

# Loneliness at the age of COVID-19

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Received 14 July 2022

Accepted 4 December 2022

Published Online First

9 December 2022

## ABSTRACT

Loneliness has been a major concern for philosophers, poets and psychologists for centuries. In the past several decades, it has concerned clinicians and public health practitioners as well. The research on loneliness is urgent for several reasons. First, loneliness has been and still is extremely ubiquitous, potentially affecting people across multiple demographics and geographical areas. Second, it is philosophically intriguing, and its analysis delves into different branches of philosophy including phenomenology, existentialism, philosophy of mind, etc. Third, empirical research has shown that loneliness is a significant health risk factor. Loneliness may thus be defined as a (negative) social determinant of health. Having that said, COVID-19 has demonstrated how little we as members of humanity have been prepared to face the loneliness resulting from the global response to the virus. As people worldwide are literally dying from loneliness, we still do not know what makes one feel lonely while making another feel being in solitude, or how is it that one feels lonely in the heart of London. In this essay, I first review loneliness in general and specifically in the context of COVID-19. I then argue that loneliness should be understood as a social determinant of health. Lastly, I argue that individuals have a right not to be lonely. Such right stems in turn from the right to healthcare or even a right to health.

We are now in the festive season, before the parties, the musical shows would have now started, news of the coming of our loved ones from overseas for holiday spreads like wildfire, and the sound of music hitting our rooms from night till morning. But here we are today, our communities, our neighbours and houses are getting silent every day with fear and the death of our loved ones.<sup>1</sup>

## INTRODUCTION

COVID-19 made us sick. At the time of writing, it has even killed >6 million people worldwide. The virus, or rather the global response to it, have devastated world economies and persons' livelihoods. It has disturbed our social fabric, and has potentially changed our social lives in ways still unbeknownst. Lockdowns, quarantines and physical distancing may be effective interventions to mitigate the pandemic,<sup>2</sup> but they have also taken a heavy toll on people's well-being and mental health.<sup>3</sup> One of the dire consequences both of the virus itself and the response to it is social isolation and loneliness, with their own specific influence on our lives and our health.

Social isolation and loneliness have been known to be common and linked to adverse health effects even prior to COVID-19,<sup>4</sup> leading to the hypothesis that social interactions are a biological need that is essential for survival as well as a condition

for emotional well-being.<sup>5</sup> Several mechanisms have been proposed to explain the link between social isolation or loneliness and health.<sup>6–8</sup> First, social isolation and loneliness are associated with physical inactivity and smoking, which, in turn, are known to be independent health risk factors. Second, social isolation and loneliness are associated with low self-esteem and limited use of coping mechanisms. Third, social isolation and loneliness are associated with a higher blood pressure and a decline in immune responses.<sup>9</sup> The main purpose of this paper is to address loneliness, but indeed because of the confusion in the biomedical literature between loneliness and social isolation, I will allow myself some fuzziness when using these two terms. Social isolation is a concern for me here only insofar it potentially or actually causes loneliness.

While disentangling loneliness from social isolation, depression or other mental states may be wanting,<sup>8 10 11</sup> loneliness specifically has been causally associated with poor sleep<sup>12 13</sup> and daily dysfunction, defined as feelings of fatigue, sleepiness or low energy.<sup>13 14</sup> Loneliness has also been found to be an independent risk factor for depression in old age<sup>15</sup> and cardiovascular disease.<sup>15</sup> A longitudinal study of 413 people with a mean age of 84 years in Berlin distinguishes social loneliness, originating from an absence of a network of friends, from emotional loneliness, originating from an absence of intimate relations. The study reveals that both types of loneliness increased risk of all-cause mortality after 19 years. This increased risk was independent of clinical depression or social isolation.<sup>7</sup>

Concerns about potential adverse effects of loneliness should be coupled with its global prevalence even before COVID-19. A survey among 95 045 people aged 65 years and above seeking publicly funded community care support in New Zealand, conducted between 2012 and 2018, has found that nearly one out of five men and one out of four women felt lonely.<sup>13</sup> A comparative survey of people aged 18 years and above in 2018 conducted by the Kaiser Family Foundation and the Economist found loneliness rates (defined as feeling lonely often or always, feeling isolated or left out or lacking companionship) to be 23% in the UK, 22% in the USA and 9% in Japan.<sup>16</sup> Other US studies report higher numbers, up to 45% among community-dwelling Americans aged 45 years and older.<sup>8</sup> The BBC Loneliness study—the largest survey to date—surveyed >55 000 people aged 16 years and above from 237 countries. It revealed that up to 40% of participants aged 16–24 years reported feeling lonely.<sup>17</sup> In Israel, 19.6% of people aged 20 years and above reported feeling lonely often or sometimes.<sup>18</sup>

Loneliness has only recently begun to draw attention from bioethicists.<sup>6 19</sup> The focus here is



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**To cite:** Lederman Z. *J Med Ethics* 2023;**49**:649–654.

on loneliness during COVID-19 and potentially during future pandemics or infectious disease outbreaks. This paper contributes to the bioethics literature and the literature on loneliness in general in the following ways. First, it further outlines and articulates the various definitions of loneliness and the difficulty in defining and researching loneliness, meaning it further complicates the term. The hope of course is that once we understand the complexity, joint interdisciplinary efforts of prevention and mitigation would be optimised. Second, there seems to be little academic discussion of loneliness as part of pandemic preparedness, even knowing what we know today—that as long as infectious diseases pose a national and global threat, loneliness (and social isolation) will pose a threat as well, both for the isolated patient at home or in the hospital, or for the quarantined individual. Even worse, loneliness will potentially pose a perpetual threat for those who have lost their loved ones due to COVID-19 and other infectious diseases. Virtually nothing of this sort was written from a bioethics perspective. This paper thus argues that pandemic preparedness plans should include measures to prevent and mitigate loneliness. Third, and perhaps most importantly, the paper explicitly argues that loneliness is a normative term, meaning that it is morally bad. Most scholars of loneliness would I think agree, but the argument seems to be always implicit rather than explicit. Loneliness specifically as the perceived absence of meaningful social relations should be understood as a negative social determinant of health, and it should thus be addressed the same way (if not more urgently) other determinants such as access to education are addressed.

I begin then with a descriptive analysis of loneliness during COVID-19, followed by a discussion of the methodological and conceptual issues with loneliness that would have to be addressed for purposes of public health and public policy. I then argue that loneliness should be perceived as a (negative) social determinant of health. Third, I argue that loneliness is normative. If my argument is compelling, it would of course apply to all instances of loneliness and not strictly in infectious disease outbreaks. I conclude by making several recommendations for research, policy and practice.

### LONELINESS DURING COVID-19

Even though different methodologies limit comparisons of pre-COVID-19 and during COVID-19 loneliness prevalence, one senses that COVID-19 increased the prevalence of loneliness globally. A 2020 survey of 950 Americans aged 18 years and above revealed that 36% of respondents reported feeling lonely ‘frequently’ or ‘almost all the time or all the time’ in the prior 4 weeks.<sup>20</sup> Specifically, 61% of young people aged 18–25 years and 51% of mothers with young children also reported feeling lonely ‘frequently’ or ‘almost all the time or all the time’.<sup>20</sup> A 2020 survey conducted in Ontario, Canada, among 4879 participants aged 65–79 years revealed that 43.1% felt lonely at least some of the time in the preceding week; 8.3% of whom felt lonely often or always in the preceding week.<sup>21</sup>

Several studies have explicitly compared pre-COVID-19 and during COVID-19 loneliness rates. A survey of 1468 adult Americans aged 18 years or older revealed that 13.8% reported always or often feeling lonely in 2020<sup>22</sup> (as mentioned above, a 2018 survey of 1003 Americans aged 18 years and above revealed that 11% always or often felt lonely).<sup>16</sup> A 2020 Dutch survey of 1679 community dwellers aged 65 years and above assessed loneliness during the first wave of COVID-19 and compared it with pre-COVID-19 rates. The study revealed an increase in both social and emotional loneliness. Importantly, the quantity of social

interactions did not seem to change between the periods, leading the researchers to emphasise the quality rather than the quantity of relations.<sup>23</sup> A UK study compared data from 31 064 respondents solicited prior to the COVID-19 with data from >50 000 respondents solicited during the outbreak. The study found increased rates of loneliness in the latter period, with 18.3% reporting feeling lonely ‘often’ during COVID-19 compared with 8.5% feeling lonely ‘often’ prior to COVID-19.<sup>24</sup>

Not all research concurs with these results however. An American survey of 1545 individuals aged 18–98 years compared loneliness rates across three periods: February 2020 during the first COVID-19 wave, March 2020 during the second wave and in late April 2020 during the third wave in the USA. No statistically significant differences were found.<sup>25</sup>

Perhaps because of the studies demonstrating increased prevalence, or merely our strong suspicion that COVID-19 or the public health policies against COVID-19 may increase loneliness rates, clinicians and national and international organisations issued recommendations for the mitigation of loneliness.

The UK National Health Services website for instance<sup>26</sup> lists 7 suggestions on how one should stave off loneliness:

1. Explore ways to spend time together.
2. Be more social and check in regularly.
3. Share your feelings but do not compare.
4. Do more things you enjoy.
5. Stay busy by learning something new.
6. Volunteer to help others.
7. Join an online community.

As these suggestions are pretty commonsensical, explanation seems redundant. For my purposes here, however, it is worth pointing out that they all assign the responsibility to combat loneliness unto the individual who is lonely. The website does provide some tools to assist individuals, such as a mental well-being audio guide, but overall the individual is left to his own devices, personally responsible for his own loneliness.

A group of psychiatrists has also offered tips to prevent the detrimental effects of loneliness and social isolation during COVID-19. These include spending more time with family, using technology, ensuring basic needs are met, maintaining daily structure and pursuing physical and outdoor activity.<sup>4</sup> Similarly, the Inter-Agency Standing Committee Reference Group on Mental Health and Psychosocial Support, after consulting 199 adults from 51 different countries, has similarly issued a toolkit to mitigate several negative psychological impacts of COVID-19, including social isolation. The toolkit states:

To help improve the mood of older women and men during the pandemic, it is important that they:

- Have a daily routine
- Engage in activities that are enjoyable
- Talk to their family and friends regularly
- Focus on activities that bring them joy and make these activities part of their daily routine
- Try relaxation, meditation, breathing and low-impact exercises
- Consider cutting down on news updates (or at least find a balance) to give their panic-inducing, stressful media reports.
- Draw on (or use) their strength, experience and knowledge to deal with the situation. (Interagency Standing Committee, p. 10)<sup>27</sup>

Again, these latter suggestions are commonsensical, that is, they make a lot of sense. The fact they were drafted after eliciting public feedback deserves merit as well. But still, those familiar with the concept of social determinants of health may—or indeed, should—cringe away from the implicit assumption that only or mostly individuals are culpable and are thus responsible for their loneliness. Personal responsibility might play a

role, but it is certainly not the whole story. At some point, the individual needs help, either because his psychological condition does not allow him to overcome his loneliness by himself, or because the factors that made him socially isolated and lonely and/or are perpetuating his loneliness are beyond his control.<sup>28</sup>

Fortunately, more structural or societal strategies and interventions to mitigate loneliness and social isolation, not necessarily in the context of COVID-19, have been offered:

1. Befriending services, which typically involve volunteers engaging or providing services to individuals considered to be at risk for loneliness, usually the elderly.<sup>15 28</sup> For instance, in Yeruham in the south of Israel, adolescents who healed from COVID-19 volunteered to contact the elderly in the city and attain to their needs. Similarly, ‘Magen Zahav’, or ‘Golden Shield’, was a policy enacted in several cities in Israel that employed social workers and volunteers to map and address the needs of the elderly.<sup>29</sup>

The effectiveness of these interventions has recently being questioned<sup>15</sup> and in fact it is currently being evaluated.<sup>30</sup>

2. Professionally led support, involving professional clinicians contacting people who are caring for their sick loved ones and who thus are at risk of social isolation and loneliness.<sup>15</sup>

For example, even prior to COVID-19, and similarly to ‘Magen Zahav’, Tel Aviv in Israel implemented its own ‘New Age’ plan, consisting of volunteers trained in cognitive behavioural therapy and social workers who accompany the elderly residing in the city both by visits or phone calls.

3. Peer-companionship, where individuals who are at risk of being socially isolated or lonely are encouraged to interact with one another.<sup>15</sup>

Importantly, such social strategies have also been criticised, as they in effect treat loneliness as if it were equivalent to social isolation. Instead, it is argued that a better conceptual understanding of loneliness should be sought in order to optimise mitigation strategies.<sup>10</sup>

Why exactly is a better understanding of loneliness needed? Above I briefly mentioned the negative ill effects of loneliness, while alluding to the difficulty in specifically linking loneliness to adverse ill effects. Various reasons account for this. First, defining loneliness proves to be difficult.<sup>10 11</sup> It is often defined as a perceived discrepancy between one’s need for social interactions and one’s actual social interactions.<sup>6 31 32</sup> But even such a minimalist account often misses crucially relevant elements, such as the causes for, and nature of such felt discrepancy—in other words, what makes one feel and suffer from such discrepancy in a certain situation while others do not.<sup>15</sup> Furthermore, not all social interactions are equal in their significance to the individual<sup>32</sup>: the unfulfilled need for intimate relations, for instance, is often felt to be worse than the unfulfilled need for other kinds of social relations.<sup>33</sup> Having that said, however, virtually all scholars agree that one can feel lonely even when surrounded by other people.<sup>28 32</sup> Scholars also agree that loneliness becomes a problem only when it becomes chronic (though no such definition is available); transient loneliness is a concern insofar as it can potentially become chronic.<sup>10 25</sup>

Second, measuring loneliness is not as straightforward as one would think. The psychological tools most commonly used to measure loneliness are the Jong Gierveld scale and the UCLA Loneliness scale, but their accuracy has been questioned.<sup>28 30 34</sup> For instance, the UCLA scale specifically asks about loneliness, but research has suggested that individuals may have been lonely even without knowing they are lonely—this could then lead to underestimation of loneliness.<sup>10</sup>

Third, research may be conflicting at times. One Taiwanese study for instance has failed to find a statistically significant association between loneliness and sleep quality.<sup>35</sup> In contrast, the largest and most rigorous study to date, conducted among people aged 65 years and above in New Zealand, has found both loneliness and social isolation to negatively affect sleep quality and daily function.<sup>13</sup>

Fourth, as mentioned, disentangling loneliness from social isolation or mental states such as depression is cumbersome.<sup>10 13 15</sup> Even after defining and quantifying loneliness, causal biases may still persist because separating loneliness as causing negative effects from social isolation as causing negative effects is difficult.<sup>34</sup> Reverse causality is a concern as well, as loneliness for instance has been found to both cause and be caused by depression.<sup>15</sup> Such difficulties are indeed reflected in a 2021 report by the US National Academies of Sciences, Engineering, and Medicine that carefully states:

While there is evidence that loneliness is associated with mortality, the existing evidence does not yet approach the cumulative weight of evidence for the association between social isolation and mortality. More research is needed to establish the strength and robustness of the predictive association of loneliness with mortality in relation to social isolation and to clarify how social isolation and loneliness relate to and operate with each other. (The National Academies of Sciences, p. 6)<sup>8</sup>

Descriptive definitions of loneliness and empirical validations of the different measurement tools of loneliness and its adverse effects, as well as empirical validations of potential interventions are of course essential to public health and public policy. Their optimisation is thus key for a rational public health approach. But there is arguably little that analytic bioethicists can contribute in this regard. Rather, bioethicists can use their expertise indeed in clearly reframing loneliness as a public health concern, that is, in explaining why we should address loneliness at all. One way to do so is to explicitly link loneliness (and social isolation) to a term that already carries a widely accepted normative weight in public policy and public health ethics.<sup>36</sup> I turn to that next.

## LONELINESS AS A SOCIAL DETERMINANT OF HEALTH

The social determinants of health are social conditions such as housing, access to healthcare, access to potable water, etc that have been empirically proven to affect human health. Several causal explanations have been offered, perhaps the most compelling one being that lacking such conditions reduces one’s personal autonomy and makes one feel unequal to one’s peers.<sup>37 38</sup> The WHO commission on social determinants of health failed to consider social relations as a social determinant of health.<sup>39</sup> Other scholars however have explicitly or implicitly made that connection, arguing that having the option or capability to develop and maintain a healthy social relations to various degrees are essential for health and should thus be considered as a social determinant of health.<sup>6 8 40 41</sup> One plausible causal explanation that could be offered is that being lonely undermines one’s personal autonomy and makes one feel inferior to his peers.<sup>37 38</sup> Being lonely plausibly undermines one’s personal autonomy in various ways. First, because humans are inherently social creatures and we depend on social relations throughout our lives; social relations are in part what gives meaning to our lives. A life without social relations, a life without meaning, is a life with a minimal sense of personal autonomy. Second, we define ourselves based on the way we perceive our social connections and the way we believe other people perceive us. As mentioned, loneliness makes

us more sensitive of social cues, and this increased alertness in turn may facilitate a belief that others perceive us as inferior or as not good enough in comparison with other individuals. Such feeling of inferiority then may contribute to a decreased sense of personal autonomy. Third, we compare our social connections with our peers' social connections. Loneliness negatively colours the way we perceive our social connections, thus subjectively placing us in an inferior spot compared with our peers, again reducing personal autonomy. In short, just as poor housing poses a hurdle for health, so is loneliness.

Having that said, a large bulk of the academic work on the social determinants of health concentrates on exploring causal mechanisms and providing empirical evidence, which in turn are supposed to inform public health policies. In light of the complexity and scientific fuzziness regarding loneliness described above, a case could be made that normative analysis should only follow the much needed descriptive and empirical work. Such a case however would be mistaken. An oft-cited publication in public health ethics has stated the following in regard to social determinants of health:

The data about social determinants are impressive even though not wholly uncontroversial. At any rate, they are strong enough to warrant close attention to the ways conditions of social justice contribute to the public's health. (Childress *et al*, p. 177)<sup>42</sup>

The authors then link social justice to human rights. The same could be said about loneliness. The evidence specifically linking loneliness to ill health may be fuzzy, or may not be as strong as we feel it should be. Scientific and epidemiological research should consequently strive to develop novel and/or rigorous methodologies to gain empirical evidence to either further support our intuitions or disprove them.<sup>30</sup> Empirical research should also inform social interventions and policies.<sup>30</sup> But we ought not allow scientific uncertainty or fuzziness, insofar as these exist in the research on loneliness, hamper political and social mobilisation to mitigate and prevent loneliness; in other words, we should manage the uncertainty in addition to reducing it.<sup>43</sup> The main argument of this article indeed is that loneliness is a normative term, and that we should thus do something about it. Using the language of human rights, can we argue then that humans have a right not to be lonely?

### UNDERSTANDING LONELINESS NORMATIVELY

Loneliness is without a doubt a social and historical construct. Up until the 19th or even 20th century, the term being lonely or alone did not bear the same emotional content it does nowadays. Robinson Crusoe is almost completely alone on the island, but he does not feel lonely. Rather, its tale can be perceived as an affront<sup>44</sup> to those philosophers, artists, romanticists and people of faith throughout history who have chosen to be alone and live in solitude in an attempt to commune with God, spirituality or nature, or to day-dream about their unrequited love.<sup>45</sup> In the 18th century, solitude furtherly began to be cherished as a force against the rise of the civilised society and a hectic, industrialised society.<sup>45</sup> In classical Europe, being alone was occasionally linked to ill health.<sup>45</sup> Complex societal changes during the last two centuries in the USA and globally have certainly created and maintained numerous spaces or opportunities for loneliness, forcing individuals to 'bowl alone'.<sup>46</sup> Such fascinating history is essential for understanding the origins of modern-day loneliness, and may inform drafting and implementing policies to address loneliness, but it does not tell us whether we should do something about loneliness in the first place.

Loneliness is very much a psychological and philosophical construct as well.<sup>10</sup> Recent research demonstrating that some families tend to suffer from loneliness more than others have also led to the definition of loneliness as a 'personality trait determined by genes and hormonal and cerebral pathophysiology'. (Jeste *et al*, p. 553)<sup>31</sup> Loneliness has also been defined as an emotional cluster, 'a blend of different emotions that might range from anger, resentment and sorrow to jealousy, shame and same-pity'. (Alberti, p. 6)<sup>45</sup> Beyond what was said elsewhere about the philosophy of loneliness,<sup>6,19</sup> philosophers have recently defined loneliness as a feeling of absence, specifically an absence of social goods widely construed.<sup>32</sup> Loneliness first involves a pro-attitude of desire towards such a social good. Second, it involves the perceived absence of that good. Social goods include compassion, companionship, trust, etc that basically allow one to flourish as a social agent. Loneliness is in fact a 'dispositional state that has occurrent manifestations', (Roberts and Krueger, p. 190)<sup>32</sup> meaning that one need not feel lonely every single moment over a period of time in order to be said (by himself or others) to be lonely during that time period. One may be lonely in a specific time period even if one experiences moments without loneliness, or not-loneliness, interspersed within that period.<sup>32</sup> While such descriptions of loneliness may indeed explain situations where surveys of loneliness underestimate the prevalence of loneliness because individuals may be unaware of their loneliness in a specific point of time, as mentioned above, their relevance to public health and bioethics is unclear.

What matters most to the (bio)ethicist is whether loneliness is a normative term. Loneliness here is not understood as 'aleness', meaning a value-neutral term, or 'solitude', meaning a positive-value term.<sup>32</sup> Loneliness as normative means that it is bad for the individual to be lonely; the individual would be better off if he were not lonely. Plausibly taking it a bit further, others would be benefiting the individual if they were to help him not be lonely. Viewed from a wider angle: if loneliness is bad, and if society is there to benefit individuals, for example, by optimising individual well-being and/or removing obstacles for human flourishing, then society has a responsibility to alleviate loneliness. Loneliness thus becomes a social and a public health concern.

Such recognition may seem banal for the ethicist, but it nevertheless must be made because some social scientists (and specifically one reviewer of this manuscript) may think that loneliness is positive because individuals can learn from it, or because it is an experience that is inherent to the human condition. Loneliness may in fact be inherent to the human condition<sup>47</sup> and individuals may in fact learn from it, but this does not mean that loneliness is a moral good. Tribalism or satisfaction-seeking behaviour may also be inherent to the human condition, but we may still oppose them as morally bad in some or all contexts. Furthermore, individuals can learn from torture or imprisonment under solitary confinement—this does not mean torture or such imprisonment are morally justifiable.

Consider health. Health nowadays carries an implicit normative meaning that was perhaps absent initially but now seems intuitive. When one is said to be unhealthy the normative implication is that either he himself or others bear the responsibility of treating him, of making him healthy.<sup>48</sup> Being unhealthy is morally bad, and the unhealthy should strive to be healthy. One is often unhealthy either because he has done something wrong (or failed to engage in a healthy behaviour) or because he has been wronged (absent factors beyond anyone's control such as genetic diseases).

Similarly to health, loneliness should indeed be understood normatively, for two main reasons. One reason is that loneliness causes ill health, as has been proven empirically and as is supported by strong intuitions and common sense. If loneliness can indeed be perceived as a (negative) social determinant of health, then one can be said to have a right not to be lonely stemming from one's right to healthcare. Such right would at least entail access to prevention and treatment measures for ailments potentially caused by loneliness, such as depression and cardiovascular diseases. Liberal or more perfectionist accounts of public health<sup>36 40 41</sup> may extend such right to the right to health, plausibly entailing services aimed at prevention and mitigation of loneliness such as the befriending services described above, or free and even mandatory socialisation or relational education, also defined as social skills training.<sup>28 31</sup> Technological measures could also be used to alleviate loneliness. Again using Yeruham in Israel as an example, computers were donated to children during COVID-19 so they could virtually interact with friends and school teachers. Similarly, the 'Magen Zahav' programme in Israel reportedly donated 'loneliness kits' containing laptops, tablets, etc to the elderly in several cities in Israel.

The second reason loneliness should be understood normatively is that it is intrinsically bad, regardless of its effects on health. Loneliness impairs one's well-being, reducing one's happiness; it makes one less well-off. Loneliness impairs one's flourishing. If Humans are essentially social creatures, an argument could be made that loneliness gets to the very core of being human. In other words, loneliness reduces our humanity. If human society exists ultimately to enable one's flourishing, and if we are all committed to assure one's well-being, the individual can be said to have a right not to be lonely, and we all as members of one's community (be it tribal, national or global) have an obligation to prevent or alleviate one's loneliness.

Obviously, the second reason is much more demanding and thus harder to justify; there is much more needed to be said in its defence. Kimberley Brownlee has made significant headway in this regard and her work is critically reviewed elsewhere.<sup>49</sup> The focus in this paper is thus put on the first reason, leaving the second for subsequent work. If the first reason then is compelling, how should we proceed specifically in the context of pandemic preparedness? Several recommendations are provided next.

## RECOMMENDATIONS FOR RESEARCH, POLICY AND PRACTICE

1. Infectious disease outbreaks affect people in specific ecological contexts, and their spread as well as the ability to mitigate them depends on various factors such as the availability of electricity, public transportation, potable water, social services, etc. Loneliness too affects people in specific ecological contexts, and its spread as well as the ability to mitigate it depends on similar factors.<sup>15</sup> There is much sense then in seriously considering the notions of humans as ecological beings and 'ethical place-making', that is, the ecological-structural conditions that enable and are necessary for human health and flourishing. (Marmot *et al*, chap. 6)<sup>39 41 50 51</sup>
2. Prevention and mitigation of loneliness should be included in national and international pandemic preparedness plans. Such plans should encourage personal resilience to face challenges such as social isolation and loneliness,<sup>3</sup> but they should also acknowledge that individuals can only do so much. As individuals are not forged in a social vacuum, and are dependent on others in achieving well-being, pandemic preparedness should also address social, or structural,

conditions that hamper or enable social isolation and loneliness. If future pandemics would require similar restrictions on our freedom of movement and ability to interact with others, then plans should recommend employing evidence-based methods to counteract loneliness, such as the adoption of pets.<sup>52</sup> Importantly, plans should go beyond mere recommendations, actively supporting individuals in usurping recommended methods, for example, by monetary support, or provision of technological measures. If evidence-based methods are scarce, then moral imagination and bravery should motivate innovative methods to prevent loneliness, seeking empirical support as we go along.

3. Some are lonelier than others. Empirical evidence suggests that certain groups such as migrants are more vulnerable than others in feeling loneliness and suffering the adverse effects of loneliness.<sup>11 28</sup> Age, culture and gender also affect the (reporting of) prevalence and consequences of loneliness.<sup>24 53</sup> From an ethical perspective, this could mean that national and international policies addressing loneliness should distribute resources based on some kind of a difference principle rather than equality. Efforts should be made then first to map those most vulnerable to loneliness or its adverse effects and second to decide how to allocate resources for the prevention and mitigation of loneliness.
4. In line with recommendation 3, while most current national policies and reports such as the 2020 report of the US National Academies Sciences, Engineering, and Medicine<sup>8</sup> emphasise loneliness in the elderly, the evidence presented here, as well as other scholars,<sup>11 24 34 53 54</sup> suggest that loneliness may affect young adults as well. Pandemic preparedness plans should thus consider this age population.
5. Several scholars have emphasised the embodiment of loneliness.<sup>10 45</sup> I take that notion to mean at least two things. One, that loneliness as suffering is felt in the body, and should thus be acknowledged by healthcare providers. Second, that the lack of human touch, or the inability to taste, smell, hear and see, may engender chronic loneliness even when one is perceived to possess or indeed has emotional connection. Loneliness, thus, may potentially be of particular concern to those with physical special needs. The study of loneliness should then be especially pertinent to those who are compelled by the notion of embodiment in bioethics.<sup>55</sup>

## CONCLUSIONS

This article places loneliness front and centre on the bioethical agenda. Loneliness is the share of all humans, at some point in our lives. It may be transitory and thus benign, or it can be all-consuming, affecting one's perspective on life and impairing one's ability to pursue one's well-being, happiness and flourishing. Loneliness is thus a major public health concern. As social relations—be it intimate, familial or amicable relations—are essential for our health, flourishing and well-being, they should be understood as social determinants of health. As loneliness is bad for our health, it should be perceived as a negative determinant of health. Insofar loneliness negatively affects our health, a case could be made for a human right not to be lonely, stemming from a human right to healthcare or even to health.

**Contributors** I am the sole author of the paper.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not applicable.

**Ethics approval** Not applicable.

**Provenance and peer review** Not commissioned; internally peer reviewed.

**Data availability statement** Data sharing not applicable as no datasets generated and/or analysed for this study. No data are available.

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