

STRIVING TO CONNECT

Health officials are raising alarms about loneliness and isolation. Can researchers identify what helps?

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BY SARAH CRESPI, KELLY SERVICK, ARIANA REMMEL, VALERIE THOMPSON, ANGELA SAINI • PODCAST • 25 APR 2024

One Wednesday in May 2023, a small group gathered at an outdoor café in Barcelona, Spain, sipping coffee in the late morning sunshine and talking about their lives. They reflected on how to use their time and the struggle to find meaning. Although their interactions may have seemed unremarkable to anyone passing by, the group's meeting was part of a carefully designed experiment, aimed at alleviating a painful experience: loneliness.

Groups in the study usually consist of eight to 12 people who have reported feeling lonely in a survey and signed up to help test whether building social support through a series of group activities in urban green spaces might help. On that day, just two participants could join, along with two trained facilitators, there to offer support as the volunteers planned their outings and got to know each other. Laura Coll-Planas, a medical doctor and public health researcher at the University of Vic - Central University of Catalonia was one such facilitator. Coll-Planas was struck by the participants' willingness to disclose private struggles and make themselves vulnerable. "It's not so easy to go to that deep level," she says, even with good friends.

The study, called RECETAS, tries to create an environment where deep connections can emerge. Its name means both "recipes" and "prescriptions" in Spanish and is an acronym for Re-imagining Environments for Connection and Engagement: Testing Actions for Social Prescribing in Natural Spaces. Among studies focused on alleviating loneliness, few have had the size or scope of RECETAS, which will recruit more than 1000 participants from diverse social and economic groups across six countries in Europe, South America, and Oceania. The study has €5 million in funding from the European Union and another AU\$400,000 from Australia's National Health and Medical Research Council.

Those investments are part of a much broader push by policymakers and health officials to address loneliness not as a private struggle, but as a public health crisis. A large body of evidence now links loneliness and social isolation to poor health and early death. Governments around the world, partly spurred on by the crushing isolation of the COVID-19 pandemic, have sprung to attention.

"For too long, the power of social connection has been overlooked and undervalued in medicine and policy making," [a joint statement](#) by the U.S., Japanese, Moroccan, Swedish, Kenyan, and Chilean governments declared in January. Last fall, the World Health Organization (WHO) [launched a commission](#) to analyze the evidence for various interventions to improve social connection.

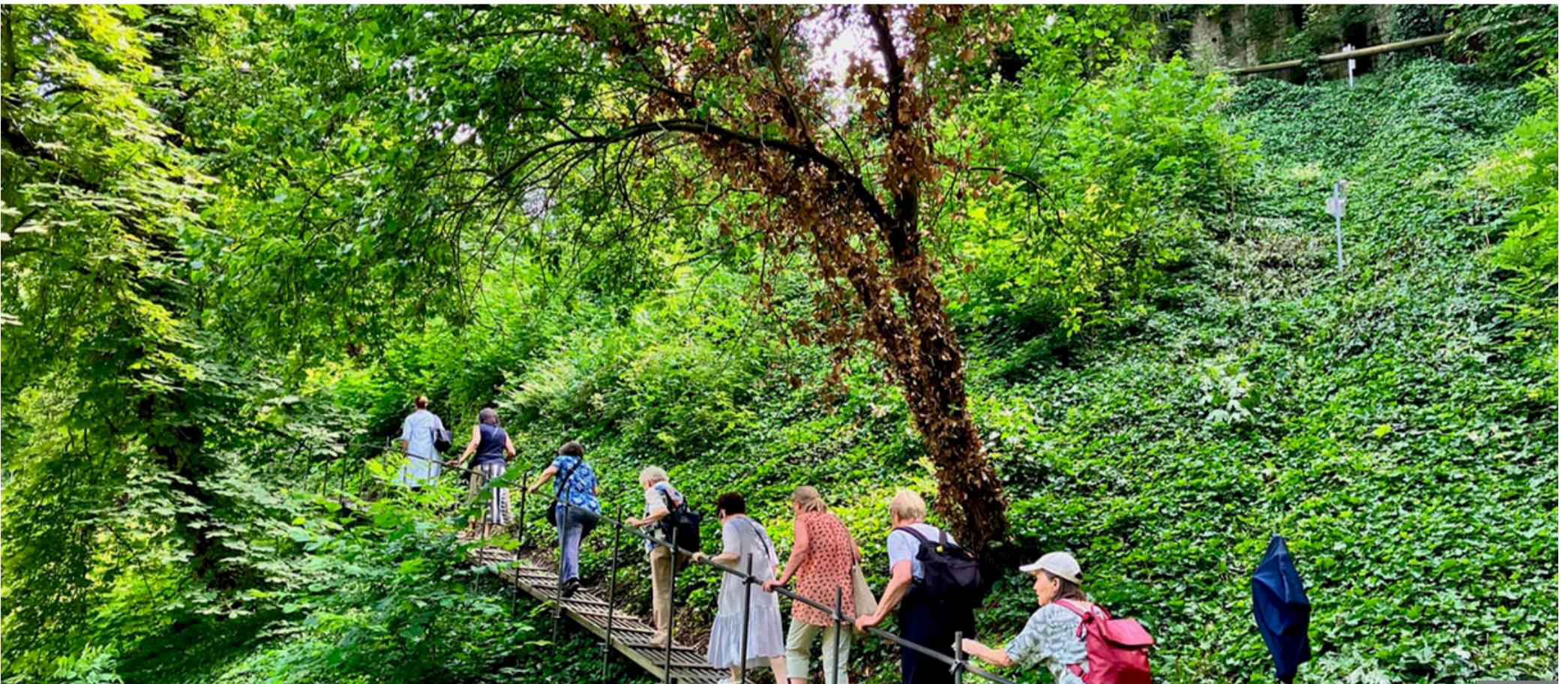
The global agency has [held up strategies such as joining clubs or pursuing hobbies](#). But the reality is that "we don't know what works for which person," says Samia Akhter-Khan, a psychologist and Ph.D. candidate studying loneliness, aging, and global mental health at King's College London. The field of possible interventions for loneliness is vast: It includes resources for individuals—from chat services and support groups to social skills training and robotic pets—and broader policy changes such as increasing transportation access or creating shared public space. But few approaches have been rigorously tested, Coll-Planas says, and even when interventions have undergone randomized trials, most have been small and not statistically robust.

Big questions still loom, such as how to measure such a complex, subjective feeling rigorously and tailor interventions to its different root causes.

As public attention increases, researchers have the dual task of building better evidence and warding off misconceptions. "We have a huge opportunity," Coll-Planas says. But she also sees a temptation among public officials to villainize or medicalize loneliness—and to tout simplistic "solutions" to a complex and natural part of the human experience. "I'm not sure if it's a very exciting or a very dangerous moment for loneliness," she says. "Both at the same time, probably."

PHIL McAULIFFE WAS in his late 30s, working as a diplomat and living in South Korea, when he first sought support for loneliness. In a life surrounded by people and full of international travel, "something was missing, and I couldn't describe it," McAuliffe says. "I felt that I didn't have anybody in my life that I could pick up the phone and talk to, and that was a horrible feeling." McAuliffe also distinctly remembers not wanting to admit he was lonely. "I really wanted how I was thinking and feeling to be something like depression or anxiety," he adds. "Because loneliness seems so sad and so clingy, right? It was for old people. It was for those who were bereaved."

But research has revealed loneliness to be a much more widespread phenomenon. Although formal definitions vary, most describe a painful feeling of being disconnected from others. That's different from isolation, an objective lack of social ties; a lonely person may have social ties but find them inadequate. Research studies and media coverage tend to bundle loneliness and social isolation, Akhter-Khan says. "And yes, they are correlated.... But loneliness is so much more complex because it's subjective."



As part of an intervention to alleviate loneliness, groups of participants in the RECETAS study chose from a “menu” of outdoor activities near them, including an art activity in Ecuador (first image) and a nature excursion in Prague (second image). (FIRST IMAGE) SILVANA VINTIMILLA; (SECOND IMAGE) BLANKA NOVOTNÁ

Older adults are thought to be at high risk of both isolation and loneliness in part because they are more likely to have lost loved ones, live alone, and face disability or chronic illness. But researchers are increasingly concerned about adolescents and young adults, too. Young people generally aren’t at the same risk of objective isolation; they tend to live with family and get daily social interaction from school, for example. And yet in a school-based

survey of 13- to 17-year-olds conducted in 70 countries between 2003 to 2018, [11.7% reported feeling lonely “most of the time” or “always”](#) in the past year. Other factors, such as facing difficult decisions or life changes or experiencing discrimination, might help explain loneliness in those who aren’t isolated. Reliance on social media as a source of connection has also been implicated in loneliness in some studies, though the evidence is mixed.

High rates of loneliness and isolation have led some public officials, [including U.S. Surgeon General Vivek Murthy](#), to declare an “epidemic.” But whether loneliness is spiking isn’t so clear. Some studies have shown recent increases, whereas others suggest levels are relatively stable, notes psychologist and neuroscientist Julianne Holt-Lunstad of Brigham Young University.

Trends toward increasing isolation, however, are more obvious: [Data from the European Union](#), for example, show a steady increase in the proportion of people living alone between 2009 and 2020. In the United States, a large-scale survey of how people use their time has revealed [decreases in time spent with family, friends, and others](#), such as neighbors and co-workers, between 2003 and 2020. “These things aren’t necessarily loneliness. ... But they do show a general pattern of less social connection,” Holt-Lunstad says. “We have reason to be concerned.”

The concern comes from a large body of studies linking both isolation and loneliness to heightened risk of health conditions including heart disease, diabetes, dementia, and depression. Meta-analyses by [Holt-Lunstad’s team](#) and [others](#) show they are independent predictors of premature death.

Yet loneliness itself is not a defect or disorder, researchers emphasize. “We’re wired for the feeling of loneliness evolutionarily,” says Linda Fried, an epidemiologist and dean of Columbia University’s Mailman School of Public Health. The pain of loneliness alerts us to our need for connection and can drive us to seek it out—which is valuable, Fried says, because “successful societies are ones in which people come together to solve the problems they can’t solve alone.” But the risk of negative health outcomes escalates when loneliness persists and becomes chronic, she says.

The pathways explaining this link to illness are tough to tease out, says Daniel Fulford, a clinical psychologist at Boston University. Longitudinal studies usually consist of a “brief self-report at one point in time, and early mortality” at some later point. But, “There’s so much in between.”



Researchers distinguish objective social isolation from the subjective feeling of loneliness, which can occur even in people who have many opportunities for social contact. [BIANCA BAGNARELLI](#)

One possibility is that people with fewer social connections may have less access to information about healthy habits or less support and encouragement to adopt them. Another is that the experience of chronic isolation or loneliness “can be thought of as a signal that we’re in danger, that there’s threat in the environment,” Fulford says. The resulting activation of the sympathetic nervous system could interfere with sleep, drive inflammation, and disrupt glucose regulation, he adds, all of which have downstream health effects. Other possible routes are psychological. Both loneliness and isolation can lead to depression, substance use, and other consequences that threaten physical health, Fulford notes.

Conversely, many studies show social connections can be protective. For example, Yusuf Ransome, a social epidemiologist at Yale University, has documented how [connectedness seems to provide a buffer](#) against the damaging mental health effects of racial discrimination. He’s now using survey data from Black adults in Milwaukee to explore how different aspects of social connectedness influence mental health. “The hope is that this work would really start producing evidence to suggest a collection of policy approaches” and interventions that help make communities more connected, he says. “I think right now, we don’t quite have all evidence to suggest the bundle of things that are necessary.”

LONELINESS WASN’T HIGH on many governments’ public health agendas even a decade ago. But as the evidence of its harms piled up, some policymakers took notice. In 2018, then-U.K. Prime Minister Theresa May appointed the world’s first minister for loneliness, who was tasked with helping craft strategy and policy to address the issue—a move many researchers cite as a game changer for public awareness. In a visit to the United Kingdom around this time, Holt-Lunstad says, “I distinctly remember thinking, ‘What kind of crisis will it take for others to recognize this? Because the evidence has been building for decades.’”

The answer came in the spring of 2020. Lockdowns and social distancing requirements made both social isolation and loneliness a near-universal experience. Government commitments to address the issue have since piled up. In 2021, Japan appointed its own minister of loneliness. The following year, Germany launched a “loneliness network” to promote the exchange of knowledge between experts. And a program announced in South Korea last year offers monthly stipends and other financial supports to help reclusive young people participate in society. The WHO commission is among the most recent responses. It brings together health and policy experts who will spend 2 years sifting through the evidence for various loneliness interventions, trying to distill it into priorities that governments can parse, and maybe even pay for.

Some interventions, like the one being tested in RECETAS, aim to create opportunities for social interaction in inclusive, supportive environments. Other approaches involve psychological treatment, such as cognitive behavioral therapy (CBT), originally designed to help reshape thought patterns underlying disorders such as depression or anxiety. CBT might also address thought patterns that perpetuate loneliness, like a person’s expectation of rejection, or their tendency to fixate on negative social experiences from the past, says Anton Käll, a behavioral scientist at Linköping University.

[An evidence review](#) released in September 2023 by the U.K. government judged psychological approaches to be the only category of loneliness interventions to have so far demonstrated a “large statistically significant effect” on loneliness. But because one-on-one sessions with a trained therapist tend to be costly and time-intensive, some researchers are trying to capture their essence with online programs. Käll and colleagues found significant reductions in loneliness in [two randomized trials](#) of their online CBT intervention where participants complete assignments and correspond with a therapist who offers weekly feedback on their work.

The intervention isn’t yet widely available; Käll’s team is now testing it in adolescents, and working to better understand the individual characteristics of people who seem to benefit most from the program, “so that we can point the right people to this opportunity.”

Other researchers stress the need to think more broadly about societal drivers of loneliness when developing interventions. “External forces … can influence how socially connected you may be,” Holt-Lunstad says, citing the forced separation of the pandemic, “and yet we are, in a way, putting the burden upon individuals to solve this.”

Trialing togetherness

An evidence map developed for the World Health Organization documents hundreds of studies measuring the effects of in-person interventions on loneliness, social isolation, or both. But very few focus on policies that would effect change at the societal level.*

- Societal-level delivery (e.g. public policy, neighborhood design)
- Community-based delivery (e.g. group activities, volunteering)
- Interpersonal delivery (e.g. social support, cognitive behavioral therapy)
- Self delivery (e.g. self-guided therapy, social skills training)



*The above totals are inflated because studies that measured both outcomes, or that tested interventions fitting more than one category, were counted multiple times. Total number of studies evaluated: 325 studies with loneliness outcomes and 88 with social isolation outcomes.

(GRAPHIC) D. AN-PHAM/SCIENCE; (DATA) V. WELCH, E. TANJONG GHOGOMU, S. DOWLING, W. Y. CHOO, R. M. YUNUS, T. A. M. T. MOHD, N. HAITAS, S. BOMZE, S. DAHROUGE, E. GARCIA, J. HOLT-LUNSTAD, M. LASGAARD, M. H. LIM, K. MULLIGAN, D. M. SALZWEDEL, P. QUALTER, P. C. HÉBERT, & C. MIKTON. (2023). PROTOCOL: IN-PERSON INTERVENTIONS TO REDUCE SOCIAL ISOLATION AND LONELINESS: AN EVIDENCE AND GAP MAP. *CAMPBELL SYSTEMATIC REVIEWS*, 19, E1340. [HTTPS://DOI.ORG/10.1002/CL2.1340](https://doi.org/10.1002/CL2.1340)

The U.S. surgeon general’s advisory notes the value of urban design—transportation, housing, and public resources such as parks and libraries—in fostering connection. But there’s very little formal research to guide such efforts, Holt-Lunstad says. A recent [map of the evidence for interventions](#) that she helped develop for WHO (see graphic, above) identified only two studies at the “societal level,” both in the Netherlands. One found an “urban

regeneration” program that included improvements to housing, green space, and recreation facilities [did not reduce loneliness or social isolation](#). A second found that cuts to the budget for household help [did not worsen the loneliness of older adults](#) in the country.

Gauging and comparing the effectiveness of interventions is hampered by the challenge of measuring loneliness itself. Two of the most commonly used measurement tools are a 20-item questionnaire [developed at the University of California, Los Angeles](#) in 1978, known as the UCLA loneliness scale, and the 11-item De Jong Gierveld scale, first [proposed by researchers at the Free University Amsterdam](#) in 1985. Unfortunately, there’s no established cut-off score that indicates a health risk, says Tami Saito, an epidemiologist who studies loneliness at Japan’s National Center for Geriatrics and Gerontology. “We cannot detect who really needs supports (or treatment) for alleviating loneliness.”

And notably absent from either questionnaire is the word “lonely.” One reason, Fulford says, is stigma: Participants’ reluctance to accept that label could bias study results. Instead, the scales probe specific aspects of the experience—feeling excluded or rejected, feeling there’s no one to talk to. “We’re taking a bit of a leap of faith here to say that what we measure is indeed loneliness,” Fulford says.

McAuliffe says destigmatizing loneliness is key to addressing it. He now advocates for greater understanding of loneliness as a speaker and author, and founded a business that provides training and mentoring to promote connection. “If only loneliness could be solved with a morning tea or a coffee group get-together,” he says, “but if you don’t feel that you’re worthy of love and belonging, you’re not going to go to it in the first place.”

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BIANCA BAGNARELLI

Indeed, stigma affects recruiting for intervention studies like RECETAS. Researchers at some study sites noticed that if they directly asked “Are you lonely?” in their conversations with potential participants, “people would just lose interest in the study, thinking ‘that’s not me,’” says Jill Litt, an environmental health researcher at the Barcelona Institute for Global Health and principal investigator of RECETAS. The project has relied largely on health care and community organizations to refer potential participants, who in some cases are first introduced to RECETAS not as a loneliness intervention, but as a chance to participate in group social activities in local green spaces.

LAST YEAR, while visiting a public park as part of a RECETAS group, Parker, age 51, kicked off his shoes and felt the rare sensation of grass under his feet. Less than a year earlier, he had left his home in Papua New Guinea—“where you have jungle just at the back”—for the urban bustle of Melbourne, Australia. “Being someone who comes from a culture where we ... are very connected to the soil,” the park visit “was soothing for me, and ... quite emotional,” he says.

RECETAS pulls together several elements suggested from previous research to promote connection. One of those is green space, which “creates an openness for being vulnerable,” says Litt, who has long studied the health effects of community gardens. She has found that a desire for social connection is often what motivates people to show up to tend plots of vegetables alongside their neighbors.

RECETAS also adapts elements of an intervention developed nearly 20 years ago to combat loneliness in older adults in Finland. The original program, called Circle of Friends, involves small groups meeting weekly for activities such as art or physical exercise. As with the cafe outing in Barcelona, trained facilitators guide participants in discussions of life and loneliness, aimed at empowering them to take good care of themselves. [A randomized trial](#) published in 2009 showed the program led to improved self-reported health, reductions in mortality, and lower health care costs, which offset the expense of running the program. “That’s how you can get the politicians behind you,” says Kaisu Pitkälä, a geriatrician and professor emerita at the University of Helsinki who led development of the program, “when they know that it improves well-being, and it’s cost-neutral.” The program continues to receive government support, and more than 12,500 people have now participated in Finland.

In 2007, Pitkälä gave a presentation on Circle of Friends at the European Academy for Medicine of Ageing in Switzerland, where Coll-Planas was a student. Photos of the elderly participants and their personal stories of loneliness and empowerment moved her. “I started crying,” Coll-Planas says. “From then on, I wanted to work on loneliness.”

More than 10 years later, her career as a loneliness researcher well-established, Coll-Planas connected with Litt. The two shared an interest in a public health approach called social prescribing, where health care systems connect patients with nonmedical resources, such as walking groups or social clubs, that might improve their health. Now, Litt, Coll-Planas, and their RECETAS collaborators are drawing on the principles of Circle of Friends for an experiment that reaches far beyond Finnish elders.

The international RECETAS teams have worked with local organizations to develop a “menu” of nature-based activities, such as birdwatching, hiking, or sketching in public parks. At three study sites—Helsinki, Prague, and Barcelona—investigators are now running randomized trials to compare the group intervention with a control condition where participants get a neighborhood-specific menu of nature activities but no group support. (The three other sites, in Melbourne; Marseille, France; and Cuenca, Ecuador; are running smaller studies without control groups.) All six sites are using the De Jong Gierveld scale to gauge loneliness among participants before and after the program.

The study, which runs through February 2026, is designed to cut across age and socioeconomic groups. In Barcelona and Marseille, participants are from socioeconomically deprived urban areas. The Melbourne study is recruiting through a nonprofit partner organization called Many Coloured Sky that supports LGBTQI+ refugees and asylum seekers.

Kye, 29, was one such asylum seeker. He had come to Australia from Indonesia in 2020 on a backpacking trip and formed friendships with fellow Indonesian travelers. But in 2022, he decided to apply for asylum to stay in the country, feeling it was impossible to return to the conservative Muslim community where he was raised. After his decision, Kye sensed judgment from his new friends, some of whom viewed his immigration path as illegitimate or illegal. “I couldn’t rely on them,” he says. “I didn’t have anyone, really.” Since completing the 8 weeks of activities through RECETAS, he has made a point of reaching out to more recent immigrants at Many Coloured Sky to help them connect to their new community; both he and Parker have been trained as co-facilitators to assist study staff in guiding future groups.

Nerkez Opacin, an ethnographer at RMIT University and a research fellow with the Melbourne RECETAS team, is eager to see even more diversity in research on social connection. As public attention to the issue ramps up, “There is the danger that we could address loneliness for Western societies,” he says, “and really forget the nonwhite populations.”

It's clear that loneliness is not unique to high-income countries with individualistic cultures. When Akhter-Khan set out to study older adults in Myanmar, for example, she expected to find loneliness would be rare, given the country's highly socially connected society, where many people live with extended families. Analyzing data from a national survey, her team instead found that more than 30% of older adults reported feeling lonely in the past month. Conflicts between people living in close quarters with no opportunity to be alone might have increased feelings of loneliness, Akhter-Khan says, as could have high rates of ill health and financial hardship. In her interviews, "People [would say], 'I can't buy food, I feel lonely,'" Akhter-Khan recalls. "Poverty is so strong and so prominent" in the data she's worked with from low- and middle-income countries, she says. But even though poverty and financial stress may be most obvious in these settings, she says, they "are definitely risk factors for loneliness anywhere."

IN NOVEMBER 2023, Coll-Planas excitedly got online to watch a press conference about the launch of the WHO commission. But in the remarks given by Murthy, the committee's co-chair, was one bit that made her uneasy: "Today, we are embarking on an effort to create a world where loneliness and isolation are replaced by social connection."

That message—and much of the current public rhetoric around loneliness—overlooks its complexity, Coll-Planas says, and the fact that it is sometimes unavoidable. The loneliness of a deep personal loss, for example, can't be easily solved with a new social connection, she adds, and in these cases, accepting it can be more beneficial than treating it like an illness.

Still, experiences like the meetup in the Barcelona café have left her with a simple hypothesis: "support is helpful—and that's what groups bring," she says. "It's as ancient as since there were two people in the world."

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