



Towards a local public policy to promote mental health in Latin America through Nature-Based Social Prescribing.

UCUENCA

Executive Summary

Loneliness is a critical public health issue worldwide, including Latin American cities, driving mental health illness and increasing healthcare demand. Extensive research highlights increased risks of depression, anxiety, loss of autonomy, and a decline in quality of life, leading to a higher demand for healthcare services. However, beyond being an individual experience, loneliness is a collective challenge that requires innovative and integrated responses across multiple sectors. This demands public policies that address this growing global (macro) phenomenon starting from the local (micro) level.

This document presents guidelines to build a public policy to promote mental in Latin America through Nature-Based Social Prescribing (NBSP), based on the findings from the European project Reimagining Environments for Connection and Engagement: Testing Actions for Social Prescribing in Natural Spaces (RECETAS) developed between 2019-2026. Specifically, it co-created the "Friends in Nature" (FiN) methodology which was successfully implemented in Cuenca, Ecuador. As a mid-sized city case study, Cuenca demonstrates how NBSP serves as a transformative, non-pharmacological, and scalable intervention for mental health.

The logic of NBSP shifts from traditional medicalized care toward a community-centered approach. By leveraging territorial proximity and intentional connection with natural spaces, the program fosters social support and emotional resilience. In Cuenca, where 28% of older adults (OAs) experience frequent loneliness, the FiN methodology proved highly effective in improving quality of life and consequently reducing the systemic burden on primary clinical services.

Key evidence highlights that NBSP is a low-cost, high-impact strategy addressing social health determinants directly. Beyond OAs, the model is adaptable to migrants and marginalized groups, promoting social equity within urban environments. However, implementing these programs in Latin American contexts faces challenges, primarily the lack of political prioritization and limited budgets for non-traditional health infrastructure.

To build effective local policy, we propose three strategic pillars: 1) Systemic Integration: Embed NBSP into existing municipal health and social care frameworks to bridge clinical and community resources; 2) Territorial Management: Optimize local parks and green spaces as primary health assets for the entire urban population, and 3) Life-Cycle Approach: Expand programs beyond older adults to mitigate loneliness across all age groups through localized interventions.

By prioritizing nature-based interventions, local governments can significantly enhance public well-being while optimizing limited financial resources. This approach transforms urban environments into therapeutic landscapes, ensuring that social connection becomes a fundamental, sustainable, and cost-effective component of comprehensive local public health policy and territorial planning.

I. Loneliness as a Public Health Problem: A Necessary Policy Focus

1. Loneliness as a Public Health Issue in 21st-Century Societies

Studying loneliness has gained increasing attention, particularly in contemporary urban societies. It has been referred to as the “hidden pandemic of the 21st century” (Paño et al., 2025; Tahmasebizadeh et al., 2024). In 2025, the World Health Organization (WHO) reported that one in six people worldwide experiences loneliness (WHO, 2025). The most widely accepted definition describes loneliness as a feeling of disconnection arising from a discrepancy between desired and actual social support—a painful sense of detachment from those we should rely on, and even from ourselves (Peplau et al., 1982). While some authors suggest loneliness is a natural phenomenon (Weiss & Bowlby, 1973), research recognizes that specific groups, including Older Adults (OAs), are more vulnerable to its adverse effects (Leavell et al., 2019; Nicolaisen & Thorsen, 2014; Rainer & Martin, 2013).

In Latin America, several studies indicate a high prevalence of loneliness among OAs, ranging from 25.3% to 32.4%, particularly in urban settings (Gao et al., 2021). In this group, this situation is associated with changes in family dynamics, migration, and the progressive weakening of social cohesion, increasing psychosocial vulnerability and the risk of mental health issues such as depression and anxiety (Cacioppo & Cacioppo, 2018). In Cuenca, despite its recognized strengths in quality of life, public service coverage, and perceived safety, inhabitants currently face tensions associated with the availability and accessibility of meeting spaces, social cohesion, and the sense of belonging—factors closely linked to loneliness and the mental health.

Given its importance as a modifiable risk factor for health—and in some cases, mortality (Peplau et al., 1982)—there is an urgent need to take political actions to minimize its negative effects across different populations. In fact, suffering from loneliness goes beyond an individual factor. It is the result of a set of social processes generated by the reproduction strategies of today's society and shaped by the characteristics of power, economic status, and opportunities available to different social groups. In other words, the perception of loneliness and its physical consequences are determined (subsumed) by macro-social processes, in which ethnicity, age, gender, and social class come into play (Breilh, 2020; Morales et al., 2013). For this reason, public authorities can play a role in alleviating loneliness at the individual level by developing loneliness-focused strategies that can improve public health, strengthen citizens' sense of belonging to their cities, and foster more connected and healthier communities.

The social determinants of health proposed by the WHO explains the heterogeneous distribution of loneliness and the structural elements that lead an OA to perceive this feeling. Simultaneously, **this perspective allows for the establishment of policies and actions to address loneliness collectively.**

This is the meeting point between social determination and NBSP, as both aim to identify community-based options to define the problem and implement collective actions. **Social prescribing is a holistic, person-centered, community-based** approach to health and well-being that bridges the gap between clinical and non-clinical supports. Nature-Based Social Prescribing (NBSP) add the regular contact with natural environments through non-medical prescriptions, activating personal, relational, and environmental pathways to improve well-being and reduce social isolation. Besides, Social prescribing is a **cost-effective preventive** tool that has demonstrated positive effects in different countries and has been successfully implemented by several governments (e.g. England, Catalonia).

2. Why Current Policies Fall Short on Loneliness

Regarding OAs, In the Cuenca there are policies, programs, and services provided by the Gobierno Autónomo Descentralizado Municipal de Cuenca, primarily through the Consejo Cantonal de Salud, Desarrollo Social, and the Consejo Cantonal de Protección de Derechos. These initiatives have improved access to recreational activities, and provided welfare support for this population. Furthermore, the Ordenanza para la Protección de los Derechos de las Personas Adultas Mayores represents a significant regulatory advancement by strengthening the rights-based approach, promoting active aging, and recognizing areas linked to mental health, recreation, and leisure time.

However, existing policies, programs and services are not yet articulated into an operational, intersectoral model that systematically addresses unwanted loneliness as a local public health issue. Although the city's high territorial and environmental potential, there is still no municipal framework that integrates NBSP as a structured mental health promotion strategy capable of leveraging green and community spaces as therapeutic and social connection resources. The Plan de Desarrollo y Ordenamiento Territorial (PDOT) structures municipal action, it does not establish a specific, measurable, or results-oriented response regarding the health sector. In practice, this results in a lack of clear detection, referral, and follow-up pathways, as well as fragmented interventions focused on isolated activities rather than the construction of meaningful social bonds.

Despite promising initiatives including collaboration with RECETAS in the upcoming "Amor por la Salud Mental" project these efforts remain programmatic and time-bound. Loneliness has not yet been institutionalized as a distinct public health priority with dedicated governance mechanisms, stable funding, and regulatory backing. Given the accelerated aging of the population, the absence of a structured response may lead to increased healthcare and social costs associated with depression, anxiety, functional decline, and loss of autonomy. Advancing toward a specific municipal policy including the formal integration of NBSP as a preventive and community-based strategy would strengthen Cuenca's public policy on mental health and healthy aging in a sustainable and results-oriented manner.

II. RECETAS Project Evidence: Tackling Loneliness Through Nature

1. The H2020 RECETAS Project

Cuenca (Ecuador) is one of the six pilot cities where the international RECETAS project is being implemented and evaluated. In Ecuador, OAs (individuals over 65 years old) are recognized as a priority group for attention, representing approximately 9% of the national population, while in Cuenca this demographic accounts for 10% (INEC, 2023). As mentioned above, according to the local survey conducted by the RECETAS project, it was identified that 28% of OAs in Cuenca experience loneliness, which confirms the relevance of this challenge as a public health issue at the local level.

In response to this reality, RECETAS Cuenca implemented the Friends in Nature (FiN) methodology, benefiting approximately 100 older adults through group-sessions developed in urban natural environments. **These interventions addressed loneliness not only as an individual experience but also as a collective phenomenon shaped by urban environments, social infrastructure, and public policy decisions.** The evidence generated demonstrates that NBSP constitutes an effective strategy to reduce loneliness and improve quality of life, supporting its potential institutionalization as a sustainable public policy at the local level.

2. How Group Nature Activities Improve Health, Reduce Loneliness and Strengthen Citizens' Feeling of Belonging to their Social & Living Environment

The RECETAS project in Cuenca has generated robust scientific evidence on nature's impact as a public health tool. The key findings based on the implementation of the Friends in Nature (FiN) model are detailed below:

1. Social prescribing as a pathway to alleviate loneliness NBSP in Cuenca represents the first local experience connecting Older Adults (OAs) from care centers and associations with group activities in the urban's natural and community spaces. The intervention showed significant, sustained effects measured at three key moments: T0 (pre-intervention, 0 months), T1 (post-intervention, 3 months), and T2 (follow-up, 6 months).

- **Results:** Total loneliness scores dropped significantly from **6.59 (T0)** to **4.55 (T1)**, and continued to decrease to **4.02 (T2)**. Health-related quality of life (**15D**) improved from **0.88 (T0)** to **0.91 (T1/T2)**, with notable gains in mental function, sleep, and reduced anxiety. Social isolation risk fell from **40% (T0)** to **26% (T2)**.
- **Learning:** NBSP is an effective, sustainable, and complementary strategy to the healthcare system. The persistence of effects at T2 suggests that benefits endure well beyond the formal intervention.

2. The power of proximity and the non-pharmacological approach: RECETAS evidence shows that well-being interventions are most effective in everyday, accessible spaces (parks, museums, rivers). This proximity reduces barriers to access and strengthens a sense of belonging. It promotes a non-pharmacological care, shifting the response to loneliness from purely clinical settings to the community and social relationships.

- Learning: Social prescribing gains effectiveness when anchored in the territory. Physical and symbolic proximity facilitates adherence, promotes autonomy, and reinforces the perception that care happens outside the doctor's office.

3. Multi-generational and life-situation approach: Working with facilitators of different ages and fostering intergenerational interaction created closer, more empathetic bonds. This approach shifted the focus toward people's life stories and transitions (retirement, bereavement) rather than just chronological age.

- Learning: Intergenerational encounters break age-related stigmas and strengthen meaningful bonds. OAs feel recognized as active stakeholders within their community, fostering empathy and solidarity as cultural pillars of well-being.

4. Nature as a third facilitator and an amplifier in Social Prescribing: In Cuenca's intercultural context, nature is not just a backdrop; it acts as a "third facilitator" that reduces tension and fosters horizontal relationships. For many OAs, contact with nature is a reunion with their history and traditions.

- Learning: Nature amplifies the effects of social prescribing. This territorial rootedness facilitates emotional openness and serves as a bridge for intergenerational connection, acting as an essential amplifier for community health.

3. Lessons from Abroad for Social Prescribing Recognition

Although NBSP has not yet been institutionalized in Latin America—and particularly in the context of Cuenca—and a full awareness of the impact of loneliness on public health is still developing, various international benchmarks demonstrate the effectiveness of implementing national strategies and operational responses. Regarding Social Prescribing, Barcelona and Catalonia provide additional examples of how this gap can be addressed through robust municipal and regional strategies. Barcelona's 2020–2030 strategy tackles loneliness comprehensively through pillars that include awareness-raising, resource deployment, transformation of public spaces, and the adaptation of municipal governance, executing an Action Plan of 71 measures with dedicated funding. Similarly, the Generalitat of Catalonia has integrated social prescribing into primary healthcare, using digital platforms to map local activities and coordinate regional health policies with municipal actions, aiming to reach 30,000 beneficiaries by 2025.

In England, social prescribing is recognized as a core public health instrument to address the social determinants of health, reduce long-term conditions, and improve physical and mental well-being. Complementary to traditional medical care, this approach aims to mitigate loneliness, support patients with long-term conditions, and lower the excessive use of medical services. By 2022, over one million patients in that country benefited from programs including physical, artistic, and cultural activities, supported by a network of more than one thousand "link workers" responsible for connecting healthcare professionals with grassroots organizations under the supervision of the National Academy for Social Prescribing.

These international experiences highlight that the success of social prescribing models requires a combination of dedicated funding, specialized coordination roles, and the integration of digital tools for mapping community resources. Furthermore, they demonstrate that addressing loneliness effectively depends on multi-sectoral governance involving urban planning, social services, and health sectors. For cities like Cuenca, these lessons suggest that institutionalizing NBSP is not only a viable path but a globally recognized strategy to strengthen urban health and social cohesion.

III. Public Policy Proposals to Reduce Loneliness Using Nature-Based Approaches

Currently, the approach to loneliness and social isolation in Cuenca is almost non-existent within formal public policy. The following proposals aim to position nature as the articulating axis of urban and health management. This approach is structured around three interconnected strategic axes: first, the institutionalization of nature-based health as a formal response within the public system; second, the transformation of the urban environment into a salutogenic and accessible setting; and third, the integration of these assets into the cultural and social agenda through shared governance models. Together, these guidelines aim not only to mitigate loneliness but also to strengthen the social fabric and ensure that the well-being derived from contact with nature is sustainable, equitable, and deeply embedded within the city's institutional structure.

1. Embedding Loneliness and Nature-Based Social Prescribing into the Local Public Agenda

This axis focuses on the administrative and technical formalization of loneliness as a public health priority. The objective is to embed NBSP into existing municipal practices and transition from isolated interventions to a structural response that recognizes NBSP as a legitimate and permanent service. Through the mapping of health assets, local evidence production, and continuous training, it seeks to address loneliness technically and measurably within municipal competencies, ensuring the local health system has the necessary tools to effectively refer citizens to natural environments.

Statement 1: Facilitate the adoption and implementation of Nature-Based Social Prescribing (NBSP) as a structural response within the local public agenda.

Evidence: Results from RECETAS Cuenca demonstrate significant and sustained improvements in loneliness, health-related quality of life, and social support networks. This evidence suggests a high potential for social and healthcare efficiency by reducing future demand for clinical services associated with the adverse effects of loneliness.

Recommendation: To advance the NBSP agenda, it is recommended to institutionalize social prescribing through the following key actions:

- **Mapping of Services and Health Assets:** Some authors (Morgan and Ziglio, 2007; Morgan, Ziglio and Davies, 2010) agree in defining health assets as factors or resources that enhance the capabilities of individuals, groups, communities, populations, social systems, and institutions to maintain and sustain health and well-being, while also contributing to reducing health inequalities. According to Botello et al. (2013), these health assets can take different forms, including human, physical and environmental resources. Conduct a comprehensive mapping of services and places within Cuenca. This process should be complemented by a participatory approach that recognizes the health assets valued by the community and their readiness to integrate into a local social prescribing network. The dissemination of a dynamic "asset map" will facilitate social referrals and foster community ownership of the strategy.
- **Information Dissemination and Situational Analysis:** Make loneliness visible as a priority public health issue by disseminating accessible and territorialized information. Periodically developing and updating a situational report—integrating both quantitative and qualitative evidence—will guide decision-making, prioritize resources, and provide the necessary evidence base to incorporate NBSP into local public policies.

Statement 2: Assess and dimension the scope of loneliness within the Cuenca canton.

Evidence: In Cuenca, 28% of OAs experience loneliness, a prevalence consistent with international evidence reporting values between 25% and 32% for this demographic. These data confirm the magnitude and transversal nature of the problem, highlighting the urgent need for an evidence-based public response.

Recommendation: Create the Observatory of Loneliness in Cuenca, in association with the university, social organizations, NGOs, the Council for the Protection of Rights, so that it conducts periodic studies on the situation of loneliness, evaluates the results of the care strategies implemented, disseminate the data, and guide the planning of future interventions that articulate territorial perspectives with the processes of social determination of health.

Statement 3: Implement a capacity-building process for health and social care professionals in the Cuenca canton for the application of NBSP.

Evidence: Two cohorts of facilitators have already been trained to apply the NBSP model to address loneliness. The results confirm the relevance of this training process, which has been officially registered at the University of Cuenca as a continuing education course, demonstrating its technical and academic viability.

Recommendation: To ensure the quality and continuity of the strategy, the following is proposed:

- **Inter-institutional Training Center:** Establish an inter-institutional training center for Nature-Based Social Prescribing focused on addressing loneliness and other mental health issues. This center should be linked to the municipal health and wellness offerings to guarantee continuous training, standardization of competencies, and the long-term sustainability of the model at the local level.

Statement 4: Consolidate a care service network to reduce loneliness and other mental health challenges.

Evidence: The FiN model has demonstrated positive impacts in reducing loneliness, strengthening social cohesion, and improving health-related quality of life. These results, derived from a menu of activities built through participatory processes, evidence the model's relevance, acceptability, and significant potential for scaling.

Recommendation: To transition from a pilot project to a permanent public service, the following elements are key:

- **Integral Model, Monitoring, and Sustainability:** Progressively implement a comprehensive care model for loneliness (covering promotion, prevention, care, and rehabilitation) within a municipal service. This model must be based on NBSP and guided by health professionals.
- **Tracking and Impact:** Incorporate a registration and follow-up system for individuals linked to NBSP to monitor outcomes and impact.
- **Financial Sustainability:** Establish a specific budgetary allocation to guarantee the financial sustainability of this integral care model for loneliness and other mental health priorities.

2. Designing Urban Environments that Reconnect People with Nature

For NBSP to be effective, the city must function as a salutogenic infrastructure. This axis addresses the need to transform Cuenca's physical space into an inclusive environment that reduces barriers to access for the most vulnerable groups, such as OAs. It proposes urban design that not only conserves nature but optimizes it for social interaction, ensuring safety, universal accessibility, and environmental comfort. The urban environment is redefined here as a determinant of health, specifically designed to facilitate human reconnection and collective well-being.

Statement 5: Promote the design, management, and protection of urban environments that integrate nature as a structural component of physical, mental, and social well-being within the Cuenca canton.

Evidence: Evidence shows that urban environments with regular access to green spaces, accessible infrastructure, and optimal environmental conditions contribute to the reduction of loneliness, improved mental health, and the strengthening of social cohesion and quality of life. Technical insights from FiN demonstrate that the quality of the physical environment determines the effectiveness of NBSP by either facilitating or limiting the participation of OAs.

Recommendation: To transform Cuenca into a salutogenic city, the following actions are proposed:

- **Inclusive and Accessible Public Spaces:** Ensure that urban planning incorporates non-exclusionary public spaces with ergonomic and sensitive urban furniture that facilitates group gatherings and social interaction. It is imperative to guarantee accessible infrastructure—such as sufficient seating, shaded areas, and continuous, safe walkways—to eliminate physical barriers for those with mobility limitations.
- **Participatory and Inclusive Public Space Design:** To ensure that the design of public space is aligned with the needs of older adults (OAs), people with physical disabilities, and caregivers, the municipality should institutionalize participatory co-design workshops as a mandatory requirement within urban planning processes. This mechanism must incorporate the perspectives of these priority groups through an experiential diagnosis, the co-creation of proposals, and the participatory evaluation of the space once implemented.
- **Regulatory Framework and Public Space:** Advance the municipal ordinance to recognize natural environments as legitimate settings for social and cultural intervention, formalizing their role in citizen well-being.
- **Proximity to Nature and Healthy Microclimates:** Prioritize the creation and strengthening of green spaces in close proximity to care centers and meeting points for vulnerable groups. This includes designing healthy microclimates through the use of native trees and the protection of wildlife, contributing to urban biodiversity, thermal regulation, and the mental health of users through regular contact with nature.
- **Salutogenic and Biocultural Environments:** Foster biocultural circuits that integrate cultural and heritage sites with natural settings. Transform public spaces into "**therapeutic gardens**" designed to address urban sensory challenges and promote restorative experiences that enhance psychosocial well-being.

3. Integrating Nature into Social and Cultural Policy Agendas

The sustainability of these policies lies in their ability to integrate into the daily life and identity of the population. This axis proposes the mainstreaming of nature into the canton's cultural and community agendas, promoting shared governance. By linking natural assets with existing social and cultural programs, community empowerment is fostered, ensuring that NBSP is socially accepted and owned by the community. It is about consolidating a management model where nature is the natural setting for social cohesion and democratic participation.

Statement 6: Transversally integrate nature as a strategic social, cultural, and public health asset within the Cuenca canton.

Evidence: The achievements and findings of the RECETAS project in Cuenca confirm the need to incorporate the transversal nature of the environment into various public policies. This shift toward relational and community well-being is economically sustainable, as it leverages existing infrastructure and human resources, making the model cost-effective and highly scalable.

Recommendation: Incorporate NBSP as an operational pillar of municipal social and cultural policies through the following actions:

- **Capacity Building and Community Facilitation:** Implement training programs for municipal staff and community promoters working with the priority care groups (OAs, persons with disabilities, and catastrophic illnesses), and people in vulnerable conditions, specializing them in NBSP and nature-based facilitation.
- **Intersectoral Coordination:** Promote the adaptation of existing cultural and social programs to natural settings through participatory planning and alignment across municipal departments
- **Intersectoral Coordination:** Promote the planning of joint intersectoral and interdepartmental actions in natural environments for the protection of well-being, health, and the mitigation of population loneliness.

VI. Building Sustainable Governance for the Effective Implementation of Nature-Based Social Prescriptions

Sustainable Governance: Coordination, Monitoring, and Evaluation

The successful embedding of NBSP within the territory depends on a shared governance model that ensures efficiency and accountability. This institutional structure transcends political cycles by defining clear coordination mechanisms between various territorial stakeholders.

Organizational Structure, Decision-Making and Social Participation

The cornerstone of this model is the **Local Policy Committee**, a formal space for intersectoral decision-making. This body facilitates the alignment of public, private, and community actors, ensuring that loneliness is addressed through a unified strategy.

The model also incorporates community co-management mechanisms (Observatory of Loneliness in Cuenca) that ensure citizens and groups involved in NBSP have a voice in decision-making processes. This participatory approach strengthens the social sustainability of the model and reinforces the community fabric. By fostering partnerships and international cooperation, the committee secures the resources necessary to transition from pilot experiences to permanent public services.

Operational Implementation and Responsibilities

To ensure effective deployment, responsibilities are distributed as follows:

- **Municipal Entities:** Lead operational implementation, resource management, and policy integration into public services.
- **Community Organizations:** Act as key facilitators on the ground, ensuring that activities are culturally relevant and accessible to OAs.
- **Academia:** Plays a role of strategic advisory and scientific support, providing technical guidance for methodological validation and impact evaluation.

Evidence-Based monitoring and evaluation

The governance framework is supported by an integrated monitoring and evaluation system designed to track referrals, engagement levels, and mental health outcomes. This data-driven approach allows for real-time adjustments and serves as a vital tool for transparency. By monitoring these metrics, the committee can demonstrate how nature-based interventions directly strengthen social cohesion, providing the necessary evidence for continued investment and model scaling.

Conclusion

Perspectives for Strengthening a Nature-Based Public Health Approach

The public policy recommendations presented herein propose a comprehensive and scalable approach to loneliness, combining local evidence production, institutional capacity building, the consolidation of care networks, inclusive urban design, and the transversal nature of environmental integration across social, cultural, and health policies. This approach recognizes that mental health does not rely solely on clinical care but on territorial, relational, and environmental conditions that foster social connection, a sense of belonging, and collective well-being.

From a governance perspective, the transition toward nature-based public health requires:

- **Institutionalization and Sustainability:** Overcoming administrative fragmentation through regulatory frameworks that ensure financial sustainability and the embedding of NBSP into cantonal planning. This ensures that access to nature is treated as a citizen right and a social determinant of health, rather than an optional intervention.
- **Health Assets Approach:** Recognizing Cuenca's system of parks and rivers not just as urban infrastructure, but as essential "health assets." NBSP acts as the mechanism that activates these spaces, transforming them into primary prevention settings where social cohesion is strengthened and loneliness is mitigated before it evolves into chronic conditions.
- **A Culture of Evidence and Scalability:** Consolidating formal coordination structures and robust monitoring systems will position Cuenca as a regional leader. By integrating FiN data into decision-making, public policy becomes dynamic, allowing the model to adapt to different social groups and sectors of the canton, ensuring measurable, long-term results.

Références

- [Beam, C. R., & Kim, A. J. \(2020\). Psychological sequelae of social isolation and loneliness might be a larger problem in young adults than older adults. *Psychological Trauma: Theory, Research, Practice and Policy*, 12\(S1\), S58-S60. <https://doi.org/10.1037/tra0000774>](#)
- [Breilh, J. \(2020\). *Critical epidemiology and the people's health*. Oxford University Press.](#)
- Botello, B. et al. (2013) 'Metodología para el mapeo de activos de salud en una comunidad', *Gaceta Sanitaria*, 27(2), pp. 180–183. doi: 10.1016/j.gaceta.2012.05.006.
- [Cacioppo, J. T., & Cacioppo, S. \(2018\). The growing problem of loneliness. *Lancet \(London, England\)*, 391\(10119\), 426. \[https://doi.org/10.1016/S0140-6736\\(18\\)30142-9\]\(https://doi.org/10.1016/S0140-6736\(18\)30142-9\)](#)
- [Castellanos, P. \(1990\). Sobre el concepto salud enfermedad. *Boletín epidemiológico*: 10 \(4\).](#)
- [Gao, Q., Prina, A. M., Prince, M., Acosta, D., Luisa Sosa, A., Guerra, M., Huang, Y., Jimenez-Velazquez, I. Z., Llibre Rodriguez, J. J., Salas, A., Williams, J. D., Liu, Z., Acosta Castillo, I., & Mayston, R. \(2021\). Loneliness Among Older Adults in Latin America, China, and India: Prevalence, Correlates and Association With Mortality. *International Journal of Public Health*, 66, 604449. <https://doi.org/10.3389/ijph.2021.604449>](#)
- [INEC. \(2023\). Población grupo etario de Cuenca. Instituto Nacional de Estadísticas y Censos. <https://cubos.inec.gob.ec/AppCensoEcuador/>](#)
- [Leavell, M. A., Leiferman, J. A., Gascon, M., Braddick, F., Gonzalez, J. C., & Litt, J. S. \(2019\). Nature-Based Social Prescribing in Urban Settings to Improve Social Connectedness and Mental Well-being: A Review. *Current Environmental Health Reports*, 6\(4\), 297-308. <https://doi.org/10.1007/s40572-019-00251-7>](#)
- [Litt, J. S., Coll-Planas, L., Sachs, A. L., Rochau, U., Jansson, A., Dostálová, V., Daher, C., Beacom, A., Bachinski, K., Garcia Velez, G. E., Bekessy, S., Blancafort Alias, S., Hill, N., Gascón, M., Bartova, A., Cattaneo, L., Cucchiaro, A., Casajuana Kögel, C., Opacin, N., ... Pitkälä, K. H. \(2024\). Nature-based social interventions for people experiencing loneliness: The rationale and overview of the RECETAS project. *Cities & Health*, 8\(3\), 418-431. <https://doi.org/10.1080/23748834.2023.2300207>](#)
- [Morales, C., Borde, E., Eslava, J., & Concha, S. \(2013\). ¿Determinación social o determinantes sociales? Diferencias conceptuales e implicaciones praxiológicas. *Revista de salud pública*, 15, 797-808.](#)
- Morgan A. and Ziglio E. (2007) 'Revitalising the evidence base for public health: an assets model', *Promotion & education*, Suppl 2, pp. 17–22. doi: 10.1177/10253823070140020701X.
- Morgan, A., Ziglio, E. and Davies, M. (2010) 'Health assets in a global context: Theory, methods, action', *Health Assets in a Global Context: Theory, Methods, Action*, pp. 1–362. doi: 10.1007/978-1-4419-5921-8.
- [Nicolaisen, M., & Thorsen, K. \(2014\). Loneliness among men and women—A five-year follow-up study. *Aging & Mental Health*, 18\(2\), 194-206. <https://doi.org/10.1080/13607863.2013.821457>](#)
- [Paño, P., García, G., Vásquez, K., & Acurio, D. \(2025\). Hacia la prescripción social basada en la naturaleza para aliviar la soledad: Una experiencia co-creativa desde Ecuador. *Ciência & Saúde Coletiva*, 30, e05692024. <https://doi.org/10.1590/1413-81232025306.05692024>](#)
- [Peplau, L., Perlman, D., & editores. \(1982\). *Loneliness: A sourcebook of current theory, research and therapy*. Wiley.](#)
- [Rainer, J., & Martin, J. \(2013\). *Isolated and alone: Therapeutic interventions for loneliness*. Professional Resource Press.](#)
- [Tahmasebizadeh, F., Toghiani, S., & Mohammadi, M. \(2024\). Urban Planning and Loneliness: A Comprehensive Analysis of Indicators Contributing to the Loneliness Crisis. *Journal of Urban Studies on Space and Place*, 8\(32\), 5-34. <https://doi.org/10.22034/jspr.2025.2050246.1101>](#)
- [Universidad del Azuay. \(2025\). Cuenca cómo vamos Informe de calidad de vida. <https://revistas.uazuay.edu.ec/index.php/ccv/issue/view/183/221>](#)
- [Weiss, R., & Bowlby, J. \(1973\). *Loneliness: The experience of emotional and social isolation*. MIT press.](#)
- [World Health Organization. \(2025\). Loneliness and isolation – the hidden threat to global health we can no longer ignore. World Health Organization. <https://www.who.int/news-room/commentaries/detail/loneliness-and-isolation-the-hidden-threat-to-global-health-we-can-no-longer-ignore>](#)