interact) such as sidewalks and public parks, encouraging neighborhood social activities, and by providing inclusive community and sports events (Cohesion and Faiths Unit 2005; Litman 2007). Montgomery (2013) offers specific recommendations and examples, such as developing neighborhood parks, complete streets, and community festivals. It may be appropriate for communities to sponsor special programs to welcome and engage new residents, and monitor newcomers for possible isolation and loneliness.

The City of Vancouver's 2016 Travel Survey indicates that people travelling by foot, bike or public transit are more likely to engage in a friendly interaction than when travelling by private automobile. This suggests that improving these modes tends to increase community cohesion.

Figure 12 **Likelihood of a Friendly Interaction During Trip** (Vancouver 2016)



People report far more friendly social interactions when walking, bicycling or riding public transport than when travelling by private automobile.

Although there is little credible evidence that high-rise housing causes significant mental harm to most people, some people may be better suited to low-rise or single-family homes, so communities should try to provide diverse housing types that meet diverse needs, including low-rise housing with shared indoor and outdoor spaces designed to maximize social interactions.

Potential Individual Responses

People who move to a new community should recognize the risks of isolation and loneliness, and take advantage of appropriate social opportunities to create friendships. People who have severe difficulties making new friends may be better off staying in their original communities in order to maintain their familial and social networks, but most people who move to cities can create new social networks. Conversely, people who feel alienated in a small community may be less lonely in a city where they can find more people with similar interests.

Noise and Light Pollution

Urban areas tend to have more ambient noise and light pollution, which can induce stress and interrupt sleep (WHO 2011). Common urban noise sources include vehicle traffic (particularly trucks and motorcycles), sirens and alarms, construction, loud music and voices, barking dogs, landscaping and noisy sex (Jaffe 2015). However, these problems are not unique to cities; suburban areas also have landscaping and vehicle noise, and rural areas experience farming activities and highway traffic noise. Carvalho, Hidalgo and Levandovski (2014) found that rural residents experience about 10% more light-exposure but have less "social jet lag" (sleep and wake at times that are out of sync from their internal, biological clock) than urban residents.

Association or Causation?

Noise and light pollution exposure tends to increase with density, and so can be considered as inherent to cities, but can often be managed and reduced with improved design.

Potential Community Responses

Table 3 lists various community strategies for reducing ambient noise and light pollution. Many of these strategies provide co-benefits; for example, shifts from gasoline to electric motorcycles, and diesel to electric buses, reduce air as well as noise pollution, and double-pane windows reduce energy consumption.

Table 3 **Community Noise and Light Reduction Strategies**

Noise	Light
• Regulate noise generation. • Restrict noisy vehicle (gasoline motorcycles and diesel trucks and buses) and reduce traffic speeds. • Restrict sirens and alarms. • Restrict noisy industrial, construction and landscaping activities. • Establish building noise insulation standards. • Develop street trees, walls, and other noise barriers.	• Orient street lights downward. • Sign and building lighting restrictions. • High quality window covers. • Sun glasses and eye shades. • Light design education.

Various strategies can reduce urban noise and light pollution.

Potential Individual Responses

Urban residents can choose home locations away from roads with high speeds and volumes (particularly heavy diesel vehicle routes), and homes with noise insulation and good window covers. People who are very noise or light sensitive may wear ear plugs or dark glasses. People who are very noise sensitive may need to avoid wood-frame multi-family housing.

Toxic Pollution

Exposure to some toxins may increase mental illness. Reyes (2014) found that high childhood lead exposure in some urban neighborhoods increased adolescent aggression and behavior problems, and adult criminal behavior. Fine particulate exposure is associated with increased anxiety (Power, et al. 2016), impaired cognition and depressive behaviors (Fonken, et al. 2011). Prenatal polycyclic aromatic hydrocarbons (PAH, an air pollutant) exposure increases children's attention deficit disorder rates (Perera, et al. 2014). These impacts can increase mental illness directly, and indirectly by increasing crime rates (Reyes 2014). Because many of these toxins originate from industrial activities and vehicles, they tend to increase with density, highway proximity and highway travel. Suburban and rural residents also experience toxic pollutants, including motor vehicle travel, agricultural chemicals, and in some areas, wood smoke (Meyer 2013). Control programs are reducing some of these risks. For example, childhood lead exposure peaked in 1970 and subsequently declined after lead was phased out of gasoline and paint.

Association or Causation?

To the degree that toxic pollution exposure increases with development density and mix, it can be considered to be caused by urban living. Exposure to lead paint tends to be common in older, poorly maintained housing in both urban and rural areas. Suburban residents that frequently travel on major highways may also suffer from toxin exposure and resulting illnesses.

Potential Community Responses

Communities can reduce toxic emissions by reducing total vehicle travel and shifting to less polluting vehicles; locating houses, worksites, schools and playgrounds away from busy highways; and reducing the time people spend travelling on congested highways.

Potential Individual Responses

Individuals can reduce their exposure to potentially toxic pollutants by choosing homes, worksites and recreational areas away from busy highways; minimizing their travel on busy highways, and reducing exposure to other pollutants such as paint and contaminated foods.

Excessive Stimulation and Stress

Some people speculate that urban living causes "relentless" stimulation (also called *cognitive overload*) that imposes mental stress (Abbott 2012; Patil 2016; Palti and Bar 2015). This is understandable since urban environments tend to be busy and noisy, cities contain competitive industries and jobs, urban areas offer more economic and social opportunities than rural areas, and many people work in cities but live and recreate in suburban and rural areas, and so associate cities with responsibility and stress. However, these effects are largely associations rather than being unique to cities: a rural job can impose as much stress as an urban job, and except for ambient noise, there is no reason that urban residents cannot engage in relaxing activities, such as knitting and reading, as they could in rural areas.

Cities may also increase psychological stress by causing frequent interactions with unfamiliar, diverse and sometimes unfriendly people (Milgram 1970). During a typical day urban residents

interact with hundreds of unfamiliar people, which exceeds *Dunbar's Number*, the number of close relationships that most people can maintain, which is generally estimated at 150-250 people. Urban populations tend to be diverse, so many of these interactions involve very different, and therefore frightening, people. The large number and anonymity of these interactions may cause city residents to be less polite and friendly than they would in smaller communities. Although most urban social interactions are benign or positive, their large numbers and diversity of may cause discomfort and stress, particularly for urban newcomers unaccustomed to these social conditions (Freeman, et al. 2015). A survey of urban neighborhood residents by researchers Nematollahi, Tiwari and Hedgecock (2015) found that many, particularly older people, consider, "a diverse mix of people in the precinct" to be undesirable. Respondents indicated that they were afraid of increased density because it would increase unpredictable social interactions and possibly crime rates.

Differences between city and smaller community friendliness are probably largely superficial. Although city residents may seem less welcoming during fleeting interactions, here is no evidence that they are less friendly with ongoing relationships, for example, with colleagues and close friends. Smaller communities can be exclusive and oppressive, particularly to outsiders and non-conformists. Visible minorities probably experience less stress in cities than they would in smaller communities where other residents are less accustomed to diversity; for those groups, city living probably increases mental health and happiness (Ray 2003).

Association or Causation?

Much of the stimulation and stress in cities is association rather than causation; reflecting the types of people and activities that locate in cities rather than a unique condition of urban living. Except for additional noise, few relaxing activities are significantly more difficult in cities than smaller communities. Increased interactions with unfamiliar and diverse people may cause mental stress to some people, particularly urban newcomers, but this is likely to decline as residents become more accustomed to urban social conditions. Many minorities and non-conformists probably experience less stress in cities than in small communities.

Potential Community Responses

If cultural diversity increases stress, communities can support community cohesion programs that encourage people to become more familiar and comfortable with different groups. Planning can increase quiet and calm urban environments through noise reduction and greenspace development, and support calming and reassuring community activities such as local art and recreation programs (Patil 2016).

Potential Individual Responses

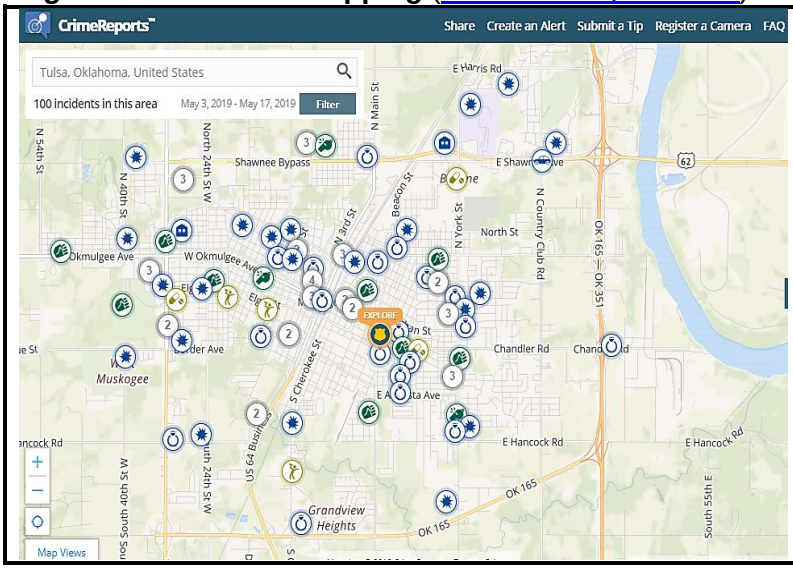
People who find diversity stressful can make an effort to become more familiar and comfortable with different groups in their community. Urban residents can organize their lives and homes to encourage calming and stress reducing activities.

Crime

Crime is both a cause and effect of mental illness. Real or perceived fear of crime tends to increase stress and distrust, which reduces mental health and happiness. Accounting for other household and economic factors, Newbury, et al. (2016) estimate that a quarter of the increased children's mental illness found in cities is explained by lower levels of social cohesion and social control, and higher crime victimization rates common in urban neighborhoods.

Crime research can be challenging due to inadequate and inconsistent data. For example, the Bureau of Justice Statistics' *Criminal Victimization Report* indicates larger differences in urban-rural crime rates based on crimes "Known to Law Enforcement" than for crimes "Reported by Victims," suggesting that rural victims are less likely to report crimes, which may bias the data ("Urban and Rural Crime," BJS 2015). That report also indicates that smaller cities have higher forcible rape and property crime rates than larger cities, and cities have higher rape arrest rates, which contradict common assumptions about high urban crime rates. New crime-reporting apps and crime mapping systems, which show police-reported crime and residents' suspicious activity reports, give an exaggerated impression of urban crime: they indicate *crime density* (crimes per square mile or kilometer) which many people misinterpret as *crime risk* (crimes per capita), causing people to overestimate actual urban crime risk (Molla 2019).

Figure 13 **Crime Mapping** (www.crimereports.com)



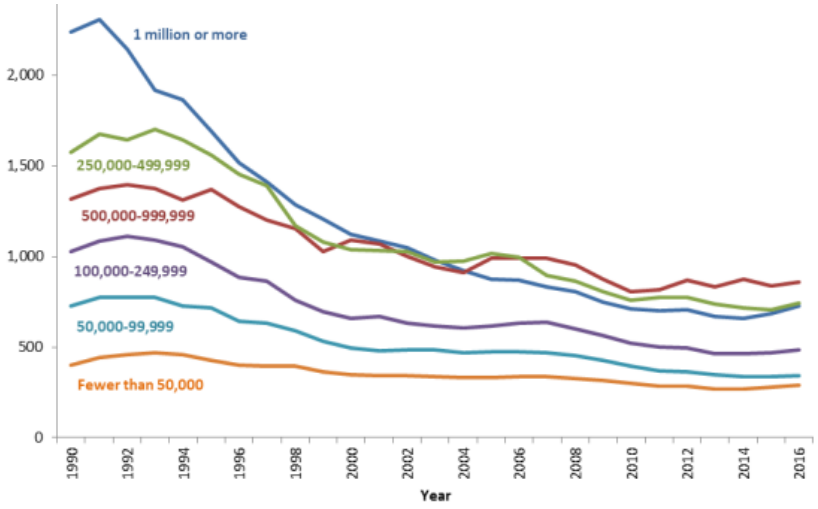
Crime reporting and mapping apps like Nextdoor, Citizen, Neighbors and Crimereports.com indicate that crime density (crimes per square-mile or -kilometer) increases with development density and mix, but fail to account for population density or the special risks associated with commercial activities such as banks and bars, and so does not really indicate that per capita crime rates or typical individuals' crime victim risks increase with density and mix. Research that accounts for these factors indicates that per capita crime risk tends to decline with more compact and mixed development that increases natural surveillance.

Popular narratives tend to exaggerate urban crime risks. Incidents such as the 1964 Genovese murder, and recent public transit assaults, are often reported inaccurately and sensationally as evidence that cities are dangerous and urban residents are uncaring (Gordon 2021).

Despite these challenges, there is evidence that crime rates tend to increase with city size, but this effect is declining. For example, U.S. urban crime rates peaked in 1992, when they were nearly ten times higher than rural areas, but subsequently declined significantly (Figure 14). If this trend continues cities will have about the same violent crime rate as rural areas by

approximately 2022. A recent study by Humphrey, et al. (2019) found that population density is not significantly associated with violent crime and negatively associated with non-violent crime.

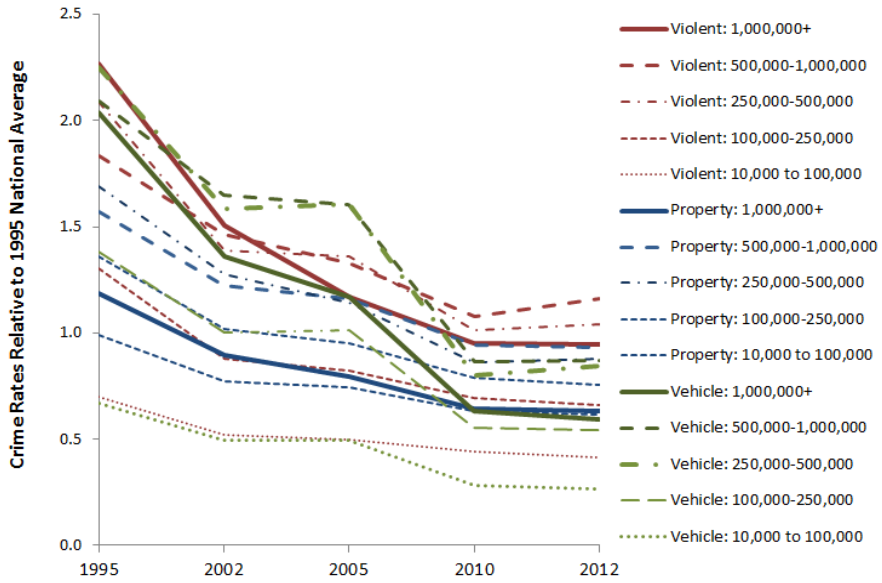
Figure 14 **Rural Vs. Urban Violent Crime, USA** (CRSR 2018)



Urban crime rates peaked in 1992 and subsequently declined by two thirds.

Although crime rates declined in virtually all size communities, the reductions were particularly large in big cities, as illustrated in Figure 15.

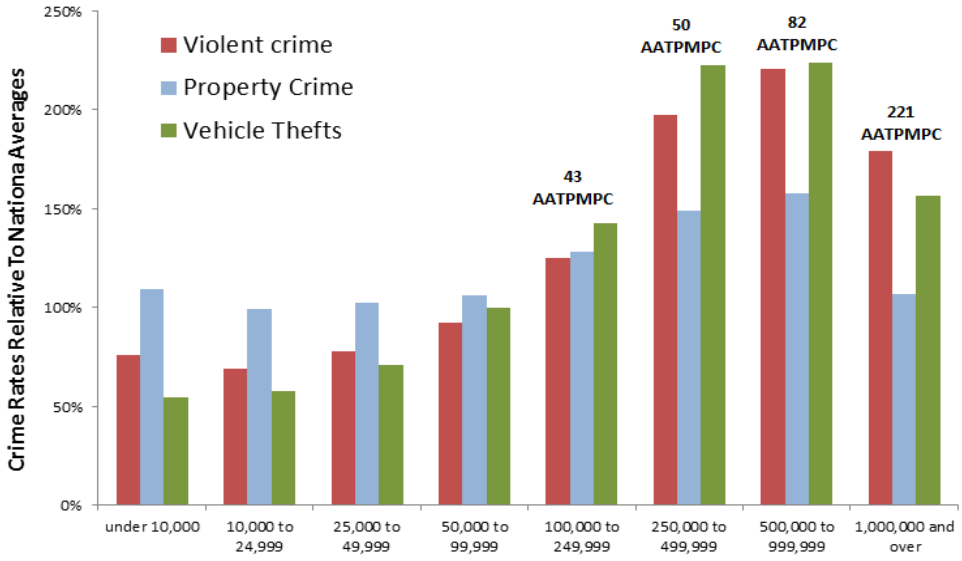
Figure 15 **Crime Rates Trends** (FBI 1995-2012, Tables 16)



Crime rates declined significantly during the last two decades, particularly in cities with more than a million residents. Crime rates are now lower in large cities than in medium-size cities (250,000 to one million).

As a result of these trends, the largest cities now have significantly lower crime rates (23% lower for violent crimes and 32% lower for property crimes) than medium-size cities, as illustrated in Figure 16.

Figure 16 **Crime Rates by Community Population Group** (FBI 2012, Table 16)



Crime rates tend to increase as community population grows, peaks at 500,000-1,000,000 residents, and is significantly lower for cities with over a million population, which also have the highest transit ridership rates (AATPMPC = Average Annual Transit Passenger-Miles Per Capita).

There is considerable speculation and some research concerning why cities had high crime rates in the past, and why these declined in recent decades. Cities contain entertainment and commercial districts that have unique crime risks (fighting is are more common in bars, and bank robberies occur at banks). Some researchers suggest that social isolation and anonymity in cities increase criminal behavior by reducing economic and social interdependencies that create community solidarity, that is, the chances that a crime will affect somebody the offender knows and cares about (Jeffery 1959).

Twinam (2017) examined the effects of residential density and land use on crime using a high-resolution dataset from Chicago over the period 2008–2013. The results indicate that commercial uses lead to more nearby street crime, particularly in more walkable neighborhoods, but this effect is strongly offset by population density; dense mixed-use areas are safer than typical residential areas. Additionally, much of the commercial effect is driven by liquor stores and late-hour bars, so other commercial activities tend to increase security.

Glaeser and Sacerdote (1999) estimate that a quarter of cities' higher crime rates reflect higher economic gains from criminal activities, for example, due to more banks and jewelry stores, and a fifth results from lower probabilities of arrest due to greater anonymity, and a major portion reflects demographic factors such as concentrated poverty. Some large cities have high rates of neuro-toxin (such as lead) exposure. Associative factors such as concentrated poverty, drug addiction and criminal gangs also increase crime in some urban areas.

Cities have features the can reduce crime rates. All else being equal, crime rates decline in more compact, mixed, walkable neighborhoods due to more passive surveillance ("eyes on the street") by non-criminal passers-by (Chang and Jacobson 2017; Christens and Speer 2005; Gilderbloom, Riggs and Meares 2015; Hillier and Sahbaz 2006; Humphrey, et al. 2019; Tang 2015; USDOT 2015), plus increased economic opportunities for disadvantaged residents, and more specialized policing. High quality public transit tends to reduce local crime rates (Devries, et al. 2018). Using international data, Ahlfeldt and Pietrostefani (2017) found that crime rates increase with density in the US cities, but decline with density in other OECD countries, perhaps reflecting the location of concentrated poverty. The following factors may contribute to declining large city crime rates:

- Aging population, which reduced the portion of high crime age residents.
- Less poverty concentration, increased security and economic opportunity (better schools and local job opportunities) as higher-income residents move into urban neighborhoods.
- Better policing and social services, including more specialists and targeted programs, and faster response times due to increased densities.
- More passive surveillance and community cohesion due to more mixed development and increased walking and bicycling activity.
- Declining lead toxin exposure.
- Better education and employment opportunities for at-risk residents due to better public transport and targeted support programs.
- Lower vehicle ownership rates, which reduce vehicle-related crime, a major portion of crimes.

Many crime risk factors are declining, so urban crime rates, and the contribution that crime makes to mental illness, are likely to decline in the future. To the degree that mental health reflects perception rather than actual crime risk, and residents rely on exaggerated crime risk information, they may experience excessive but unjustified fears and risks.

Association or Causation?

High urban crime rates probably resulted from a combination of causal factors, such as the concentration of crime-inducing entertainment and commercial districts, and greater social isolation and anonymity, plus associations due to concentration of poverty, drug addiction and gangs. Urban crime rates are declining, and this is likely to continue as cities become more affluent and poverty moves to suburbs.

Potential Community Responses

Urban communities may be able to reduce crime risks through better intervention programs for at-risk residents, and urban design features that create more compact, mixed, walkable neighborhoods with passive surveillance. Because crime perception is a mental health risk, it may be helpful for communities to better communicate the decline in urban crime risks to reduce excessive fear that may contribute to mental illness and unhappiness.

Potential Individual Responses

Individuals can reduce their personal crime risk, and by learning about declining urban crime rates, reduce excessive fear and resulting stress.

Crowding and Reduced Privacy

Crowding (excessive people in confined spaces) can cause mental stress, particularly for youths (Solari and Mare 2012; Urist 2013), but it is difficult to isolate this effect from confounding factors such as poverty (Fitts 2016). Residential crowding (residents per room) is greater in poor rural states such as Alaska and Texas than in denser but more affluent states such as New York and Massachusetts (Census 2011). As previously discussed, evidence, such as Calhoun's rat colony studies, are sometimes cited to argue that urban *densities* (people per acre or hectare) are harmful, but that conclusion is inappropriate since *crowding* is primarily associated with poverty, not density, and the rat colony studies were much more crowded than normal in human housing. There is no evidence that typical urban densities (20-60 residents per hectare or 8-25 residents per acre) cause social problems (1000 Friends 1999; Ramsden 2009). Urban density often involves tradeoffs with mental health consequences, for example, lower density housing may require longer and more stressful commutes, or reduce economic opportunities.

Increased densities and multi-family housing can reduce the privacy of activities such as loud arguments and outdoor parties, but small town residents may also lack privacy because "everybody knows your business" (Preston and D'Augelli 2013). Strategies such as sound-dampening building design and appropriate landscaping can increase urban privacy.

Considering all costs, including land, infrastructure, parking, construction, maintenance, utilities and transportation expenses, a mid-rise, wood-frame urban townhouse or apartment tends to have the lowest cost per square foot, and so allow households to purchase larger, less crowded housing (Litman 2016; USHUD and USDOT 2015). In the example illustrated in Table 4, a $65,000 annual-income household can afford a 2,000 sq. ft. urban townhouse or apartment, or a smaller crowded 1,200 sq. ft. single-family suburban house.

Table 4 **City Versus Suburb Housing & Transport Costs**

	City (multi-family)	Suburb (single-family)
Land price per acre	$1,000,000	$200,000
Houses per acre	20	4
Construction costs per square foot (ICC 2016)	$107	$120
Infrastructure (driveway & utility connections)	$20,000	$40,000
Parking garage spaces	0.5	2.0
Cost per parking space	$20,000	$20,000
House square feet	**2,000**	**1,200**
Total capital costs	$294,000	$274,000
Annualized capital costs (5%, 25 yrs.)	$20,860	$19,441
Maintenance, heating and cooling expenses	$4,000	$6,000
Transportation expenses	$5,000	$10,000
Total annual housing and transport costs	*$29,860*	*$35,441*

Compared with suburban single-family housing, urban multi-family housing requires less land, has lower construction costs per square foot, lower infrastructure and parking costs, lower maintenance and heating/cooling costs, and lower household transportation costs. As a result, households can often afford a larger urban townhouse or apartment than a suburban single-family house.

Association or Causation?

High urban land prices tend to increase building space costs (dollars per square foot or meter) which can contribute to crowding, particularly for lower-income households in attractive cities such as New York and San Francisco, but many other factors can affect housing affordability (Litman 2015; Taylor 2015), and in many situations, households can afford larger houses in cities than in smaller communities.

Potential Community Responses

Policy reforms that increase affordable housing development can help reduce housing costs, allowing households to afford larger, less crowded homes (Burda and Collins-Williams 2015; Litman 2015). Since mid-rise (3-6 story) multi-family housing tends to have the lowest development costs per square foot, allowing more of this type of housing tends to reduce crowding, particularly if some units have three to five bedrooms to accommodate larger families.

Potential Individual Responses

Households can choose housing that has sufficient space for mental health, and amenities such as an attractive view. Researcher Jeni Cross emphasizes the importance of aesthetics and design, "In the hospital literature, people heal faster in hospital rooms when they have a view of nature. So if you're thinking about affluent micro-housing and poor micro-housing, it's not just 'how many people per square foot,' but, 'do they have a view?'" (Fitts 2016).

Physical Activity and Fitness

Several studies suggest that physical exercise and fitness can increase mental health, and prevent mental illnesses such as dementia (Bingham 2009; Robertson, et al. 2012). For example, increased neighborhood walkability is associated with reduced symptoms of depression in older men (Berke, et al. 2007), and reduced frequency of dementia (Larson, et al. 2006). In a study of 299 U.S. older adults Erickson, et al. (2010) found significantly higher rates of grey matter volume and cognitive ability in those who previously walked more than 72 blocks a week.

Although there are various ways to exercise, many, such as organized sports and gym workouts, require special time, money, and effort, which discourages use, particularly by people who are low income and sedentary. For groups that are most at risk of physical inactivity, neighborhood walking and cycling are among the most practical ways to increase daily, lifelong exercise. Urban living tends to increase physical activity compared with sprawled, automobile-dependent areas (Ewing and Hamidi 2014). Since most public transit trips include walking links, physical fitness tends to increase with transit travel (Lachapelle, et al. 2011).

In a study of residents in 14 international cities, Sallis, et al. (2016) found that controlling for other factors, net residential density, intersection density, public transport density and number of parks were significantly, positively related to physical activity. Residents of the most activity-friendly neighborhoods reported about 75 more weekly minutes of physical activity, half the target recommended by experts to maintain basic fitness and health. This suggests that, to improve public fitness and health, cities should be designed for walkability and ensure that appropriate parks and recreational facilities are located within walking distance of most homes.

Orstad, et al. (2020) examined the relationships between park proximity and mental health among 3,652 New York City residents who completed the 2010–2011 Physical Activity and Transit (PAT) random-digit-dial survey. Measures included number of poor mental health days in the previous month (outcome), self-reported time to walk to the nearest park from home (exposure), and frequency of park use for sports, exercise or PA (mediator). Park proximity was associated with fewer days of poor mental health, apparently due to increased physical activity, but only among those not concerned about park crime. They concluded that improving park safety and security, and promoting park-based physical activity can increase mental health in urban neighborhoods.

Research by Adjaye-Gbewonyo, et al. (2023) used the 2020 U.S. National Health Interview Survey to determine associations between factors related to pedestrian access (walking paths, sidewalks), amenities (shops, transit stops, entertainment/services, places to relax), and unsafe walking conditions (traffic, crime) and self-reported sleep duration and disturbances. It found that neighborhoods with better pedestrian access and more places to rest were associated with better sleep health, while unsafe walking conditions were associated with worse sleep health. Access to amenities was found to have no effect on sleep health.

Association or Causation?

The positive mental health benefits of increased physical activity and fitness are largely caused by well-planned urbanization, which increase the portion of destinations (schools, shops, parks, etc.) located within walking and cycling distance, and improve walking and cycling conditions with more sidewalks and paths.

Potential Community Responses

Cities can be designed to maximize physical fitness with compact, mixed development, good walking and cycling conditions, pro-transit policies (since most transit trips include walking links), and appropriate parks and recreation facilities located close to most homes.

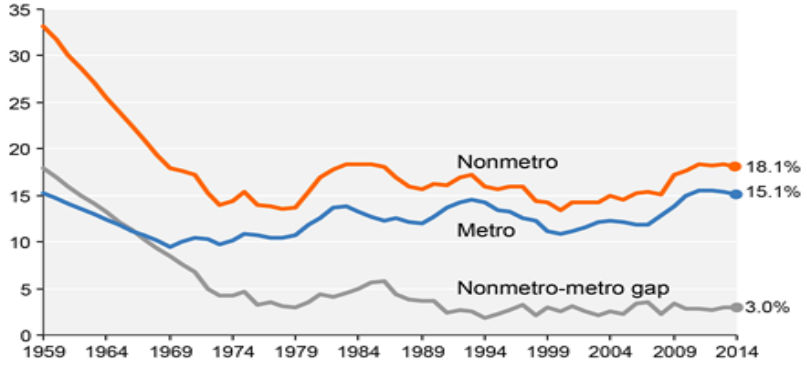
Potential Individual Responses

Residents can choose homes in walkable and bikeable neighborhoods with appropriate parks and recreation facilities nearby, and choose physically active transport and recreation options, for example, walking and cycling rather than driving for errands, commuting and social activities when possible.

Economic Stress

Economic stresses often contribute to mental illness and unhappiness (Graham 2015; Tobin 2014; Winter and Li 2016). Rural and urban areas have different economic stresses. Rural areas tend to have higher poverty rates (Figure 17), fewer education and employment opportunities (particularly for non-drivers), higher transportation costs, and less access to affordable goods and services, such as bulk retailers.

Figure 17 **U.S. Poverty Rates by Residential Location** (USDA 2016)



Poverty rates tend to be lower in metro (urban) than in non-metro (rural) areas. Similar patterns are found in most countries throughout the world.

CPS poverty status is based on family income in the prior year, and ACS poverty status is based on family income during the last 12 months.

Association or Causation?

Some urban economic stresses, such as less ability to build houses and grow food, are inherent to urban areas, but because urban areas are more productive and provide more economic opportunities, particularly for physically and economically disadvantaged groups, urban living probably reduces economic stresses overall (Glaeser 2011). Relative poverty may currently be greater in urban areas, but this difference is likely to decline as rural residents become more exposed to consumer marketing.

Potential Community Responses

Communities can reduce financial stress by improving disadvantaged groups' economic opportunities, and affordable housing and transport options (Litman 2015; Taylor 2015).

Dweik and Woodhall-Melnik (2022) found that housing subsidy programs have mixed impacts on residents' mental health, depending on program design such as type of housing assistance, housing stability, and neighbourhood quality. This suggests that poorly designed subsidy programs may create new mental health stresses, for example, if it concentrates poverty and social problems or is located in an inaccessible or undesirable area.

Potential Individual Responses

Individuals can choose affordable housing and transport options, and opportunities for increasing incomes. For workers, this often involves moving to urban areas to access better education and jobs; their higher incomes tend to offset higher living costs, particularly over the long run. Fixed income households may be better off choosing lower living cost locations.

Transport Conditions

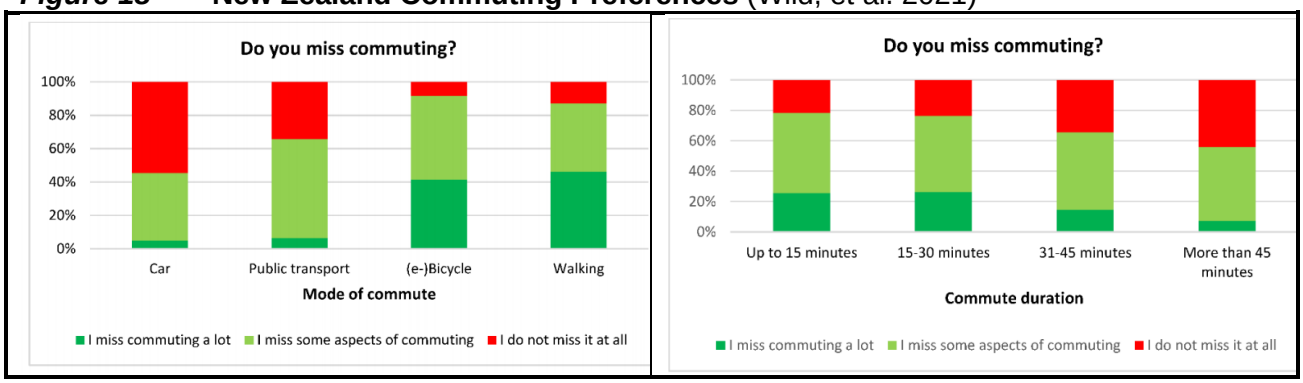
Local transport conditions affect mental health and happiness (Montgomery 2013). Improved walking conditions and increased walking activity can increase community cohesion (positive interactions among neighbors), community security (more passive surveillance), public fitness, and health (Appleyard and Appleyard 2012). Reduced vehicle travel also reduces per capita traffic casualty and crime risks, which can cause mental stress to victims and their families.

Garrido-Cumbrera, et al. (2023) used data from the Spanish 'Commuting, Daily Habits and Urban Health Survey' to explore how commute patterns affect workers' mental health. They found that commuting by private vehicle, and spending more time and money on commuting, are associated with poorer mental health. The study suggests that these outcomes result from reduced physical activity and increased financial stress caused by driving.

Leyden, et al. (2023) found that living in a walkable neighborhood was directly linked to the happiness of people aged from 18 to 45, and improved happiness for older residents by improving health and community relationships. Salazar-Miranda, et al. (2022) found that Paris's pedestrian-oriented "slow zones" had 44% more Twitter activity, reflecting increases in both the number of users and the tweets per user, suggesting that slow zones attract more people from a wider geographic range, and increases their social activity, reflecting more social mixing.

Commute stress tends to be lowest for walkers and bicyclists, higher for comfortable public transit travel, and highest for driving in congestion and uncomfortable public transit travel (Clark, et al 2020; Gimenez-Nadal and Molina 2019; Hilbrecht, Smale and Mock 2014; Wei 2015). Martin, Goryakin and Suhrcke (2014) used data from eighteen waves of the *British Household Panel Survey* to evaluate how commute mode and duration affects psychological wellbeing. The results indicate that accounting for various confounding factors, wellbeing was significantly higher for active mode commuters (walkers and bicyclists) than car or public transport users, and declined with longer commute duration, particularly driving. Other studies find similar results (ONS 2014). A detailed survey during the COVID-19 pandemic found that car commuters and longer-duration commuters were less likely to miss their commute than those who use other mode, as illustrated below. These data indicate that long-duration car commuting is associated with less happiness and more anxiety, while public transport commuting does not reduce well-being until journey times exceeds 30 minutes.

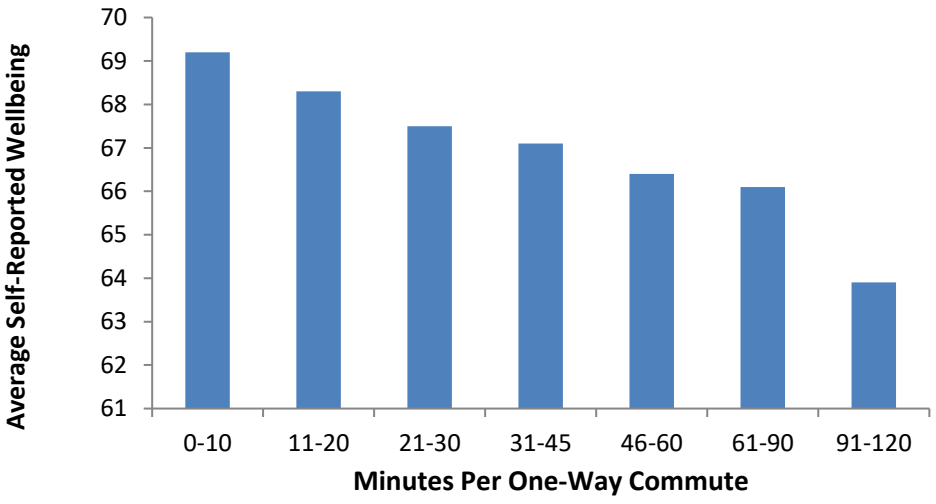
Figure 18 **New Zealand Commuting Preferences** (Wild, et al. 2021)



The *Gallup Healthways Index* indicates that large, compact, multi-modal cities such as Boston, San Francisco, Chicago and New York have significantly higher rates of exercise, and significantly lower rates of depression, obesity, diabetes and smoking than sprawled, automobile-dependent cities such as Fort Wayne, Indianapolis, Oklahoma City, Tulsa and Durham-Chapel Hill (Gallup 2016). Controlling for age, education, and income levels, longer commutes reduce subjective well-being, as illustrated below. Workers with commutes exceeding 90 daily minutes, 40% experienced worry for much of the previous day -- significantly higher than the 28% among those with commutes of 10 minutes or less, and extremely long commuters were less likely to have experienced enjoyment for much of the previous day or report feeling well-rested.

Iamtrakul, et al (2024) found that that in Bangkok that neighborhoods with better public transit accessibility consistently demonstrated higher average life satisfaction levels, apparently because better transit improves residents' access to services and activities. They authors recommend that cities provide high-quality, safe, and affordable transportation services.

Figure 18 **Self-Reported Wellbeing Versus Commute Duration** (Crabtree 2010)



People with shorter commutes tend to have higher well-being ratings. This suggests that more compact development can increase happiness.

Commute duration (time spent commuting) tends to increase with city size, but suburban and rural home locations are associated with more total time spent traveling, much of which consists of non-commute travel (see . Melis, et al. (2015) conclude that improving local mobility and accessibility options tends to reduce rates of depression, and walking provides mental health and happiness benefits (Robertson, et al. 2012).

Association or Causation?

Transport can affect urban mental health and happiness in several ways. City living generally increases walking and cycling, and reduces total time spent driving, causing positive impacts, but commute duration tends to increase with city size, and public transit is sometimes crowded and dirty, causing negative impacts. Net impacts depend on the trade-offs between these factors.

Potential Community Responses

Cities can increase mental health and happiness by improving walking and cycling conditions, and enhancing public transit services, particularly reducing the most uncomfortable conditions such as excessive crowding, heat, and harassment. They can also improve housing options in accessible and multi-modal neighborhoods, which reduces the time residents spend driving.

Potential Individual Responses

Individuals can choose to live in areas with good walking, cycling and public transit services, and reduce their need to drive. They can also support policies that encourage active transportation.

Inadequate Interaction with Nature

Some people argue that people require regular interactions with nature, and that urban living leads to *nature deficit syndrome* (Berto 2014; Hartig and Kahn 2016). Conservationist E.O. Wilson (1993) called the innate human affiliation to other living organisms *biophilia*, which he considered innate to humans. In addition, urban parks provide opportunities for physical exercise, social interactions and quiet each of which contributes to mental health and happiness.

Several studies find that exposure to nature (images, gardens, parks, rural landscapes) increases people's wellbeing. For example, a review by Berto (2014) indicates that patients are calmer and have lower heart rates in clinics with murals of nature on their walls. Grazuleviciene, et al. (2016), randomly assigned twenty heart disease patients to seven days of walking in either a city park or street; recovery rates were better for park walkers. Using Wellbeing Index data and controlling for other geographic and demographic factors, Larson, Jennings and Cloutier (2016) found that U.S. residents' wellbeing increases significantly with the portion of urban land devoted to parks (ranging from 2.0% to 23%), park quality (per capita parks spending) and accessibility (percentage of residents within ½-mile of parks). Sturm and Cohen (2014) found that Los Angeles residents' physical and mental health ratings increased with proximity to public parks. Similarly, a survey of 496 Phoenix (AZ) residents found that life satisfaction increased with the quantity of neighborhood parks and neighborhood walkability (Pfeiffer, et al. 2020). Mhuireach, et al. (2016) find that airborne bacteria are more diverse in urban parks than parking lots, and suggest that this diversity may contribute to human wellbeing; if so, proximity to natural landscapes may improve mental health and happiness.

A major study by Younan, et al. (2016) of 1,287 Southern California adolescent twins found that, controlled for socioeconomic factors such as age, gender, race, and geographic factors such as neighborhood quality, traffic density and ambient temperatures, more greenspace (parks, golf courses and fields) within 1,000 meters of a subject's home is associated with significant reductions on aggressive behaviors, equivalent of 2 to 2.5 years of behavioral maturation. They suggest that this results from increased physical activity, reduced pollution exposure, and possibly more exposure to positive microbial biodiversity that improves brain health.

Bu, et al. (2022) found that, accounting for other demographic and geographic factors, residents in English areas with higher greenspace coverage had fewer anxiety symptoms. Using a large survey of self-reported loneliness and objectively measured proximity to parks, Astell-Burt, et al. (2021) found that loneliness declines with proximity to parks, and estimate that if at least 30% of urban land were dedicated to public greenspace loneliness would decline up to 26% among adults overall and up to 52% among adults who live alone.

These effects may reflect the physiological effects of reduced noise and air pollution exposure, and increased exposure to beneficial natural bacteria, or psychological benefits from the positive associations many people have with natural environments. Some of these effects may be superficial and so can be synthesized with images of nature, but others may be innate or require substantial interactions with real natural environments.

Association or Causation?

Although most cities have significant greenspace, including street trees, public parks, private gardens and indoor plants, they generally offer less access to nature than suburban and rural areas. Since suburban and rural living significantly increases land consumption, pavement area and energy consumption, suburban and rural residents can be considered to *consume* nature, while urban residents help protect and therefore *produce* nature. To the degree that people care about their global ecological impacts, urban residents can take pride in these positive effects.

Potential Community Responses

There are different and sometimes conflicting ways to provide urban residents access to nature, as summarized in the table below. To be *biophilic*, cities should devote sufficient area (generally more than 15% of their total area) to public greenspace, provide public parks and recreational facilities within a five-minute walk of most houses, incorporate landscaping such as street trees and planters, and offer community gardens, green infrastructure (such as plants incorporated into buildings), and nature visiting programs in order to ensure that residents have frequent and significant exposure to natural environments and associated benefits (Green 2016). Research summarized by Surico (2020), suggests that proximity to public parks tends to increase physical and mental health, but bigger is not necessarily better; smaller local parks and gardens tend to provide more benefits than large regional parks.

Table 5 **Three Ways to Increase Interaction with Nature**

Approach	Advantages	Disadvantages
Lower density development, such as housing with large private gardens, or near farms and forests.	Private gardens tend to provide more privacy, plus physical and emotional involvement.	Increases per capita land consumption and costs associated with dispersed development.
Higher density development with public greenspace, such as apartments near urban parks.	Reduces land consumption per capita and provides benefits of compact urban development.	Increases costs associated with compact development. Requires more planning.
Green infrastructure, such as green roofs, and street trees.	Provides greenspace within developed areas.	Can increase infrastructure costs.
Natural area visiting, such as parks programs and holidays.	Allows more people to experience natural environments.	Tend to be infrequent. Increases transport costs.

There are several possible ways to increase people's exposure to nature.

Potential Individual Responses

Although suburban housing can provide more private greenspace and proximity to public openspace, denser development helps preserve natural lands, so people who value nature can choose urban homes with green infrastructure (e.g. rooftop gardens and street trees), proximity to public parks, indoor plants and images in their homes, and visit natural areas.

Impacts Summary

Table 6 summarizes the various mechanisms through which urban living can affect mental health and happiness, whether these are associations or inherently caused by urban conditions, and strategies for reducing negative impacts in order to create saner, happier cities.

Table 6 **Summary of Urban Mental Health Impact Mechanisms**

Mechanism	Causation or Association	Mental Health and Happiness Strategies
Concentrated mental illness risk factors	Mainly association. May increase some problems but reduce others by improving economic opportunities and services.	Recognize that cities tend to attract people with elevated mental health risks, and so should provide appropriate services.
Substance (alcohol and drug) abuse	Mainly association. Cities have more cocaine and heroin addiction, rural areas more prescription drug, meth and alcohol abuse.	Provide targeted substance abuse prevention and treatment programs.
Social isolation and loneliness	Mixed. Affected by interregional migration. Rural residents may initially seem friendlier, but cities offer more social opportunities.	Encourage *community cohesion* (positive interactions among neighbors) and programs to welcome newcomers.
Noise and light pollution	Increases with density but can be minimized with policy and design changes.	Regulations and designs that reduce noise and light pollution.
Toxic pollution	Increases with density but can be reduced.	Toxic pollution reduction strategies.
Excessive stimulation and stress	Mixed. Urban newcomers often experience stress but this usually declines over time.	Support programs that help people to become more comfortable with diversity.
Crime	Mixed. Some urban areas have high crime rates but this is declining.	Support crime reductions and more accurate crime risk information.
Crowding and reduced privacy	High housing costs can increase crowding, particularly for lower income households.	Increase affordable housing supply in cities, including larger units for families.
Economic stress	Mixed. Urban areas tend to have high housing costs but better economic opportunities.	Support affordability and economic opportunities.
Physical inactivity	Mainly causation.	Support active transport and local parks
Transport conditions	Mixed. Urban residents usually experience more walking and bicycling and less driving, but sometimes unpleasant transit travel.	Improve walking, cycling and public transit, and support Smart Growth policies.
Inadequate access to nature	Mainly causation but can be reduced.	Increase greenspace and opportunities to visit natural areas.

Urban living can affect mental health and happiness in several ways. Some are inherent to urban conditions, but many are associations related to confounding factors.

This analysis suggests that urban conditions such as increasing noise, toxic pollution, crime, and social overstimulation may increase total mental illness and unhappiness, but these impacts are declining or can be reduced with appropriate planning. Other risk factors tend to be *associated with* rather than *caused by* urban conditions, including increased interregional migration (reducing nearby social support), concentration of people with elevated mental illness risks, and the tendency of people to move to urban areas during stressful periods in their lives.

Creating Saner and Happier Communities

This analysis suggests that the following urban policies and design strategies can help create saner and happier cities (Agnello 2020; *CUDMH*; Montgomery 2013; Tam 2017):

- *Targeted social services.* Recognize that cities attract people with elevated mental illness risks (poverty, disability, minority, alienated, etc.), and provide appropriate social services, including programs to treat mental illness, homelessness and substance abuse (HUD 2016).
- *Affordability*. Improve affordable urban housing and transportation options (walking, cycling, public transit, taxi, etc.) to reduce residents' financial stress.
- *Independent mobility.* Provide independent mobility options for diverse community members, including those who are poor, have disabilities or impairments, children, adolescents and seniors.
- *Transportation improvements.* Improve quality and design of walking, bicycling and public transit services to reduce user discomfort and stress (WPI Economics 2019).
- *Pro-social places*. Create public spaces (streets, parks, public buildings, etc.) that promote community and encourage positive interactions among residents, particularly vulnerable groups including poor, people with disabilities, visible minorities, migrants, youth and seniors. Involve residents in creating public places and activities that meet their needs (Agnello 2020).
- *Community safety*. Create communities that minimize urban dangers including traffic, crime and harassment, and pollution exposure. This can involve traffic safety programs (particularly for vulnerable groups including pedestrians, cyclists, people with disabilities, etc.), crime prevention though environmental design (CPTED), appropriate lighting, passive surveillance by nearby residents and by-passers, and other community safety programs.
- *Design for physical activity*. Integrate physical activity by providing good walking and cycling conditions, high quality public transit (since transit travel complements walking and cycling), compact and mixed neighborhoods (so common destinations, such as schools and shops, are located within walking and cycling distance of most homes and worksites), local parks and recreational facilities, plus appropriate community sports and recreation programs.
- *Pollution reductions.* Implement noise, air, light and toxic pollution reduction programs.
- *Greenspace*. Design cities with appropriate greenspaces, including local and regional parks (15-25% of urban land should be devoted to public parks, and most homes should be within a five-minute walk of neighborhood parks or appropriate recreational facilities), green infrastructure (such as street landscaping and rooftop gardens), and out-of-city wilderness access programs.

The following strategies are particularly important in suburban and rural areas:

- Provide social services that address local poverty, mental illness and mobility needs.
- Address isolation and loneliness by providing suitable places to socialize, and ways for disadvantaged groups to access them. Ensure that local social activities include minorities and non-conformists.
- Because transport systems more automobile-dependent, it is particularly important to improve walking, cycling and public transit.

Mackett (2019) surveyed 385 UK residents with mental illnesses (depression, anxiety and panic attacks, difficulty communicating and memory loss) concerning their travel challenges. The study found that many have difficulty travelling independently, particularly using public transport, and identified 39 strategies for improving mobility options for people with mental illness.

A major study titled, *The Relationship Between Transport and Mental Health in Aotearoa, New Zealand*, (Wild, et al. 2021) investigated ways that transport systems can support psychological wellbeing. It identified factors that contribute psychological distress such transport poverty and inaccessible street environments. It concluded that some transport trends, such as rising private car traffic and their community impacts, lengthening commutes, and degraded active travel, tend to threaten mental health. It highlights the positive contribution that walkable environments, reducing long commutes, increasing active commuting, increasing public transport comfort and affordability can make toward mental wellbeing.

The book, *Happy Home* (Larsen and Rambøll 2022) identifies five home and neighbourhood qualities that have significant positive impact on residents' wellbeing: balancing private and communal spaces; personalising the physical layout; sensing nature from the home; experiencing local identity; and engaging in process and decision making.

Who is Most Suited to Urban Living?

People's needs and preference vary. Some are more or less suited to urban living, as summarized in Table 7. Many of these factors can change over a person's life, so an individual may be happier in a city during some periods more than others.

Table 7 **Suitability for Sane and Happy City Living**

More Suited To City Living	Less Suited to City Living
• Poor, with good education and employment opportunities in cities. • Is alienated from their original community, and is likely to find a supportive community in cities. • Is comfortable with and enjoys cultural diversity. • Enjoys walking, cycling and public transit. • Enjoys stimulation and is likely to take advantage of new economic and cultural opportunities. • Can respond effectively to urban mental health risks.	• Has strong suburban or rural social and family networks, and has difficulty making new friends. • Owns large animals (large dogs, horses, etc.) or enjoys large-scale gardening. • Is uncomfortable with cultural diversity. • Is very sensitive to noise and crowding. • Enjoys automobile travel. • Is vulnerable to cocaine and heroin addiction, and not to alcohol abuse.

People are diverse; some are more mentally suited to city living than others.

This suggests that many people are suited to city living, and this can increase with strategies recommended in this report. For example, people who are sensitive to ambient noise can choose urban homes designed to minimize noise exposure, and those who have difficulty making new friends can make a concerted effort to participate in urban social activities. Even people who find some aspects of urban living to be stressful may be better off overall in a city due to offsetting benefits. For example, even people who initially find urban living lonely and over-stimulating may be better off overall if they are able to earn more money, particularly over the long run as they make friends and become more comfortable with urban conditions.

Healthy Skepticism

Be skeptical of urban mental health and happiness studies that:

- Only mention negative impacts and ignore ways that urban living can increase sanity and happiness.
- Fail to account for confounding factors related to the types of people who locate in urban areas, such as concentrated poverty, disabilities and minority status, and so assume that associations reflect causation.
- Imply that studies of specific areas, times and groups apply everywhere to everybody.
- Imply that risk factors are unchangeable, ignoring changes in factors such as urban crime and poverty rates.
- Confuse crowding (people in confined spaces) with urban density (people per acre or hectare).
- Imply that all urban households must live in high-rise apartments and forego private car ownership.
- Use inappropriate evidence (such as rate colony studies) and biased terms, such as "relentless stress."

Conclusions

The human experience is increasingly urban so it is important to understand how city living affects our sanity and happiness, and incorporate mental health and happiness objectives into urban planning. There is considerable debate about these issues. It is common to hear people cite irrelevant research (such as Calhoun's rodent studies) or anecdotes about urban social problems as evidence that city living endangers mental health and happiness. Such attitudes are understandable; urban environments tend to be noisy and busy, people often move to cities during periods of personal or economic stress, and many people work in cities and recreate in rural areas and so associate urban conditions with responsibility and rural areas with relaxation. As a result, many people consider cities stressful and depressing and rural areas healthy and happy. However, that does not really mean that cities increase mental illness and unhappiness or a typical person will become insane and depressed by living in a typical urban neighborhood.

This analysis indicates that city living has mixed mental health impacts: credible research suggests that urban residency can increase some people's risk of psychosis such as schizophrenia, mood disorders such as depression, drug addiction, and unhappiness, but reduces dementia, some substance abuse and suicide rates, and increases many people's happiness. Urban living can also improve mental health by increasing economic opportunities, physical fitness and access to healthcare services.

Higher mental illness and unhappiness rates in cities result largely from the concentration of risk factors such as poverty and disability in urban areas, due to the better services and opportunities they provide. This can create a self-reinforcing cycle of urban poverty and mental illness, and associated social problems, called *social drift*. Higher urban mental illness rates may also partly reflect better reporting. As a result, the *association* between cities and mental illness does not really mean that city living *causes* these problems. In fact, many people are saner and happier in cities than they would be in smaller communities that offer less opportunity and support.

This report examines various mechanisms by which urban living can affect mental health and happiness. Urban conditions can increase some mental illness risk factors including noise, toxic pollution, crime and social over-stimulation, but these impacts are declining or can be reduced with appropriate planning. Urban residents tend to have less absolute poverty but may experience more relative poverty due to exposure to more affluent neighbors. It is hyperbola to claim that cities cause "relentless" stress. Urban newcomers may find the abundance of activities, opportunities and social interactions over-stimulating, but these effects generally decline over time. Urban residents tend to have larger social networks. For visible minorities, increased cultural diversity in cities can reduce stress and increase happiness.

In most countries, surveys find *higher* self-reported happiness in cities than in smaller communities. In the U.S., large city residents report slightly *lower* (up to three percentage points) happiness rating than rural residents, but this probably reflects other factors related to differences between urban and rural populations and U.S. urban conditions, and so would not apply to successful people and non-distressed urban neighborhoods.

Lower (about half) urban suicide rates suggest that city living increases overall mental health and happiness. If urban living doubles residents' lifetime psychosis risk, from about 1% to 2%, as some research suggests (others estimate much smaller effects), this approximately equals the higher rural suicide rates. Since psychosis is generally transitory and treatable while suicides are permanent and devastating, cities' increased psychosis risk is generally preferable to higher rural suicide risk.

A critical issue is the degree that urban conditions actually *cause* mental illness and unhappiness, in which case individuals suffer if they move to cities, and total mental illness and unhappiness increase with urbanization, or whether these problems result from conditions *associated with* but not inherent to cities, in which case urbanization is not harmful overall. Table 9 categorizes mental illness risk factors identified in this study. *Demographic* factors affect individuals regardless of where they live. *Economic and lifestyle* factors are associated with but not necessarily inherent to cities, and often change over time. Only the *geographic* factors can be considered to actually be caused by urbanization.

Table 8 **Factors Affecting Mental Health and Happiness**

Demographic	Economic and Lifestyle	Geographic
Are geographic factors to the degree that higher-risk groups concentrate in cities.	*Are geographic factors to the degree that higher-risk economic and lifestyle conditions concentrate in cities.*	*Are inherent to urban conditions and so increase when people move to cities.*
• Education, income and wealth • Age and lifecycle stage • Family and marriage status • Family and social networks • Health status • Drug and alcohol abuse • Minority status • Personal attitudes and beliefs	• Interregional migration • Economic (education and employment) opportunities • Cost of living • Transport activity • Crime rates • Social status of urban locations • Physical activity and fitness	• Crime opportunities • Population density • Noise and pollution exposure • Transport options (walking, cycling and transit quality) • Increased physical activity • Exposure to nature • Better reporting of problems

Many factors can affect mental health and happiness. Some are associations related to the types of people and activities that locate in cities rather than an inherent risk of urban living.

This indicates that most mental illness risk factors are *associated with* rather than *caused by* urbanization. Risk factors such as concentrated poverty and substance abuse, and urban out-migration by affluent households can create the self-reinforcing cycle of social drift, but these factors often change. For example, urban and rural divorce and crime rates are converging, and many urban areas are attracting more affluent residents. In addition new technologies and planning practices can improve urban mental health, for example by reducing noise exposure and increasing housing and transportation affordability. As urban residents become more affluent, urban environmental quality will probably become more important for mental health and happiness, and as poverty becomes more suburban, so will mental illness risks. It is therefore important to track how risk factor and mental health needs evolve in the future.

This is an emotional issue; many people consider cities either good or bad, and search for supporting evidence. This is understandable. Cities can be frightening and unpleasant due to crowding, noise, and concentrated poverty and social problems. Because city living (particularly apartments and public transit) is often stigmatized, many people work hard and commute long distances so their families can live in suburban areas; they may feel threatened by evidence that city living can be healthy and enjoyable, which would question the value of their sacrifices.

There is good evidence that city living increases most people's overall happiness, including worldwide rural-to-urban migrations, and the high housing costs in cities; these would not occur if billions of people did not consider themselves better off overall in cities. Many people say that, given unlimited resources, they prefer a large home and automobile travel over an urban apartment and public transport, but when confronted with realistic trade-offs between housing and transportation costs many households choose compact urban housing, provided it is affordable, accessible and located in an attractive neighborhood.

Much of the evidence that cities increase mental illness and unhappiness is specific to North America where policies tend to be anti-urban and cities have severe social problems; these results do not apply to economically successful urban neighborhoods. This suggests that better policies and design strategies can increase urban mental health and happiness. These include policies that improve mental health services, more affordable urban housing and transport options, improved walking and cycling conditions, improved public realm, social inclusion programs that welcome newcomers and integrate visible minorities, plus appropriate public parks and recreation facilities. Such policies are important in both developed countries that currently under-support existing cities, and in developing countries where new cities are developing rapidly.

This is not to suggest that everybody should live in dense urban neighborhoods; some people are unsuited due to their lifestyle or temperament, for example, because they own large pets, engage in noisy activities, or are uncomfortable with cultural diversity. However, because cities tend to improve economic and social opportunities, many people benefit overall from urban living because their gains in income, social connections and physical activities offset any incremental mental stresses, particularly over the long run as urban benefits increase and disadvantages decline. Since urban living reduces per capita land consumption and transportation costs, it tends to provide additional, indirect benefits.

This research is reassuring overall: it suggests that most people can take advantage of urban living benefits without sacrificing their sanity or happiness.

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