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# MORE INFORMATION ABOUT

**Urban environment and mental health: risk and protective Factors for people with psychiatric disorders in contemporary cities.**

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## 3º Congress of Friendly Cities

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# Content

# 1

# LIST OF REVIEWED STUDIES ON URBAN FACTORS THAT NEGATIVELY AFFECT MENTAL HEALTH

| REFERENCE OF THE STUDY | TYPE OF STUDY | CONCLUSIONES | / CONCLUSIONS |
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| Aneshensel, C. S., & Sucoff, C. A. (1996). The neighborhood context of adolescent mental health. *Journal of Health and Social Behavior, 37*(4), 293–310. | Longitudinal Observational Study | Los adolescentes que viven en barrios percibidos como desorganizados o inseguros presentan más síntomas emocionales. | **Adolescents living in neighborhoods perceived as disorganized or unsafe exhibit higher levels of emotional symptoms.** |
| Aneshensel, C. S., Wight, R. G., Miller-Martinez, D., Botticello, A. L., Karlamangla, A. S., & Seeman, T. E. (2011). The urban neighborhood and cognitive functioning in late middle age. *Journal of Health and Social Behavior, 52*(2), 163–179. | Longitudinal Observational Study | Las condiciones ambientales y sociales acumuladas durante años pueden afectar al rendimiento y envejecimiento cognitivo. | **Environmental and social conditions accumulated over time may adversely affect cognitive performance and cognitive ageing.** |
| Bakolis, I., Hammoud, R., Smythe, M., Gibbons, J., Davidson, N., Tognin, S., & Bhui, K. (2021). Mental health consequences of urban air pollution: Prospective population-based longitudinal survey. Social *Psychiatry and Psychiatric Epidemiology*, 56(9), 1587–1599. | Longitudinal study | La exposición prolongada a contaminantes urbanos se asocia con peor salud mental. | **Long-term exposure to urban pollutants is associated with poorer mental health.** |
| Baranyi, G., Di Marco, M. H., Russ, T. C., Dibben, C., & Pearce, J. (2021). The impact of neighbourhood crime on mental health: A systematic review and meta-analysis. *Social Science & Medicine*, 282, 114106. | Systematic Review y metaanálisis | Existe una asociación consistente entre mayores niveles de criminalidad y peor salud mental. | **There is a consistent association between higher levels of crime and poorer mental health.** |
| Braithwaite, I., Zhang, S., Kirkbride, J. B., Osborn, D. P. J., & Hayes, J. F. (2019). Air pollution, particulate matter exposure and associations with depression, anxiety, bipolar disorder, psychosis and suicide risk: A systematic review and meta-analysis. *Environmental Health Perspectives*, 127(12), 126002. | Systematic Review y metaanálisis | Mayor contaminación del aire se asocia con mayor riesgo de depresión, suicidio, ansiedad y psicosis. | **Higher levels of air pollution are associated with an increased risk of depression, suicide, anxiety, and psychosis.** |

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| Cox, D. T. C., Shanahan, D. F., Hudson, H. L., Fuller, R. A., & Gaston, K. J. (2018). The impact of urbanisation on nature dose and the implications for human health. *Landscape and Urban Planning, 179*, 72–80. | Observational Study | A mayor urbanización menor contacto con la naturaleza y mayor riesgo para la salud mental. | **Greater urbanisation is associated with reduced contact with nature and an increased risk of mental health problems.** |
| Echeverría, S., Diez Roux, A. V., Shea, S., Borrell, L. N., & Jackson, S. (2008). Associations of neighborhood problems and social cohesion with mental health and health behaviors: Multi-Ethnic Study. *Health & Place*, 14(4), 853–865. | Observational Study | La presencia de problemas vecinales se asocia con peor salud mental y conductas menos saludables, mientras que la cohesión social del vecindario se relaciona con mejores resultados de salud. | **Neighborhood problems are associated with poorer mental health and less healthy behaviors, whereas neighborhood social cohesion is linked to better health outcomes.** |
| Evans, G. W. (2003). The built environment and mental health. *Journal of Urban Health*, 80(4), 536–555. | Narrative Review | Factores como mala calidad de la vivienda, el hacinamiento humano, el ruido o poca luz natural pueden generar estrés. | **Factors such as poor housing quality, overcrowding, noise, and limited natural light can contribute to stress.** |
| Evans, G. W., & Kantrowitz, E. (2002). Socioeconomic status and health: The potential role of environmental risk exposure. *Annual Review of Public Health*, 23, 303–331. | Narrative Review | Personas con menor nivel socioeconómico viven en zonas con contaminación, ruido, hacinamiento, viviendas de peor calidad y entornos vecinales más adversos, que perjudican su salud mental. | **People with lower socioeconomic status are more likely to live in areas with pollution, noise, overcrowding, poor-quality housing, and disadvantaged neighborhood environments, all of which can negatively affect mental health.** |
| Evans, G. W., Wells, N. M., & Moch, A. (2003). Housing and mental health: A review of evidence and a methodological and conceptual critique. *Journal of Social Issues,* 59(3), 475–500. | Narrative Review | Las viviendas deterioradas, hacinadas o de baja calidad | **Deteriorated, overcrowded, or low-quality housing increases psychological distress.** |

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| | | incrementan el malestar psicológico. | |
| Foster, S., & Giles-Corti, B. (2008). The built environment, neighborhood crime and constrained physical activity: An exploration of inconsistent findings. *Health & Place*, 14(1), 57–69. | Narrative Review | A mayor inseguridad percibida, menor actividad física de los residentes y en consecuencia menor salud mental. | **Higher levels of perceived insecurity are associated with lower levels of physical activity among residents and, consequently, poorer mental health.** |
| Galea, S., Ahern, J., Rudenstine, S., Wallace, Z., & Vlahov, D. (2005). The urban built environment and depression: A multilevel analysis. *Journal of Epidemiology & Community Health*, 59(10), 822–827. | Análisis multinivel | Barrios con edificios deteriorados se asocian con mayor probabilidad de depresión independientemente del nivel socioeconómico individual. | **Neighborhoods with deteriorated buildings are associated with a higher likelihood of depression, regardless of individual socioeconomic status.** |
| Galea, S., Uddin, M., & Koenen, K. (2011). The urban environment and mental disorders: Epigenetic links. *Epidemiologic Reviews*, 33(1), 84–97. | Narrative Review | Los factores estresantes del entorno urbano pueden influir en la aparición de trastornos mentales a través de mecanismos epigenéticos que median entre las condiciones ambientales y la salud mental. | **Urban environmental stressors may contribute to the development of mental disorders through epigenetic mechanisms that mediate the relationship between environmental conditions and mental health.** |
| Gary-Webb, T. L., Baptiste-Roberts, K., Pham, L., Wesche-Thobaben, J., Patricio, J., Pi-Sunyer, F. X., & Brancati, F. L. (2011). Neighborhood socioeconomic status, depression, and health status in the Look AHEAD study. *American Journal of Public Health*, 101(9), 1569–1575. | Observational Study | Barrios de menor nivel socioeconómico se relacionan con peor estado | **Lower socioeconomic-status neighborhoods are associated with poorer physical and mental health** |

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| | | de salud física y mental en personas con diabetes tipo 2. | **outcomes among individuals with type 2 diabetes.** |
| Gruebner, O., Rapp, M. A., Adli, M., Kluge, U., Galea, S., & Heinz, A. (2017). Cities and mental health. *Deutsches Ärzteblatt International*, 114(8), 121–127. | Narrative Review | Vivir en ciudades aumenta el riesgo de diversos trastornos mentales, especialmente psicosis, ansiedad y trastornos del estado de ánimo, pero este efecto puede ser mitigado si hay factores socioeconómicos favorables. | **Living in urban areas increases the risk of several mental disorders, particularly psychosis, anxiety, and mood disorders; however, this effect may be mitigated by favorable socioeconomic conditions.** |
| Hegewald, J., Schubert, M., Freiberg, A., Romero Starke, K., Augustin, F., Riedel-Heller, S. G., & Seidler, A. (2020). Traffic noise and mental health: A systematic review and meta-analysis. *International Journal of Environmental Research and Public Health*, 17(17), 6175. | Systematic Review y metaanálisis | La exposición al ruido del tráfico se asocia con un aumento del riesgo de depresión. | **Exposure to traffic noise is associated with an increased risk of depression.** |
| Hill, T. D., Ross, C. E., & Angel, R. J. (2005). Neighborhood disorder, psychophysiological distress, and health. *Journal of Health and Social Behavior*, 46(2), 170–186. | Observational Study | La delincuencia, deterioro físico de los edificios, conflictos y señales de abandono del barrio, propician estrés, ansiedad, depresión y somatización del estrés. | **Crime, building deterioration, social conflict, and visible signs of neighborhood neglect contribute to stress, anxiety, depression, and stress-related somatic symptoms.** |
| Kim, D. (2008). Blues from the neighborhood? Neighborhood characteristics and depression. *Epidemiologic Reviews*, 30(1), 101–117. | Narrative Review | La privación socioeconómica, el desorden físico, la inseguridad y la baja cohesión social se asocian con un mayor riesgo de depresión. | **Socioeconomic deprivation, physical disorder, insecurity, and low social cohesion are associated with an increased risk of depression.** |

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| Latkin, C. A., & Curry, A. D. (2003). Stressful neighborhoods and depression: A prospective study of the impact of neighborhood disorder. *American Journal of Community Psychology*, 32(1–2), 187–198. | Longitudinal Observational Study | La percepción de un mayor desorden en el vecindario predijo niveles más elevados de síntomas depresivos en el seguimiento, lo que sugiere que vivir en deteriorados constituye un factor de riesgo para el desarrollo o mantenimiento de la depresión. | **Perceived neighborhood disorder predicted higher levels of depressive symptoms at follow-up, suggesting that living in deteriorated neighborhood environments is a risk factor for the development or persistence of depression.** |
| Lorenc, T., Clayton, S., Neary, D., Whitehead, M., Petticrew, M., Thomson, H., & Renton, A. (2012). Crime, fear of crime, environment, and mental health and wellbeing: Mapping review of theories and causal pathways. *Health & Place*, 18(4), 757–765. | Narrative review | El miedo a la criminalidad del barrio perjudica la salud mental y el bienestar a través de múltiples vías interrelacionadas, como el estrés crónico, la restricción de la actividad física, el debilitamiento de las relaciones sociales y el deterioro de la cohesión comunitaria. | **Fear of neighborhood crime adversely affects mental health and well-being through multiple interrelated pathways, including chronic stress, reduced physical activity, weakened social relationships, and diminished community cohesion.** |
| Mair, C., Diez Roux, A. V., & Galea, S. (2008). Are neighbourhood characteristics associated with depressive symptoms? A review of evidence. *Journal of Epidemiology & Community Health*, 62(11), 940–946. | Systematic Review | Las características desfavorables del vecindario, particularmente la privación socioeconómica, el desorden físico y social, y la escasez de recursos, se asocian con una mayor presencia de síntomas depresivos, aunque la fuerza de la evidencia varía según el tipo de característica analizada. | **Adverse neighborhood characteristics, particularly socioeconomic deprivation, physical and social disorder, and lack of resources, are associated with a higher prevalence of depressive symptoms, although the strength of the evidence varies** |

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| | | | **according to the characteristic examined.** |
| Miles, R., Coutts, C., & Mohamadi, A. (2012). Neighborhood urban form, social environment, and depression. *Journal of Urban Health*, 89(1), 1–18. | Observational Study | Entornos que no favorecen la cohesión social y la percepción de seguridad mostraron una asociación más fuerte con la depresión que las características físicas de la forma urbana, aunque ciertos elementos del entorno construido pueden influir indirectamente en la salud mental al favorecer o dificultar las relaciones sociales. | **Environments that do not promote social cohesion and perceived safety showed a stronger association with depression than physical urban form characteristics, although certain aspects of the built environment may indirectly influence mental health by facilitating or hindering social relationships.** |
| Orban, E., McDonald, K., Sutcliffe, R., Hoffmann, B., Fuks, K. B., Dragano, N., & Nieuwenhuijsen, M. J. (2016). Residential road traffic noise and high depressive symptoms after five years of follow-up: Results from the Heinz Nixdorf Recall Study. *Environmental Health Perspectives*, 124(5), 578–585. | Longitudinal Observational Study | La exposición prolongada al ruido del tráfico rodado en el entorno residencial se asoció con un mayor riesgo de desarrollar síntomas depresivos durante el seguimiento, incluso tras ajustar por factores sociodemográficos, conductuales y de salud. | **Long-term exposure to residential road traffic noise was associated with an increased risk of developing depressive symptoms during follow-up, even after adjustment for sociodemographic, behavioral, and health-related factors.** |
| Pelgrims, I., Devleesschauwer, B., Guyot, M., Keune, H., Nawrot, T. S., Remmen, R., & others. (2021). Association between urban environment and mental health in Brussels. *BMC Public Health*, 21, 635. | Longitudinal Observational Study | La exposición residencial al ruido del tráfico rodado se asoció con un mayor riesgo de presentar síntomas depresivos elevados durante el seguimiento, incluso después de ajustar por múltiples | **Residential exposure to road traffic noise was associated with an increased risk of elevated depressive symptoms during follow-up, even after adjustment** |

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| | | factores individuales y ambientales. | **for multiple individual and environmental factors.** |
| Petrowski, N., Schmitt, J., & Hoffmann, B. (2021). Examining air pollution, mental health and well-being. *Scientific Reports,* 11, 18457. | Longitudinal Observational Study | La exposición prolongada a la contaminación atmosférica, especialmente a partículas finas y óxidos de nitrógeno, se asoció con peor bienestar mental y mayor probabilidad de problemas de salud mental, aunque las asociaciones observadas fueron generalmente modestas y no siempre consistentes entre los distintos indicadores analizados. | **Long-term exposure to air pollution, particularly fine particulate matter and nitrogen oxides, was associated with poorer mental well-being and a higher likelihood of mental health problems, although the observed associations were generally modest and not always consistent across the indicators examined.** |
| Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. Simon & Schuster. | Narrative review | La pérdida de conexiones sociales tiene consecuencias negativas para el bienestar individual y colectivo, incluida la salud física y mental. | **The loss of social connections has negative consequences for both individual and collective well-being, including physical and mental health.** |
| Ross, C. E. (2000). Neighborhood disadvantage and adult depression. *Journal of Health and Social Behavior*, 41(2), 177–187. | Observational Study | Vivir en barrios socioeconómicamente desfavorecidos se asocia con mayores niveles de depresión en adultos, en gran medida porque estos entornos incrementan la exposición a problemas sociales y físicos que reducen el | **Living in socioeconomically disadvantaged neighborhoods is associated with higher levels of depression among adults, largely because these environments increase exposure to social and physical problems that reduce** |

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| | | sentimiento de control personal y aumentan el estrés cotidiano. | **perceived personal control and increase everyday stress.** |
| Silver, E., Mulvey, E. P., & Swanson, J. W. (2002). Neighborhood structural characteristics and mental disorder. *Social Science & Medicine*, 55(8), 1457–1470. | Observational Study | La pobreza concentrada en un mismo barrio, la inestabilidad residencial y la desorganización social se asocian con una mayor prevalencia de trastornos mentales, incluso después de controlar las características individuales de los residentes. | **Concentrated poverty, residential instability, and social disorganization are associated with a higher prevalence of mental disorders, even after controlling for residents' individual characteristics.** |
| Steptoe, A., & Feldman, P. J. (2001). Neighborhood problems as sources of chronic stress: Development of a measure of neighborhood problems and associations with socioeconomic status and health. *Journal of Epidemiology & Community Health*, 55(10), 734–738. | Observational Study | Los problemas percibidos en el vecindario (como ruido, delincuencia, tráfico, basura o deterioro físico) constituyen una fuente importante de estrés crónico y se asocian con peor salud física y psicológica, siendo más frecuentes en áreas de menor nivel socioeconómico. | **Perceived neighborhood problems (such as noise, crime, traffic, litter, or physical deterioration) constitute an important source of chronic stress and are associated with poorer physical and psychological health, being more common in lower socioeconomic areas.** |
| Weich, S., Holt, G., Twigg, L., & Lewis, G. (2001). Mental health and the physical environment: Cross-sectional and geographical analyses of the National Psychiatric Morbidity Survey. *Psychological Medicine*, 31(6), 1113–1125. | Observational Study | Un entorno residencial desfavorable se relacionó con algunos problemas de salud mental, sugiriendo que el entorno físico puede influir en el bienestar psicológico, aunque su efecto es generalmente menor | **An adverse residential environment was associated with certain mental health problems, suggesting that the physical environment may influence psychological well-being, although its effect is generally smaller than that of** |

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| | | que el de los factores socioeconómicos y personales. | **socioeconomic and personal factors.** |
| Werder, E., Meyer, J., Chang, H. H., & others. (2024). Residential air pollution, greenspace and adverse mental health outcomes. *Environmental Health*. | Observational Study | La exposición residencial a mayores niveles de contaminación atmosférica se asoció con un mayor riesgo de resultados adversos de salud mental, mientras que una mayor presencia de espacios verdes en el entorno residencial se relacionó con un menor riesgo, sugiriendo que los espacios verdes pueden actuar como un factor protector frente a algunos efectos negativos de la contaminación sobre la salud mental. | **Residential exposure to higher levels of air pollution was associated with an increased risk of adverse mental health outcomes, whereas greater availability of greenspace in the residential environment was associated with a lower risk, suggesting that greenspaces may act as a protective factor against some of the negative mental health effects of air pollution.** |

# 2

# REVIEWED STUDIES ON URBAN FACTORS THAT PROMOTE MENTAL HEALTH

| REFERENCIA DEL ESTUDIO | TYPE OF STUDY | CONCLUSIONES / CONCLUSIONS |
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| Aerts, R., Honnay, O., & Van Nieuwenhuyse, A. (2018). Biodiversity and human health: Mechanisms and evidence of the positive health effects of diversity in nature and green spaces. *British Medical Bulletin, 127*(1), 5–22. | Narrative Review | La biodiversidad y espacios naturales aportan beneficios relacionados con: restauración psicológica, regulación inmunológica mediante exposición a microbiota diversa, aumento de oportunidades recreativas y de interacción con la naturaleza. **Biodiversity and natural environments provide benefits related to psychological restoration, immune regulation through exposure to diverse microbiota, and increased opportunities for recreation and interaction with nature.** |
| Alcock, I., White, M. P., Wheeler, B. W., Fleming, L. E., & Depledge, M. H. (2014). Longitudinal effects on mental health of moving to greener and less green urban areas. *Environmental Science & Technology, 48*(2), 1247–1255. | Longitudinal Observational Study | Mudarse a zonas más verdes produce una mejora inmediata de la salud mental. **Moving to greener areas leads to an immediate improvement in mental health.** |
| Almedom, A. M. (2005). Social capital and mental health. *Social Science & Medicine, 61*(5), 943–964. | Observational Study | Las redes sociales fuertes pueden actuar como factor protector frente al estrés y la exclusión. **Strong social networks can act as a protective factor against stress and social exclusion.** |
| Annerstedt, M., Östergren, P.-O., Björk, J., Grahn, P., Skärbäck, E., & Währborg, P. (2012). Green qualities in the neighbourhood and mental health: Results from a longitudinal cohort study in Southern Sweden. *BMC Public Health, 12*, 337. | Longitudinal Observational Study | Espacios verdes con determinadas cualidades (tranquilidad, naturaleza, refugio, apertura) se **Green spaces with specific qualities (tranquility, naturalness, refuge, and openness) are associated with better mental health.** |

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| | | relacionan con mejor salud mental. | |
| Astell-Burt, T., Feng, X., & Kolt, G. S. (2013). Mental health benefits of neighbourhood walkability. *American Journal of Preventive Medicine, 45*(2), 193–200. | Observational Study | Los barrios con más zonas para caminar se asocian con menor riesgo de malestar psicológico. | **Neighborhoods with greater walkability are associated with a lower risk of psychological distress.** |
| Astell-Burt, T., Feng, X., & Kolt, G. S. (2019). Association of urban green space with mental health and general health among adults in Australia. *JAMA Network Open, 2*(7), e198209. | Observational Study | Mayor cobertura de espacios verdes se asocia con mejor salud mental y mejor salud general. | **Greater green space coverage is associated with better mental health and overall health.** |
| Beard, J. R., Blaney, S., Cerda, M., Frye, V., Lovasi, G. S., Ompad, D., Rundle, A., & Vlahov, D. (2009). Neighborhood characteristics and disability in older adults. Journal of Epidemiology & Community Health, 63(3), 252–257. | Observational Study | La seguridad, accesibilidad y cohesión social del entorno influyen en la capacidad funcional. | **Environmental safety, accessibility, and social cohesion influence functional capacity.** |
| Bond, L., Kearns, A., Mason, P., Tannahill, C., Egan, M., & Whitely, E. (2012). The impact of the built and social environment on mental health. Health & Place, 18(1), 68–78. | Observational Study | Los efectos del entorno social influyen más que los puramente físicos. Por lo que los entornos urbanos deben favorecer la cohesión social. | **The effects of the social environment are stronger than those of the physical environment alone; therefore, urban environments should promote social cohesion.** |
| Bowler, D. E., Buyung-Ali, L. M., Knight, T. M., & Pullin, A. S. (2010). A systematic review of evidence for the added benefits to health of exposure to natural environments. BMC Public Health, 10, 456. | Systematic Review | La exposición a la naturaleza mejora el estado de ánimo, con mejoras en | **Exposure to nature improves mood, attention, and psychological restoration.** |

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| | | atención y recuperación psicológica. | |
| Bratman, G. N., Hamilton, J. P., Hahn, K. S., Daily, G. C., & Gross, J. J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. Proceedings of the National Academy of Sciences, 112(28), 8567–8572. | Experimental study | Caminar en un entorno natural reduce significativamente la rumiación mental, así como la actividad del córtex prefrontal subgenual, una región asociada con depresión y pensamiento negativo repetitivo. | **Walking in a natural environment significantly reduces rumination and decreases activity in the subgenual prefrontal cortex, a brain region associated with depression and repetitive negative thinking.** |
| Bratman, G. N., Anderson, C. B., Berman, M. G., Cochran, B., De Vries, S., Flanders, J., Folke, C., Frumkin, H., Gross, J. J., Hartig, T., Kahn, P. H., Jr., Kuo, M., Lawler, J. J., Levin, P. S., Lindahl, T., Meyer-Lindenberg, A., Mitchell, R., Ouyang, Z., Roe, J., … Daily, G. C. (2019). Nature and mental health: An ecosystem service perspective. Science Advances, 5(7), eaax0903. | Narrative Review | La naturaleza favorece la reducción del estrés, restauración atencional, mejora emocional, fortalecimiento de relaciones sociales y promoción de actividad física. | **Nature promotes stress reduction, attentional restoration, emotional well-being, stronger social relationships, and increased physical activity.** |
| Berman, M. G., Jonides, J., & Kaplan, S. (2008). The cognitive benefits of interacting with nature. Psychological Science, 19(12), 1207–1212. | Experimental study | Entornos naturales mejoran la memoria de trabajo y la atención dirigida. | **Natural environments improve working memory and directed attention.** |
| Beyer, K. M. M., Kaltenbach, A., Szabo, A., Bogar, S., Nieto, F. J., & Malecki, K. M. (2014). Exposure to neighborhood green space and mental health: Evidence from the survey of the health of Wisconsin. International Journal of Environmental Research and Public Health, 11(3), 3453–3472. | Observational Study | Personas que viven en barrios más verdes presentan menores niveles de depresión, ansiedad y estrés. | **People living in greener neighborhoods exhibit lower levels of depression, anxiety, and stress.** |

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| Cerin, E., Leslie, E., du Toit, L., Owen, N., & Frank, L. D. (2009). Neighbourhood environment, physical activity and mental well-being. Health & Place, 15(1), 111–122. | Observational Study | Barrios que favorecen la actividad física propician con ello la salud mental. | **Neighborhoods that promote physical activity also support better mental health.** |
| De Silva, M. J., McKenzie, K., Harpham, T., & Huttly, S. R. A. (2005). Social capital and mental illness: A systematic review. Journal of Epidemiology & Community Health, 59(8), 619–627. | Systematic Review | El capital social cognitivo (confianza interpersonal, percepción de apoyo, sentido de pertenencia) se asocia con menor prevalencia de trastornos mentales comunes, especialmente depresión y ansiedad. | **Cognitive social capital (interpersonal trust, perceived support, and sense of belonging) is associated with a lower prevalence of common mental disorders, particularly depression and anxiety.** |
| De Vries, S., Verheij, R. A., Groenewegen, P. P., & Spreeuwenberg, P. (2013). Street greenery and health outcomes in urban neighborhoods. Social Science & Medicine. | Observational Study | Las calles con mayor presencia de vegetación se asociaron con mejor salud percibida. | **Streets with greater vegetation cover were associated with better self-rated health.** |
| Diez Roux, A. V., & Mair, C. (2010). Neighborhoods and health. Annals of the New York Academy of Sciences, 1186(1), 125–145. | Narrative Review | Además de las características individuales, el contexto residencial constituye un determinante fundamental para la salud psicosocial. | **In addition to individual characteristics, the residential context is a key determinant of psychosocial health.** |
| Dzhambov, A. M., & Dimitrova, D. D. (2014). Urban green spaces' effectiveness as a psychological buffer for noise pollution. Noise and Health, 16(70), 157–165. | Observational Study | Aunque la vegetación no siempre disminuye físicamente el nivel de ruido, sí mejora la experiencia subjetiva del | **Although vegetation does not always physically reduce noise levels, it improves the subjective environmental** |

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| | | entorno y reduce el estrés asociado al ruido. | **experience and reduces noise-related stress.** |
| Dadvand, P., Nieuwenhuijsen, M. J., Esnaola, M., Forns, J., Basagaña, X., Alvarez-Pedrerol, M., & Sunyer, J. (2015). Green spaces and cognitive development in primary schoolchildren. *Proceedings of the National Academy of Sciences*, 112(26), 7937–7942. | Longitudinal Observational Study | Los espacios verdes en los colegios pueden favorecer el desarrollo neurocognitivo durante la infancia. | **Green spaces in schools may promote neurocognitive development during childhood.** |
| Douglas, O., Lennon, M., & Scott, M. (2017). Green space benefits for health and well-being: A life-course approach for urban planning, design and management. *Cities, 66*, 53–62. | Narrative Review | Los espacios verdes urbanos promueven la salud y el bienestar a lo largo de toda la vida. | **Urban green spaces promote health and well-being throughout the life course.** |
| Engemann, K., Pedersen, C. B., Arge, L., Tsirogiannis, C., Mortensen, P. B., & Svenning, J.-C. (2019). Residential green space in childhood is associated with lower risk of psychiatric disorders from adolescence into adulthood. *Proceedings of the National Academy of Sciences, 116*(11), 5188–5193. | Cohort study | La presencia de espacios verdes durante la infancia ejerce un efecto protector frente al desarrollo posterior de trastornos psiquiátricos. | **Exposure to green spaces during childhood exerts a protective effect against the later development of psychiatric disorders.** |
| Ellen, I. G., & Turner, M. A. (2003). Do neighborhoods matter and why? *Housing Policy Debate*, 14(4), 833–866. | Narrative Review | Los barrios importan para las oportunidades sociales, económicas y de bienestar. | **Neighborhoods matter for social, economic, and well-being opportunities.** |
| Fone, D., Dunstan, F., Lloyd, K., Williams, G., Watkins, J., Palmer, S., & others. (2007). Effect of neighbourhood deprivation and social cohesion on mental health inequality: A multilevel population-based longitudinal study. *British Journal of Psychiatry*, 191(4), 325–330. | Multilevel Longitudinal Study | Una elevada cohesión social comunitaria puede amortiguar significativamente los | **High levels of community social cohesion can significantly buffer the negative effects of the urban environment.** |

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| | | efectos negativos del entorno urbano. |
| Fone, D., White, J., Farewell, D., Kelly, M., John, G., Lloyd, K., & others. (2014). Change in neighbourhood deprivation and mental health in Wales: A record linkage study. *Social Psychiatry and Psychiatric Epidemiology*, 49(9), 1337–1346. | Longitudinal study | Las mejoras en las condiciones de los barrios se asociaron con mejoras en la salud mental de sus residentes. **Improvements in neighborhood conditions were associated with improvements in residents' mental health.** |
| Francis, J., Giles-Corti, B., Wood, L., & Knuiman, M. (2012). Creating sense of community: The role of public space. *Journal of Environmental Psychology*, 32(4), 401–409. | Observational Study | Los espacios verdes y las áreas comerciales del vecindario se asocian positivamente con un mayor sentido de comunidad de sus residentes. **Neighborhood green spaces and commercial areas are positively associated with a stronger sense of community among residents.** |
| Frank, L. D., Engelke, P. O., & Schmid, T. L. (2006). Many pathways from land use to health: Associations between neighborhood walkability and active transportation, body mass index, and air quality. *Journal of the American Planning Association*, 72(1), 75–87. | Observational Study | Barrios con más variedad de opciones de tránsito (parques, carril bici, aceras, zonas peatonales…) tienen residentes con menor índice de masa corporal y mejor salud mental. **Neighborhoods offering a wider range of active transportation options (parks, bicycle lanes, sidewalks, pedestrian areas, etc.) have residents with lower body mass index and better mental health.** |
| Gascon, M., Triguero-Mas, M., Martínez, D., Dadvand, P., Forns, J., Plasència, A., & Nieuwenhuijsen, M. J. (2015). Mental health benefits of long-term exposure to residential green and blue spaces: A systematic review. *International Journal of Environmental Research and Public Health*, 12(4), 4354–4379. | Systematic Review | La exposición residencial a largo plazo a espacios verdes se asocia con mejores resultados de salud mental y bienestar, **Long-term residential exposure to green spaces is associated with better mental health and well-being outcomes, whereas evidence** |

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| | | mientras que la evidencia sobre los beneficios de los espacios azules era todavía limitada e insuficiente. | **regarding the benefits of blue spaces remains limited and insufficient.** |
| Gascon, M., Zijlema, W., Vert, C., White, M. P., & Nieuwenhuijsen, M. J. (s. f.). Mental health benefits of urban green and blue spaces. *People and Nature*. | Narrative Review | Hay una correlación positiva entre los espacios verdes y azules urbanos y la salud mental. | **There is a positive correlation between urban green and blue spaces and mental health.** |
| Gong, Y., Gallacher, J., Palmer, S., & Fone, D. (2016). Neighbourhood environment and mental health in urban China. *Health & Place*, 39, 161–169. | Observational Study | Factores sociales del vecindario como la cohesión y el apoyo comunitario muestran asociaciones especialmente consistentes con la salud mental, incluso después de considerar características individuales y del entorno físico. | **Neighborhood social factors such as cohesion and community support show particularly consistent associations with mental health, even after accounting for individual and physical environmental characteristics.** |
| Gruebner, O., Rapp, M. A., Adli, M., Kluge, U., Galea, S., & Heinz, A. (2017). Cities and mental health. *Deutsches Ärzteblatt International*, 114(8), 121–127. | Narrative Review | Vivir en ciudades aumenta el riesgo de diversos trastornos mentales, especialmente psicosis, ansiedad y trastornos del estado de ánimo, pero este efecto | **Living in cities increases the risk of several mental disorders, particularly psychosis, anxiety, and mood disorders; however, this effect** |

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| | | puede ser mitigado si hay factores socioeconómicos favorables. | **may be mitigated by favorable socioeconomic conditions.** |
| Guite, H. F., Clark, C., & Ackrill, G. (2006). The impact of the physical and urban environment on mental well-being. *Public Health*, 120(12), 1117–1126. | Observational Study | La percepción de seguridad, la calidad del espacio público, el ruido, la densidad residencial y el acceso a espacios verdes muestran asociaciones independientes con el bienestar psicológico de los residentes. | **Perceived safety, public space quality, noise, residential density, and access to green spaces show independent associations with residents' psychological well-being.** |
| Halonen, J. I., Hansell, A. L., Gulliver, J., Morley, D., Blangiardo, M., Fecht, D., & Tonne, C. (2014). Associations of traffic noise with self-rated health and psychotropic medication use. *Scandinavian Journal of Work, Environment & Health*, 40(3), 235–243. | Cohort Study | Las personas con ansiedad tienen una mayor vulnerabilidad individual a los efectos psicológicos adversos del ruido y el tráfico. | **Individuals with anxiety are more vulnerable to the adverse psychological effects of noise and traffic.** |
| Hartig, T., Mitchell, R., de Vries, S., & Frumkin, H. (2014). Nature and health. *Annual Review of Public Health*, 35, 207–228. | Narrative Review | Los espacios naturales en las ciudades favorecen la salud física y mental reduciendo el estrés y mejorando la atención. | **Natural spaces in cities promote physical and mental health by reducing stress and improving attention.** |
| Heckert, M., & Kondo, M. C. (2018). Can civic ecology improve human health? Green infrastructure, social cohesion, and well-being. *Cities & Health, 2*(1), 44–57. | Narrative Review | Iniciativas de ecología urbana como huertos comunitarios, programas | **Urban ecology initiatives such as community gardens, urban greening programs,** |

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| | | de reverdecimiento urbano y gestión participativa de espacios verdes pueden mejorar el bienestar y la cohesión social. | **and participatory green space management can improve well-being and social cohesion.** |
| Helbich, M., de Beurs, D., Kwan, M.-P., O'Connor, R. C., & Groenewegen, P. P. (2018). More green space is related to less antidepressant prescription rates in the Netherlands. | Observational Study | Una mayor proporción de espacios verdes en los municipios neerlandeses se asocia con menores tasas de prescripción de antidepresivos, mostrando además una relación dosis-respuesta no lineal. | **A higher proportion of green space in Dutch municipalities is associated with lower antidepressant prescription rates, demonstrating a non-linear dose–response relationship.** |
| Honold, J., Lakes, T., Beyer, R., & van der Meer, E. (2016). Restorative qualities of urban parks and mental well-being. *Landscape and Urban Planning*, 146, 26–39. | Observational Study | Los parques urbanos generan sensación de evasión, fascinación y compatibilidad con las necesidades del usuario, lo cual favorece la salud mental. | **Urban parks generate feelings of escape, fascination, and compatibility with users' needs, thereby promoting mental health.** |
| Hunter, M. R., Gillespie, B. W., & Chen, S. Y.-P. (2019). Urban nature experiences reduce stress in the context of daily life based on salivary biomarkers. *Frontiers in Psychology, 10*, 722. | Experimental study | Pasar entre 20 y 30 minutos en un entorno natural urbano reduce significativamente los niveles fisiológicos de estrés, especialmente el cortisol. | **Spending between 20 and 30 minutes in an urban natural environment significantly reduces physiological stress levels, particularly cortisol.** |

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| Jennings, V., & Bamkole, O. (2019). The relationship between social cohesion and urban green space: An avenue for health promotion. *International Journal of Environmental Research and Public Health*, 16(3), 452. | Narrative Review | Los espacios verdes urbanos pueden promover la salud mental y la cohesión social. | **Urban green spaces can promote mental health and social cohesion.** |
| Jennings, V., Larson, L., Yun, J., & otros autores. (2024). The dynamic relationship between social cohesion and urban green space. *International Journal of Environmental Research and Public Health*, 21(6), 800. | Narrative Review | La relación entre espacios verdes urbanos y cohesión social es dinámica y bidireccional. | **The relationship between urban green spaces and social cohesion is dynamic and bidirectional.** |
| Jennings, V., Floyd, M. F., Shanahan, D., Coutts, C., & Sinykin, A. (2016). Emerging issues in urban ecology: Implications for research, social justice, human health, and well-being. *Population and Environment, 37*(4), 465–483. | Narrative Review | La ecología urbana debe integrar explícitamente las dimensiones de salud humana, bienestar y justicia social, garantizando que green spaces are accessible to all. | **Urban ecology should explicitly integrate the dimensions of human health, well-being, and social justice, ensuring that green spaces are accessible to all.** |
| Kawachi, I., & Berkman, L. F. (2001). *Social ties and mental health*. Oxford University Press. | Narrative Review | Los entornos que facilitan los vínculos sociales desempeñan un papel fundamental en la salud mental porque proporcionan apoyo emocional, recursos y sentido de pertenencia. | **Environments that facilitate social ties play a fundamental role in mental health because they provide emotional support, resources, and a sense of belonging.** |
| Krefis, A. C., Augustin, M., Schlünzen, K. H., Oßenbrügge, J., & Augustin, J. (2018). How does the urban environment affect health and well-being? A systematic review. *Urban Science*, 2(1), 21. | Systematic Review | Los espacios verdes, la calidad del aire, el bajo nivel de ruido, la fácil movilidad, la baja densidad | **Green spaces, good air quality, low noise levels, easy mobility, low urban density, and strong social** |

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| | | urbana y la alta cohesión social favorecen la buena salud mental. | **cohesion promote good mental health.** |
| Kondo, M. C., Fluehr, J. M., McKeon, T., & Branas, C. C. (2018). Urban green space and its impact on human health. *International Journal of Environmental Research and Public Health, 15*(3), 445. | Narrative Review | La cercanía de espacios verdes urbanos se relaciona con menor estrés, mejor salud mental, mayor actividad física y reducción de la mortalidad. | **Proximity to urban green spaces is associated with lower stress, better mental health, greater physical activity, and reduced mortality.** |
| Kuo, F. E. (2015). How might contact with nature promote human health? Promising mechanisms and a possible central pathway. *Frontiers in Psychology,* 6, 1093. | Narrative Review | El contacto con la naturaleza favorece la mejora del funcionamiento del sistema inmunitario, así como la reducción del estrés, la restauración de la atención, el aumento de la actividad física y la cohesión social. | **Contact with nature enhances immune system functioning, reduces stress, restores attention, increases physical activity, and strengthens social cohesion.** |
| Leslie, E., Cerin, E., & Kremer, P. (2007). Walkability of local communities and mental health: Results from the PLACE study. *Health & Place*, 13(1), 111–122. | Observational Study | Una mayor transitabilidad del vecindario se asoció con mejor salud mental, especialmente entre las personas que caminaban regularmente por su entorno local. | **Greater neighborhood walkability was associated with better mental health, particularly among individuals who regularly walked within their local environment.** |

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| Liu, Y., Wang, R., Xiao, Y., Huang, B., Chen, H., & Li, Z. (2019). Exploring the linkage between greenness exposure and depression among Chinese residents. *Landscape and Urban Planning, 191*, 103618. | Observational Study | Una mayor exposición residencial a espacios verdes se asoció con una menor probabilidad de presentar síntomas depresivos entre los residentes urbanos chinos. | **Greater residential exposure to green spaces was associated with a lower likelihood of depressive symptoms among urban Chinese residents.** |
| Maas, J., Verheij, R. A., de Vries, S., Spreeuwenberg, P., Schellevis, F. G., & Groenewegen, P. P. (2006). Green space, urbanity and health: How strong is the relation? *Journal of Epidemiology & Community Health*, 60(7), 587–592. | Observational Epidemiological Study | Una mayor proporción de espacios verdes en el entorno residencial se asoció con una mejor salud percibida y con una menor prevalencia de diversos problemas de salud, especialmente ansiedad y depresión. | **A higher proportion of green space in the residential environment was associated with better self-rated health and a lower prevalence of various health problems, particularly anxiety and depression.** |
| Maas, J., Verheij, R. A., Groenewegen, P. P., de Vries, S., & Spreeuwenberg, P. (2009). Morbidity is related to a green living environment. *Journal of Epidemiology & Community Health*, 63(12), 967–973. | Observational Study | Las personas que viven en entornos con mayor cantidad de espacios verdes presentan menores tasas de morbilidad para diversas enfermedades. | **Individuals living in greener environments exhibit lower morbidity rates for a variety of diseases.** |
| Markevych, I., Schoierer, J., Hartig, T., Chudnovsky, A., Hystad, P., Dzhambov, A. M., & Fuertes, E. (2017). Pathways linking greenspace and mental health. *Environmental Research*, 158, 301–317. | Narrative Review | Los efectos beneficiosos de los espacios verdes sobre la salud mental pueden explicarse principalmente a | **The beneficial effects of green spaces on mental health can largely be explained through several interrelated mechanisms.** |

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| | | través de varios mecanismos interrelacionados. |
| Melis, G., Gelormino, E., Marra, G., Ferracin, E., & Costa, G. (2015). Urban density, green spaces and psychological distress. *Health & Place*, 34, 94–104. | Observational Study | Una mayor disponibilidad de espacios verdes en el entorno residencial se asoció con menores niveles de malestar psicológico. **Greater availability of green spaces in the residential environment was associated with lower levels of psychological distress.** |
| McKenzie, K., Whitley, R., & Weich, S. (2002). Social capital and mental health. *British Journal of Psychiatry*, 181(4), 280–283. | Narrative Review | Niveles más altos de capital social tienden a asociarse con mejores resultados de salud mental tanto a nivel individual como comunitario. **Higher levels of social capital tend to be associated with better mental health outcomes at both the individual and community levels.** |
| Mitchell, R., & Popham, F. (2008). Effect of exposure to natural environment on health inequalities: An observational population study. *The Lancet,* 372(9650), 1655–1660. | Observational Study | Las desigualdades socioeconómicas en mortalidad fueron significativamente menores en las poblaciones que vivían en áreas con mayor disponibilidad de espacios verdes. **Socioeconomic inequalities in mortality were significantly lower among populations living in areas with greater availability of green spaces.** |
| Moore, T. H. M., Kesten, J. M., López-López, J. A., Ijaz, S., McAleenan, A., Richards, A., & Audrey, S. (2018). The effects of changes to the built environment on the mental health and well-being of adults: Systematic review. *Health & Place,* 53, 237–257. | Systematic review | Las intervenciones de reverdecimiento urbano y mejora de espacios públicos **Urban greening interventions and improvements to public** |

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| | | pueden favorecer la salud mental. | **spaces can promote mental health.** |
| Nutsford, D., Pearson, A. L., & Kingham, S. (2013). Residential exposure to visible blue space and mental health. *Health & Place*, 22, 101–110. | Observational Study | Una mayor visibilidad de espacios azules desde el entorno residencial se asoció con una menor probabilidad de presentar malestar psicológico. | **Greater visibility of blue spaces from the residential environment was associated with a lower likelihood of psychological distress.** |
| Nutsford, D., Pearson, A. L., & Kingham, S. (2016). An ecological study investigating the association between access to urban green space and mental health. *Public Health, 134*, 127–133. | Sociodemographic Study | La cercanía de espacios verdes utilizables y una mayor proporción de áreas verdes en el vecindario se asociaron con menores tasas de tratamiento por trastornos de ansiedad y del estado de ánimo. | **Proximity to usable green spaces and a higher proportion of neighborhood green areas were associated with lower treatment rates for anxiety and mood disorders.** |
| Richardson, E. A., Pearce, J., Mitchell, R., Day, P., & Kingham, S. (2013). Green cities and health: A question of scale? *Journal of Epidemiology & Community Health*, 67(2), 160–165. | Observational Study | La relación entre espacios verdes y salud depende de la escala espacial utilizada para medir la exposición. | **The relationship between green spaces and health depends on the spatial scale used to measure exposure.** |
| Richardson, R., Westley, T., Gariépy, G., Austin, N., & Nandi, A. (2015). Neighbourhood ethnic density and mental health. *Social Psychiatry and Psychiatric Epidemiology*, 50(8), 1291–1300. | Systematic review | Vivir en barrios con una mayor densidad de personas del mismo grupo étnico suele asociarse con mejores resultados de | **Living in neighborhoods with a higher density of people from the same ethnic group is often associated with better mental health** |

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| | | salud mental entre minorías étnicas. | **outcomes among ethnic minorities.** |
| Roe, J., Thompson, C. W., Aspinall, P. A., Brewer, M. J., Duff, E. I., Miller, D., Mitchell, R., & Clow, A. (2013). Green space and stress: Evidence from cortisol measures in deprived urban communities. *Landscape and Urban Planning,* 110, 83–95. | Observational Study | Los residentes de barrios urbanos desfavorecidos con mayor disponibilidad de espacios verdes mostraron patrones de secreción de cortisol más saludables y menores niveles de estrés crónico. | **Residents of disadvantaged urban neighborhoods with greater availability of green spaces exhibited healthier cortisol secretion patterns and lower levels of chronic stress.** |
| Sarkar, C., Gallacher, J., Webster, C., & Pryor, M. (2018). Residential greenness and mental well-being in older adults. *BMC Public Health*, 18, 787. | Observational Study | Una mayor presencia de vegetación alrededor de la vivienda se asoció con un mejor bienestar mental en personas mayores. | **Greater vegetation around the home was associated with better mental well-being among older adults.** |
| Schmitz, N., Wang, J., Malla, A., & Lesage, A. (2012). Neighbourhood socioeconomic status and mental health. *Social Psychiatry and Psychiatric Epidemiology*, 47(1), 89–98. | Longitudinal Observational study | Un menor nivel socioeconómico del vecindario se asoció con un mayor riesgo de desarrollar trastornos mentales y peor salud mental a lo largo del tiempo. | **Lower neighborhood socioeconomic status was associated with a greater risk of developing mental disorders and poorer mental health over time.** |
| Schwartz, A. J., Dodds, P. S., O'Neil-Dunne, J. P. M., Danforth, C. M., & Ricketts, T. H. (2019). Visitors to urban greenspace have higher sentiment and lower negativity. *People and Nature*. | Observational Study | Las personas que visitan espacios verdes urbanos expresan emociones más positivas y menos negativas | **Individuals who visit urban green spaces report more positive and fewer negative** |

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| | | durante su estancia en estos lugares. | **emotions during their time in these settings.** |
| Shanahan, D. F., Bush, R., Gaston, K. J., Lin, B. B., Dean, J., Barber, E., & Fuller, R. A. (2016). Health benefits from nature experiences depend on dose. *Scientific Reports, 6*, 28551 | Observational Study | Los beneficios para la salud derivados del contacto con la naturaleza dependen de la "dosis" de exposición. | **The health benefits derived from contact with nature depend on the "dose" of exposure.** |
| South, E. C., Hohl, B. C., Kondo, M. C., MacDonald, J. M., & Branas, C. C. (2018). Effect of greening vacant land on mental health of community-dwelling adults: A cluster randomized trial. *JAMA Network Open*, 1(3), e180298. | Randomized Controlled Trial | La transformación de solares urbanos abandonados en espacios verdes produjo mejoras significativas en la salud mental de los residentes cercanos. | **Transforming vacant urban lots into green spaces resulted in significant improvements in the mental health of nearby residents.** |
| Stafford, M., De Silva, M., Stansfeld, S., & Marmot, M. (2008). Neighbourhood social environment and common mental disorder: Results from the English Longitudinal Study of Ageing. *Social Science & Medicine*, 66(11), 2265–2277. | Longitudinal Observational Study | Las zonas urbanas que favorecen la cohesión social se relacionan con menor probabilidad de padecer trastornos mentales comunes. | **Urban areas that foster social cohesion are associated with a lower likelihood of common mental disorders.** |
| Sugiyama, T., Leslie, E., Giles-Corti, B., & Owen, N. (2008). Associations of neighbourhood greenness with physical and mental health: Do walking, social coherence and local social interaction explain the relationships? *Journal of Epidemiology & Community Health*, 62(5), e9. | Observational Study | Una mayor presencia de espacios verdes en el vecindario se asoció con mejor salud mental, relación parcialmente explicada por mayores | **Greater neighborhood green space was associated with better mental health, a relationship partially explained by higher levels of social cohesion and local social interaction.** |

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| | | niveles de cohesión e interacción social. | |
| Triguero-Mas, M., Dadvand, P., Cirach, M., Martínez, D., Medina, A., Mompart, A., & Nieuwenhuijsen, M. J. (2015). Natural outdoor environments and mental and physical health: Relationships and mechanisms. *Environment International*, 77, 35–41. | Observational Study | Una mayor exposición a entornos naturales exteriores se asoció con mejor salud mental y mejor salud general percibida. | **Greater exposure to outdoor natural environments was associated with better mental health and better self-rated general health.** |
| Triguero-Mas, M., Donaire-Gonzalez, D., Seto, E., Valentín, A., Smith, G., Martínez, D., Carrasco-Turigas, G., Masterson, D., van den Berg, M., Ambròs, A., Dadvand, P., & Nieuwenhuijsen, M. J. (2017). Natural outdoor environments and mental health: Stress as a possible mechanism. *Environmental Research, 159*, 629–638. | Observational Study | Una mayor exposición a entornos naturales exteriores se asoció con mejor salud mental, sugiriendo que la reducción del estrés es uno de los principales mecanismos explicativos. | **Greater exposure to outdoor natural environments was associated with better mental health, suggesting that stress reduction is one of the primary explanatory mechanisms.** |
| Twohig-Bennett, C., & Jones, A. (2018). The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environmental Research*, 166, 628–637. | Systematic Review and metaanalisis | La exposición a espacios verdes se asocia con múltiples beneficios para la salud. | **Exposure to green spaces is associated with multiple health benefits.** |
| Vanaken, G.-J., & Danckaerts, M. (2018). Impact of green space exposure on children's and adolescents' mental health: A systematic review. *International Journal of Environmental Research and Public Health, 15*(12), 2668. | Systematic Review | Una mayor exposición a espacios verdes se asocia generalmente con mejores resultados de salud mental en niños y adolescentes, incluyendo menos problemas emocionales y | **Greater exposure to green spaces is generally associated with better mental health outcomes in children and adolescents, including fewer emotional and behavioral problems** |

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| | | conductuales y un mejor bienestar psicológico. | **and improved psychological well-being.** |
| Vanaken, G.-J., & Danckaerts, M. (2021). Green space and mental health in children and adolescents: A systematic review. *Current Opinion in Psychiatry, 34*(6), 586–593. | Systematic Review | La exposición a espacios verdes se asocia con una mejor salud mental en niños y adolescentes, especialmente en relación con menores problemas emocionales y conductuales y un mejor bienestar general. | **Exposure to green spaces is associated with better mental health in children and adolescents, particularly through reduced emotional and behavioral problems and improved overall well-being.** |
| Van den Berg, M., van Poppel, M., van Kamp, I., Andrusaityte, S., Balseviciene, B., Cirach, M., & Maas, J. (2015). Visiting green space is associated with mental health and vitality: A cross-sectional study in four European cities. *Health & Place*, 38, 8–15. | Observational Study | Las personas que visitaban espacios verdes con mayor frecuencia presentaban mejor salud mental y mayores niveles de vitalidad. | **Individuals who visited green spaces more frequently exhibited better mental health and higher levels of vitality.** |
| Van den Bosch, M., & Ode Sang, Å. (2017). Urban natural environments as nature-based solutions for improved public health: A systematic review of reviews. *Environmental Research*, 158, 373–384. | Systematic Review of reviews (umbrela review) | Los entornos naturales urbanos constituyen una solución basada en la naturaleza con potencial para mejorar la salud pública. | **Urban natural environments represent a nature-based solution with considerable potential to improve public health.** |
| Völker, S., & Kistemann, T. (2011). The impact of blue space on human health and well-being: Salutogenetic health effects of inland surface waters. *Landscape and Urban Planning*, 105(4), 449–460. | Narrative Review | Los espacios azules interiores (ríos, lagos, canales y otras masas de agua continentales) pueden | **Inland blue spaces (rivers, lakes, canals, and other freshwater bodies) can promote health and well-** |

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| | | promover la salud y el bienestar mediante efectos restauradores, reducción del estrés, fomento de la actividad física y fortalecimiento de las interacciones sociales. | **being through restorative effects, stress reduction, increased physical activity, and strengthened social interactions.** |
| Wang, R., Helbich, M., Yao, Y., Zhang, J., Liu, P., Yuan, Y., & Liu, Y. (2019). Urban greenery and mental wellbeing in adults: Cross-sectional mediation analyses on multiple pathways across different greenery measures. *Environmental Research*, 176, 108535. | Observational Study | Una mayor exposición a vegetación urbana se asoció con un mejor bienestar mental en adultos, y esta relación estuvo mediada por múltiples mecanismos. | **Greater exposure to urban vegetation was associated with better mental well-being among adults, and this relationship was mediated by multiple mechanisms.** |
| Ward Thompson, C., Roe, J., Aspinall, P., Mitchell, R., Clow, A., & Miller, D. (2012). More green space is linked to less stress in deprived communities: Evidence from salivary cortisol patterns. *Landscape and Urban Planning*, 105(3), 221–229. | Observational Study | Los residentes de comunidades urbanas desfavorecidas con mayor cantidad de espacios verdes mostraron patrones diarios de cortisol más saludables y menores niveles de estrés crónico. | **Residents of disadvantaged urban communities with greater amounts of green space exhibited healthier daily cortisol patterns and lower levels of chronic stress.** |
| Weich, S., Blanchard, M., Prince, M., Burton, E., Erens, B., & Sproston, K. (2002). Mental health and the built environment: Cross-sectional survey of individual and contextual risk factors for depression. *British Journal of Psychiatry*, 180(5), 428–433. | Observational Study | Determinadas características del entorno construido y social del vecindario se asociaron con | **Certain built and social neighborhood characteristics were associated with an increased risk of depression.** |

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| | | un mayor riesgo de depresión. | |
| White, M. P., Alcock, I., Wheeler, B. W., & Depledge, M. H. (2013). Would you be happier living in a greener urban area? A fixed-effects analysis of panel data. *Psychological Science*, 24(6), 920–928. | Longitudinal observational study | Las personas que se mudaron a zonas urbanas con más espacios verdes experimentaron mejoras sostenidas en su salud mental y bienestar subjetivo. | **Individuals who moved to greener urban areas experienced sustained improvements in mental health and subjective well-being.** |
| Wilson, B., Jennings, V., & otros autores. (2024). Urban green space access, social cohesion and mental health outcomes before and during COVID-19. | Observational Study | El uso y la satisfacción con los espacios verdes urbanos se asociaron positivamente con la cohesión social, y esta, a su vez, se relacionó con una mejor salud mental. | **Use of and satisfaction with urban green spaces were positively associated with social cohesion, which in turn was linked to better mental health.** |
| World Health Organization. (2022). Urban environments and mental health: Evidence review. *World Health Organization*. | Narrative review | Espacios verdes y azules, calidad de la vivienda, baja contaminación atmosférica, poco ruido, alta seguridad, alta cohesión social y buen diseño urbano mejoran significativamente la salud mental. | **Green and blue spaces, high-quality housing, low air pollution, low noise levels, high safety, strong social cohesion, and good urban design significantly improve mental health.** |
| Wood, E., Harsant, A., Dallimer, M., de Chavez, A. C., McEachan, R. R. C., & Hassall, C. (2018). Not all green space is created equal: Biodiversity | Observational Study | Los residentes de comunidades urbanas desfavorecidas con mayor | **Residents of disadvantaged urban communities with greater amounts of green** |

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| predicts psychological restorative benefits from urban green space. *Frontiers in Psychology, 9*, 2320. | | cantidad de espacios verdes mostraron patrones diarios de cortisol más saludables y menores niveles de estrés crónico, sugiriendo una reducción de las desigualdades en salud. | **space exhibited healthier daily cortisol patterns and lower levels of chronic stress, suggesting a reduction in health inequalities.** |
| Xian, Z., Zhang, Y., Liu, X., & otros autores. (2024). The effects of neighbourhood green spaces on mental health of disadvantaged groups: A systematic review. *Humanities & Social Sciences Communications*, 11, 560. | Systematic Review | Los espacios verdes del vecindario ejercen un efecto protector sustancial sobre la salud mental de los grupos desfavorecidos. | **Neighborhood green spaces exert a substantial protective effect on the mental health of disadvantaged groups.** |
| Yoo, E. H., & Roberts, J. E. (2021). Exposure to urban green space may both promote and harm mental health in socially vulnerable neighborhoods. *Environmental Research*, 204, 112292. | Observational Study | La mera exposición a espacios verdes urbanos no produce por sí misma beneficios uniformes para la salud mental. | **Exposure to urban green spaces alone does not automatically generate uniform mental health benefits.** |
| Kotera, Y., Richardson, M., & Sheffield, D. (2022). Effects of shinrin-yoku (forest bathing) and nature therapy on mental health: A systematic review and meta-analysis. *International Journal of Mental Health and Addiction, 20*(1), 337–361. | Systematic Review and Meta-Analysis | La naturaleza produce mejoras significativas en la salud mental, especialmente mediante la reducción de la ansiedad, la depresión, el estrés y el malestar psicológico general. | **Nature produces significant improvements in mental health, particularly through reductions in anxiety, depression, stress, and overall psychological distress.** |

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| Park, B. J., Tsunetsugu, Y., Kasetani, T., Kagawa, T., & Miyazaki, Y. (2010). The physiological effects of Shinrin-yoku (taking in the forest atmosphere or forest bathing): Evidence from field experiments in 24 forests across Japan. *Environmental Health and Preventive Medicine, 15*(1), 18–26. https://doi.org/10.1007/s12199-009-0086-9 | Multicenter Field Experimental Study | La exposición a entornos forestales produjo una reducción significativa de los indicadores fisiológicos de estrés. | **Exposure to forest environments resulted in significant reductions in physiological indicators of stress.** |
| Song, C., Ikei, H., & Miyazaki, Y. (2016). Physiological effects of nature therapy: A review of the research in Japan. *International Journal of Environmental Research and Public Health, 13*(8), 781. https://doi.org/10.3390/ijerph13080781 | Narrative Review | La exposición a entornos naturales, especialmente bosques, madera natural y paisajes vegetados, favorece la relajación fisiológica. | **Exposure to natural environments, particularly forests, natural wood, and vegetated landscapes, promotes physiological relaxation.** |
| Zorić, M., Fratrić, I., Vuković, N., Jovanović, M., & Kostić, M. (2021). Phytochemical screening of volatile organic compounds in selected conifer species and their impact on human health. *Forests, 12*(7), 928. | Experimental study | Los fitoncidas emitidos por árboles de la familia de las coníferas reducen el estrés mediante la disminución del cortisol, lo que sugiere que las coníferas son especies especialmente adecuadas para las zonas verdes urbanas. | **Phytoncides released by coniferous trees reduce stress by lowering cortisol levels, suggesting that conifer species are particularly suitable for urban green spaces.** |

# 3

# MENTAL HEALTH-PROMOTING CITY

SPANISH

Las ciudades pueden mejorar su protección a las personas con trastornos mentales graves, así como de otras personas vulnerables y también la salud mental de todos sus habitantes en general realizando mejoras en aspectos como:

- Ofrecer una red de viviendas con apoyo en zonas tranquilas, bien comunicadas, accesibles, fácilmente transitables
- Equipos comunitarios de salud mental.
- Transporte accesible y sencillo.
- Espacios tranquilos, seguros, con poco ruido y muchas zonas verdes.
- Programas de empleo con apoyo.
- Redes vecinales y actividades inclusivas.
- Servicios sociales coordinados con los sanitarios.

Las administraciones públicas tienen la posibilidad de llevar a cabo estrategias urbanísticas que mejoren la salud como proteger las zonas no urbanizadas y restringir la altura de los edificios para no concentrar altas cantidades de personas en una misma zona. Las grandes urbes podrían solucionar este problema a largo plazo mediante planes urbanísticos de renaturalización, con objetivos cercanos al 50% de zonas naturales. Para ello, las administraciones públicas tendrían que ir comprando edificios y ofreciendo viviendas en otras zonas a sus residentes hasta ir poco a poco acercándose al 50% de renaturalización. También se pueden aplicar políticas de naturalización de edificios, mediante normativas de construcción con vegetación en los tejados y fachadas vegetales en al menos una de las caras del edificio.

**ENGLISH**

**Cities can improve protection for people with severe mental disorders, as well as other vulnerable groups, and enhance the mental health of all residents by implementing measures such as:**

- **Providing supported housing networks in quiet, well-connected, accessible, and walkable areas.**
- **Establishing community mental health teams.**
- **Ensuring accessible and user-friendly public transportation.**
- **Creating quiet, safe environments with low noise levels and abundant green spaces.**
- **Offering supported employment programs.**
- **Promoting neighborhood networks and inclusive community activities.**
- **Coordinating social services with healthcare services.**

**Public authorities have the opportunity to implement urban planning strategies that promote health, such as protecting undeveloped land and restricting building heights in order to avoid concentrating large numbers of people in the same area. In the long term, large cities could address this issue through urban renaturalization plans, aiming to achieve close to 50% natural areas. To accomplish this, public authorities would gradually acquire buildings and offer alternative housing to residents in other areas, progressively moving toward a target of 50% renaturalization.**

**In addition, building greening policies can be implemented through construction regulations requiring vegetation on rooftops and green façades on at least one side of each building.**

A continuación, se muestra un ejemplo de como una ciudad podría cambiar su estructura mediante este proceso. En la imagen de la izquierda se muestra la fotografía aérea de una ciudad y la de la derecha se muestra una recreación de esa misma ciudad con una tasa de renaturalización cercana al 50%.

**The following example illustrates how a city could transform its urban structure through this process. The image on the left shows an aerial photograph of a city, while the image on the right presents a reconstruction of the same city with a renaturalization rate approaching 50%.**

A continuación, se muestra una imagen aérea de una ciudad con la densidad demográfica que suelen mostrar las ciudades actuales, cuyo crecimiento no es planificado, sino que partieron de un antiquísimo núcleo inicial y fueron creciendo hacia las afueras. Debajo se muestra un planteamiento urbanístico de una ciudad desconcentrada, planificada en núcleos muy cercanos que pueden recorrerse a pie, pero que mantienen una baja densidad poblacional, con edificios bajos y con tamaño suficiente para que en cada núcleo se ubique un colegio, un hospital, una oficina del ayuntamiento, una zona de industria sostenible y una zona comercial. Las zonas de agua pueden preexistir, o se pueden crear mediante ingeniería hidrográfica, para abastecer con ellas a cultivos y hogares. La segunda imagen es mucho más saludable, pero requiere normativas urbanísticas que protejan las zonas naturales.

**The image below shows an aerial view of a city with the population density typically found in many contemporary urban areas, whose growth has occurred in an unplanned manner. These cities generally originated from an ancient urban core and gradually expanded outward over time.**
**Beneath it is an alternative urban planning model based on a decentralized city structure, organized into closely connected neighborhoods that can be easily traversed on foot while maintaining low population density, low-rise buildings, and sufficient space to accommodate essential services within each neighborhood, including a school, a hospital, a municipal office, a sustainable industrial area, and a commercial district.**
**The water bodies shown may either be natural features already present in the landscape or be created through hydraulic engineering projects to supply water for agriculture and residential use.**
**The second urban model offers a significantly healthier environment; however, its implementation requires urban planning regulations that protect natural areas and limit excessive urban expansion.**

Elementos urbanos para la cohesión social

Pequeñas decisiones pueden suponer una gran diferencia. En esta fotografía se observa un grupo de personas mayores que están en un parque con mucha vegetación que protege del sol, del ruido y del viento. Están sentadas en asientos que favorecen la conversación, porque están instalados en forma de U, para poder charlar cara a cara. Este tipo de elementos favorecen la cohesión social. Esta fotografía fue realizada en un parque de la localidad de Foios, un pueblo cercano a la ciudad de Valencia. Este pueblo de pequeña superficie tiene todos los recursos básicos necesarios y en transporte público se puede llegar a la ciudad en 20 minutos. Tiene poca extensión y se ubica en la comarca de La Huerta Norte, una comarca de pequeños núcleos urbanos rodeados de zonas naturales.

**Urban Elements That Promote Social Cohesion**

**Small design decisions can make a significant difference. In this photograph, a group of older adults can be seen in a park with abundant vegetation that provides protection from the sun, noise, and wind. They are seated on benches arranged in a U-shape, a design that encourages face-to-face conversation and social interaction.**

**Features such as these help foster social cohesion. The photograph was taken in a park in the town of Foios, located near the city of Valencia. Despite its small size, the town provides all essential services and amenities, and Valencia can be reached in approximately 20 minutes by public transport. Foios occupies a relatively small area and is situated within the Horta Nord (Northern Huerta) region, an area characterized by small urban settlements surrounded by natural landscapes.**

El área de La Huerta Norte está formada por un conjunto de pequeños municipios ubicados, como su nombre indica, al norte de la ciudad. Las políticas públicas protegen actualmente sus zonas naturales para impedir su urbanización. Además está rodeada por el parque natural de la Sierra Calderona y por el este tiene el mar Mediterráneo. Sus pueblos están conectados por una vía que atraviesa sus campos formada por dos partes, una para caminar y otra para ir en bici, la llaman la vía verde. La huerta norte gracias a su ubicación en la costa valenciana tiene un cielo soleado casi todo el año. Sus municipios



organizan multitud de festejos y eventos sociales para sus habitantes, ofreciendo así múltiples oportunidades para la cohesión social. Al no tener grandes avenidas sus calles no son ruidosas y su contaminación es baja. Su índice de criminalidad también es bajo. La Huerta Norte de Valencia es un ejemplo de protección de las personas mediante la implantación de límites firmes a la expansión urbanística masiva. Esta zona reune todos los elementos que según los estudios realizados alrededor del mundo son beneficiosos para la salud.

**The Horta Nord (Northern Huerta) area is composed of a group of small municipalities located, as its name suggests, to the north of the city of Valencia. Public policies currently protect its natural and agricultural landscapes in order to prevent urban development. In addition, the area is bordered by the Sierra Calderona Natural Park and, to the east, by the Mediterranean Sea. Its towns are connected by a route that crosses the surrounding farmland and consists of two separate paths: one for walking and another for cycling. This route is known as the Greenway (*Vía Verde*). Thanks to its location on the Valencian coast, Horta Nord enjoys sunny weather throughout most of the year. This towns regularly organize a wide variety of festivals, cultural events, and community activities, providing numerous opportunities for social interaction and social cohesion. Because the towns lack large avenues and heavy traffic infrastructure, their streets are generally quiet, with low levels of noise and air pollution. Crime rates are also relatively low. Valencia's Horta Nord is an example of how people can be protected through the implementation of firm limits on large-scale urban expansion. This area brings together all the elements that studies conducted around the world have identified as beneficial to health, including access to nature, walkability, social cohesion, environmental quality, safety, and protection from excessive urban density.**

Images were extracted from Google Maps in june 2026.

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