



# Reproductive Choices and Climate Change in a Pronatalist Context

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This study contributes to a better understanding of how individuals make decisions about childbearing according to their views on climate change and how they rationalize their reproductive choices in a pronatalist country, Hungary. Using forty-four semi-structured interviews conducted between September 2020 and March 2022 in Hungary, we found that women are more concerned with the future of their children than the carbon footprint of their (potential) children. Most interviewees consider having children to be an important part of a woman's life, and some even regard it as a duty not only to maintain the population size but also because they believe future generations will be more environmentally aware and provide solutions for the climate crisis. In addition, there are condemnatory attitudes towards those who do not want children because of the consequences of climate change. We also found a pattern of planning to have fewer children or planning alternative routes to parenthood (adoption) due to climate change-related concerns. While climate change was acknowledged as a relevant issue, overpopulation was considered less concerning, and there is a prevailing belief that efforts to decrease fertility rates should primarily target developing countries. Generally, interviewees support the Hungarian government's pronatalist family policy; nevertheless, some feel that the state degrades women by treating them only according to their roles as mothers.

**Keywords:** *reproductive choices; climate change; overpopulation; green parenting; pronatalist policy*

## Introduction

Nowadays, uncertainty in reproductive decision-making is an important research topic. This uncertainty may arise from a range of contributing factors,<sup>1</sup> including, among others, labour market insecurity and financial difficulties,<sup>2</sup>

relationship instability,<sup>3</sup> and difficulties in reconciling work and private life.<sup>4</sup> Concerns may also stem from the macro-structure of society: events like the regime change in the post-socialist region in 1990<sup>5</sup> or the economic crisis of 2008 may have influenced reproductive choices through various pathways.<sup>6</sup> Also, the Covid-19 pandemic starting in early 2020 contributed to feelings of uncertainty at the macro level, and also influenced reproductive choices.<sup>7</sup>

At the same time, another macro-uncertainty is also present, and unlike Covid-19, it is less sudden and lasts for a longer period: the phenomenon of climate change. Climate change has been unfolding over an extended period, with observable effects such as droughts and hot, prolonged summers already impacting our daily lives; its more severe repercussions are unforeseeable. However, one of the most important assumptions in life-course theory is that people try to minimize unpredictability in their lives.<sup>8</sup>

The sense of uncertainty is shaped not only by our past experiences and present circumstances but also by the “shadows of the future.”<sup>9</sup> Thus, it is worth examining how concerns related to climate change affect life-altering decisions such as reproductive choices.

Climate change has been shown to impact mental health, inducing anxiety related to an uncertain future or concerns about potential future harm to one’s children,<sup>10</sup> and some studies have found evidence of the relationship between environmental concerns and voluntary childlessness in the Anglo-Saxon context.<sup>11</sup> However, the link between reproduction-related choices and climate change has rarely been studied in other contexts, such as in Central and Eastern European (CEE) societies, except for a couple of comparative studies based on survey research.<sup>12</sup> It is interesting to look deeper into the link between reproductive choices and environmental concerns in CEE societies because in this region, governments aim to encourage or even pressure women to have more children by providing financial aid, such as generous maternity benefits, paid family leave, family taxation, or housing subsidies. These measures often strengthen traditional gendered divisions by encouraging men’s breadwinner roles and mothers’ withdrawal from the labour market to carry out full-time childcare and household activities. At the same time, support for work–life reconciliation and gender equality is missing in the region,<sup>13</sup> which distinguishes these measures from the pronatalist policies of the Nordic countries.

Thus, in our study, we examine how environmental concerns, such as climate change and overpopulation, are related to the reproductive choices of women of reproductive age in Hungary. To shed more light on these processes, we conducted interviews with forty-four women between fall 2020 and spring 2022. Our research contributes to this body of research as the first to investigate how climate change concerns and reproductive choices interact in the pronatalist family policy context and how mothers make sense of their motherhood and mothering practices in the context of state pronatalism and climate crisis in Hungary.

## Background and Previous Research

Several recent studies have focused on the link between reproductive choices and climate change. Some have identified individuals who refrain from having children due to their heightened environmental concerns, driven by the desire to protect their potential offspring from the detrimental effects of climate change.<sup>14</sup> However, in Allen and Wiles's qualitative study<sup>15</sup> on elderly childless people from New Zealand, only a few participants mentioned that their non-parenthood was actively chosen to prevent environmental harm or because they had concerns about the overpopulation of the planet. O'Driscoll and Mercer<sup>16</sup> examined childless individuals in the United Kingdom, and they found that this kind of reasoning, that is, not having children to save the world, exists among childless women. Environmental reasons appeared among the motives for voluntary childlessness among the respondents of other earlier studies, as well.<sup>17</sup>

A recent study<sup>18</sup> conducted a content analysis of reader comments on articles and of semi-structured interviews conducted in the United States and New Zealand to explore the role of climate change considerations in reproductive attitudes and motivations to remain child-free. The content analysis revealed that many readers expressed fears and anxiety related to the negative implications of having children, as childbearing contributes to overpopulation and overconsumption. Views also emerged in which commentators were worried about the quality of life of the next generation. Not having biological children was often considered the best sustainable behaviour to reduce one's carbon footprint, and a group of readers claimed those who have children in the current environmental climate are selfish.<sup>19</sup>

Arnocky et al.<sup>20</sup> found similar findings based on previous studies: all around the world, many couples choose non-parenthood to reduce their personal effect on the environment, while others are afraid that the well-being of their potential children would be threatened by poor environmental quality, so they have chosen to remain childless. Both standpoints are covered in the exploratory survey of Schneider-Mayerson and Leong.<sup>21</sup> According to their results, almost 60 per cent of American respondents aged twenty-seven to forty-five had serious concerns about the carbon footprint of procreation. Being very or extremely concerned about the well-being of existing, expected, or hypothetical children in a world characterized by climate change was highly common: 96.5 per cent of participants shared this view: younger people and those undecided about whether to have children being more concerned with climate change were overrepresented.

However, other research has suggested a positive association between climate concerns and intended number of children.<sup>22</sup> In the analysis by De Rose and Testa<sup>23</sup> of 2011 Eurobarometer data of the twenty-seven European Union (EU) countries, the relation between climate change concerns and the number of intended additional children was positive among those who already had one child. These findings were tested in the reverse direction as well, and the results suggest many people are

concerned about climate change because they are worried about the well-being of their offspring.<sup>24</sup>

Schneider-Mayerson's recent research,<sup>25</sup> based on open-ended survey questions, revealed a possible mechanism behind the contrasting results. He distinguished four different groups, where the motivations of the first two groups explain the mechanism behind the positive relationship between fertility and environmental protection. Parents or potential parents belong to the first group, who believe that without children they would not be motivated to fight for the environment. Parents or potential parents in the second group include those who expect that their children will (or would) become climate activists or pro-environmental voters or would contribute to the transition to a more sustainable world in other ways. Childless people who think the cost of parenting would take energy and time away from the project of fighting climate change constitute the third group, while in the fourth group, we find those who use fertility as a sociopolitical tool. For example, they use their reproductive potential to influence environmental attitudes and politics. However, Schneider-Mayerson<sup>26</sup> focused solely on climate leftists (liberal and progressive climate-concerned people), so it is not surprising to observe such strong activist motives.

The issue of overpopulation and fertility goes back as far as Malthus's overpopulation theory, introduced in the late eighteenth century. He stated that exponential population growth will endanger linear food production, thus leading to famine.<sup>27</sup> The concept of overpopulation itself is racist and classist in the sense that poor women in the developing world are often made the scapegoats of overpopulation and are expected to have fewer children.<sup>28</sup> Simultaneously, research shows that overpopulation is not the root of the problem; rather, it is overconsumption.<sup>29</sup>

More general research shows that confidence in technological progress can also affect reproductive choices.<sup>30</sup> For example, those who are worried about climate change and overpopulation may not restrict their reproductive choices because they trust that technological progress will solve the problem. People might also separate climate change-related worries and reproductive choices because they think the answer to a systemic problem should come from economic and political leaders who have a stronger role in approaching the problem.<sup>31</sup>

There is a scarcity of studies investigating our main topic within the Central–Eastern European region. Notably, one such study conducted a comparative analysis of the Visegrad Group (V4) countries and found that these societies are not uniform in the sense of how climate change concerns are related to people's ideal family size. In Slovakia, heightened concerns regarding climate change are linked to a preference for a larger ideal family size. Conversely, in the Czech Republic, the association is reversed, and it is only evident when individuals are asked about their personal aspirations for family size, while in Hungary, the same correlation emerges only when discussing the topic at a more general level. This pattern can potentially be attributed to traditional family orientations and conservative values, which likely serve as key explanatory factors.<sup>32</sup>

## The Hungarian Context

Hungary belongs to the category of developed countries where the population is ageing and shrinking, but people have high incomes and consumption levels. However, compared to the Western European countries, Hungary lags behind in the average household net-adjusted disposable income per capita and the life expectancy at birth in Hungary is around seventy-six years, five years lower than the Organisation for Economic Co-operation and Development (OECD) average of eighty-one years.<sup>33</sup>

In Hungary, Eurobarometer data<sup>34</sup> show that climate change is a grave problem according to 81 per cent of respondents (compared to the EU average of 78%), while only 8 per cent (EU: 18%) believe it the single most serious problem facing the world. According to most respondents, it is the responsibility of business, industry, and national governments to tackle climate change, while fewer than one in four respondents (well below the EU average) felt a personal responsibility to address the problem. Nevertheless, 67 per cent claimed they had taken action to fight climate change recently, which is a higher proportion than the EU average (64%).<sup>35</sup>

The Orbán governments in power since 2010 have introduced a series of population policy measures with the clear aim of encouraging childbearing to stop population decline. Thus the policy context is characterized by pronatalist family policies, where pronatalism can be defined as an ideological and political project that aims to encourage childbearing by female members of the society.<sup>36</sup> Furthermore, in Hungary, pronatalist policies are often embedded in nationalist discourse, such as the current concerns regarding declining birth rates and the shrinking population in the country, which label the demographic situation a “national catastrophe” and worry about “the death of the nation.”<sup>37</sup>

As part of the government’s pronatalist approach, several measures were introduced in 2018 to encourage women to have more children, such as a lifetime personal income tax exemption for women who give birth to and raise at least four children and the availability of a low-interest loan for women younger than forty years who marry for the first time. Furthermore, one-third of this debt is waived after the birth of a second child, and the entire loan is cancelled after the birth of a third child. Most of the family policy measures are focused on women, which shows that pressure to have more children is placed primarily upon them.<sup>38</sup>

Although the Orbán governments have pursued a strongly pronatalist family policy since 2010, the number of births did not increase between 2010 and 2022: 90,335 live births in 2010 and 88,491 in 2022 (HCSO 2023<sup>39</sup>). However, the total fertility rate has improved slightly, from 1.25 to 1.52 (HCSO 2023). This apparent paradox can be attributed to the fact that the number of women of reproductive age has declined in the meantime. Nevertheless, the total fertility rate of 1.52 in 2022 is far below the desirable fertility rate of 2.1.

Pronatalism views women primarily as mothers responsible for reproduction to increase the population or even prevent the death of the Hungarian nation; Russo<sup>40</sup> has called this a “motherhood mandate,” meaning it is imperative for women to bear and rear children. In Hungary, most women have internalized the concept of the motherhood mandate, and many agree with the statement that “a woman has to have children to be fulfilled” in Hungary.<sup>41</sup> In this sense, voluntarily childless individuals are considered a risk to the survival of the nation and are often perceived as choosing independence and freedom over taking responsibility for raising children.<sup>42</sup> Women who do not want to become mothers must frequently face stigmatization, such as being called selfish for being a career-oriented person.<sup>43</sup> Despite government efforts to strengthen traditional roles, women tend to have their first child at a relatively late age: 29.15 in Hungary.

## **Data and Methods**

The research presented herein is exploratory and novel in nature, because women’s reproductive choices in relation to climate change when embedded in the pronatalist context have not been examined in Hungary until now. To gain more insight into these issues, we conducted semi-structured interviews with women of reproductive age in the period between September 2020 and March 2022. Our selection criteria included childless women and single-child women between the ages of eighteen and forty-five. We focused on childless and single-child women because they have fewer children than the average woman in Hungary. The upper age limit of forty-five was justified by statistical data showing that it is rare for a woman to become a parent for the first time in Hungary above this age.<sup>44</sup> The youngest in our sample of forty-four women was twenty-one, while the oldest was forty-four. The sample was built in two stages: First, we used our social networks to identify initial contacts, and then subsequent respondents were found through referrals to acquaintances using snowball sampling. Before starting the interview, all interviewees provided informed consent after an explanation of the details of the applied data collection procedures, confidentiality, and voluntary participation.

The interviews took place while Hungary was past the most serious Covid-19 pandemic lockdowns. Because the pandemic partly restricted personal contact, we decided to mix interview modes by considering the interviewees’ preferences. Thus, most of the interviews were conducted online (on various platforms, such as Zoom and Skype), but some were conducted in person. Furthermore, we must note that the last couple of interviews were conducted after the outbreak of the Russian–Ukrainian conflict in February and March 2022.

Our sample included interviewees from different geographical areas within Hungary: twenty-two were from Budapest, the capital; seventeen were from other

towns; and five were from small villages. Regarding age groups, nine women belonged to the youngest cohort (twenty to twenty-four), sixteen were aged twenty-five to twenty-nine, nine were aged thirty to thirty-four, seven were aged thirty-five to thirty-nine, and three were aged forty to forty-five. There were four educational subgroups: five with a low-level education (lower than completed secondary school), five with a medium-level education (completed secondary school), nine who were enrolled in higher education institutions, and twenty-five who were highly educated. Regarding marital status, most were married (fifteen) or in cohabiting relationships (eighteen), six were in a living apart together (LAT) relationship, and five were single (one was a single mother). In total, twenty-one women did not have children and another twenty-one had one child; furthermore, two women were pregnant at the time of the interview. Eighteen women had a child younger than five years of age, while three women had a school-age child (see Table 1 for participant demographics).

The interviewees were asked to choose a fictitious name, so we could identify the research material related to them later, while preserving anonymity. (These names are also used in this study when referring to or quoting our interviewees.) Most interviews lasted about forty to fifty minutes, and they were tape-recorded, with the recorded interview material transcribed verbatim. The interview guide included topics related to one's perceptions of their own family and family practices; reproductive attitudes; employment and partnership history; opinions on climate change, overpopulation, and the Covid-19 pandemic; and future plans. Through the interviews, we gained rich retrospective biographical narratives, with a focus on the interviewees' private and family lives, including their experiences, desires, and intentions regarding having children. Interviews were transcribed and both authors used open coding to identify key themes related to climate change and fertility independently. We then consolidated our themes: the first being the general perception of climate change and attitudes related to its mitigation, followed by our main topic, the link between fertility and climate change. The themes were then divided into the following sub-topics: the concept of the carbon footprint, overpopulation, and concern about the future of children in the light of climate change. In this study, we did not delve into the short-term effects of the Covid-19 pandemic on fertility, as the purpose of this study was specifically to investigate the relationship between climate change, overpopulation, and reproductive decisions.

We should note two primary limitations in our sample selection. First, we intentionally did not focus on specific groups, such as women experiencing significant eco-anxiety. Our aim was to gain a broad understanding of how women, in general, perceive climate change and how it is reflected in reproductive choices at a general level and not among selected minorities. This approach, however, has a potential drawback regarding our results, in that we do not get a picture of the positions of devoted climate activists on the topic, and since the target group of several studies

**Table 1.**  
**Participant Demographics**

Group	Number of participants
Age group (years)	
20–24	9
25–29	16
30–34	9
35–39	7
40–45	3
Highest education level	
Elementary school	5
Secondary school	5
Student enrolled in higher education	9
Higher education degree	25
Place of residence	
Capital city	22
Other town or city	17
Village	5
Partnership status	
Married	15
Cohabitation	18
LAT	6
Single	5
Parental status	
One child	21 (18 children aged between 0 and 4, 3 children aged 5–12)
Pregnant	2
No children	21
Religious status	
Actively practices religion	9
Religious in her own way	11
Not religious	24
Total	44

Note: LAT = living apart together.

has been such individuals,<sup>45</sup> we need to be cautious when comparing our results with those of other researchers.

Another limitation of our research is that interviewees living in the capital and with a higher education were overrepresented in our sample, so that we gain insight into the perspectives of those who might be more concerned about climate change rather than people with lower education levels living in rural areas.



## Results

### Perceptions and Taking Actions against Climate Change

Most of our interviewees reported that they have some concerns about climate change as they experience weather events such as more frequent and more extreme (massive storms, hailstorms, drought, etc.) and rising average temperatures (hot summers, mild winters) in their lives. These observations of the weather seem to be the primary way for people to perceive climate change. Beyond these, additional effects of climate change were mentioned such as water and food shortages, species at risk of extinction, possible negative health impact, economic recession, and rising costs of production and transportation. Highly educated women or students enrolled in higher education talked about invisible future consequences of climate change (e.g., mental health effects), and they reported the strongest worries or climate anxiety. We observed a pattern in the interviews wherein the participants did not seem overly concerned about the impacts of climate change as it had not yet been affecting their daily lives; however, they envisaged that the crisis would intensify and have repercussions at some point in the future.

Participants, regardless of their level of worry, felt some kind of personal obligation to take action against climate change, but opinions differed concerning the extent of an individual's responsibility: some felt they could not make a difference, as a single person could do very little compared to what a company or government regulation could do to address the situation. Among the many things one can do to mitigate climate change, participants tended to mention selective waste collection or various forms of waste reduction such as carrying reusable bags, going to package-free shops, using washable diapers, or buying second-hand clothes. In addition to these, efforts to reduce emissions (less travel by plane and car, changing to public transport and bicycle; saving energy; not turning on the air conditioner; etc.) and the use of environmental-friendly detergents were brought up as examples. Some reported that they compost, follow a vegetarian diet, or reduce their water consumption.

The source of knowledge and perceptions of climate change can be, among other things, news consumption. Reading about the potential negative impacts of climate change often appeared in a context that evoked negative feelings, highlighting the seriousness of the issue. Kate (twenty-six, highly educated, pregnant, lives in the capital), who is otherwise optimistic about future climate mitigation both by companies and individuals, reckons that if she started to read news and articles about the environmental crisis, it would raise her stress levels significantly so that she tries to stay away from doing so. Emily (twenty-seven, highly educated, mother, from a town), who also perceives the impact of climate change through her experience working at a ski resort and witnessing the shortening of seasons due to snow conditions, said,

Obviously, one listens to the news [. . .], and one can see that in various parts of the world, there are increasingly severe droughts, ongoing wildfires, and obviously, people see that this is not normal. This is clearly the result of something, and what else could it be the result of if not this [climate change].

They connected their own experiences and what they heard in the news with the idea that this was indeed the effect of climate change, but the connection was not so clear for everyone.

Learning from each other and convincing others to lead more environmental-friendly lives was regarded as a feasible way to mitigate climate change, as Marie's (twenty-eight, highly educated, childless, from a town) case illustrates: "For example, I have managed to get my mother to collect the garbage selectively, even though she thought it was gibberish. I feel that this is a huge step, a huge achievement in her life." She is moderately worried about the repercussions of climate change, believing that it would not intensify within the next generation's life, but she holds it a very important individual responsibility to actively take actions against the process. The knowledge transfer seems to work in the direction from younger to older, but having more and more environmentally conscious friends was also mentioned by twenty-six-year-old Kate, indicating the role of the peer group as well.

### **Climate Change and Fertility**

Based on previous research,<sup>46</sup> the direction of the relationship between climate change and reproductive intentions might be two-way. First, we present what interviewees think about the idea that their reproductive choices might have an influence on the process of climate change. Then we present thoughts on another global perspective, overpopulation. Finally, we take a look at the relationship from the opposite direction and present interviewees' thoughts on how climate change influences the future of their potential children.

*The concept of the carbon footprint.* Most of our interviewees were concerned with climate change, and there were examples when these concerns were incorporated into reproductive choices; however, this was not the dominant pattern within our sample. Victoria (forty, highly educated, childless, from a village), who was not engaged in any significant environmental activities, noted, "I don't think climate change could be mitigated or stopped by reducing reproduction; I do not perceive such a connection." With her partner, they had been attempting assisted reproductive techniques for quite some time in their quest to start a family. Her argument was based on her view that climate change was a slow process to which people can adapt. She was not alone in her view: interviewees often expressed the view that they should not adjust their own reproductive choices to their concerns about climate change. Olga (twenty-three, highly educated, childless, from Budapest) strives to plan her

everyday activities in an environmentally conscious manner, aiming to make eco-friendly choices when it comes to travel, shopping, and reducing her consumption of animal-based food products. Regarding climate change mitigation, and how it is linked to reproductive choices, she said, “Obviously, you can do small things, but I think it would take a stronger global cooperation to solve it, especially from a business viewpoint, so, it doesn’t play a role in the choice of whether to have children.” Similarly, other participants emphasized that little can be done at the individual level to tackle climate change—mentioning efforts to reduce water or electricity consumption, and collecting waste separately—and they use this to justify their views that there is no point adjusting reproductive choices to these circumstances.

Two radical views emerged in our sample. Two women belong to the first group of extreme views, who felt eco-anxiety to such an extent that they have altered their reproductive choices. Dora (twenty-one, university student, childless, from Budapest), who was bothered by the thought that the state views women merely as potential mothers, considering their sole purpose to be giving birth, plans not to have children because of the environmental impact: “The thought crossed my mind that I would rather adopt than give birth to a child.” Barbara (twenty-seven, highly educated, mother, from Budapest), who is currently on maternity leave with her baby, but works as a freelancer, reported that because of what she perceives as destruction of the natural environment and severe overpopulation, she hesitated to have children at all. According to her original fertility plan, she desired three or four children, but she ultimately decided to have “two at most, which would replace us in terms of population.” Barbara, therefore, felt that in this situation reducing the number of children she originally wanted was the appropriate solution.

Some women who were about to have a child reported having faced the dilemma of whether to have children because of climate change. Kate (twenty-six, highly educated, pregnant, from Budapest), who makes efforts to reduce her waste production (even considering the zero-waste lifestyle) and believes in the effectiveness of an environmentally conscious upbringing and education, said, “My whole life’s ambition was to be a mother . . . so I wouldn’t want to choose between having a child now or saving the world by not having a child.” In every case where this dilemma arose, the response was choosing to become a mother.

In addition to the patterns presented so far on how climate change concerns may affect interviewees’ reproductive choices, we found disapproving attitudes regarding the adaptation of fertility plans to climate change concerns when we approached the question from another angle. We asked what they thought about those who choose not to have children because of climate change–related considerations. For example, Helena (forty-two, low education, mother, from a village), who would have liked to have another child, but for medical reasons could not, sarcastically said, “Those who don’t have children because of this are not normal.” Similarly, Hannah (twenty-nine, low education, mother, from a town), a mother of a one-year-old child who plans to have more children soon, said, “I wouldn’t even talk to someone like that, because a

child is not an object; we cannot just decide whether we need it.” They claimed that dealing with environmental threats and climate change are not part of their everyday lives in any way. It is clear from their viewpoints that they regard childbearing as an obligation and a necessary part of life, reinforcing the widespread view in Hungary that a woman needs a child to be fulfilled in Hungary.

It is interesting to note that this approach is observed not only among women who are less concerned about climate change, but also among women who take climate change seriously and are taking actions against it in their daily lives. Christina (thirty, secondary education, childless, from Budapest), who otherwise tries to pay attention to the reduction of waste production and water consumption, and is very concerned about the process of climate change, said, “I have a friend who doesn’t have any children because of climate change; I think she lies to herself—she is selfish, and that’s her excuse.” This kind of approach has emerged in the context of the motherhood mandate in Hungary.

Another interviewee, Jasmine (twenty-six, highly educated, mother, from a town), who had always planned to have a big family, says that although she herself is anxious about climate change, she thinks that those who claim climate change is the reason for their childlessness may have other reasons behind it, so it is certainly not the only one. She herself is worried for these women because “women who say that now might want to have children when they’re 35 or 40,” when it is no longer certain they can conceive naturally. In Jasmine’s case, we can witness not just the societal pressure for motherhood (motherhood mandate), but also the common resistance to accepting that not having children can be a deliberate choice.

*The concept of overpopulation.* Some interviewees asserted a link between climate change and fertility, but only Barbara (twenty-seven, highly educated, mother, Budapest) linked overpopulation (and climate change–related concerns, as discussed above) to her reproductive choice by choosing not to have more than two children. All other interviewees reported that their reproductive choices were not influenced by this issue. Not even those concerned with climate change considered overpopulation as a problem in this part of the world where the population is ageing. According to Marta (thirty-one, highly educated, childless, from Budapest),

I don’t think this applies to European society, and I think fertility must be an individual’s decision. So, if there’s a loving family that wants to have a child, then they should have one. And that should be the case anywhere around the world.

Marta is not alone with her view, as other participants emphasized that they think overpopulation is not a European problem, so the issue does not affect their reproductive choices. Others reflected on this issue from a religious perspective: Claudia (thirty-two, secondary education, mother, from Budapest), who is currently on maternity leave with a two-year-old child and plans to have two more children, and

formerly worked as an evangelical religious teacher, said, “God created us to multiply.” Those who take these positions believe the problem is not the population size itself, but the unequal distribution of resources globally: where there is a lack of resources, the fertility rate is high.

However, some other interviewees were not so permissive about the reproductive choices of people from the developing world. For example, Julia (twenty-seven, university student, pregnant, from a town), who also actively practised religion, expressed, “I believe we should limit the number of children born in countries with such an awful lot of people. You can live happily with 2–3 children instead of 8–9.” Meanwhile, some interviewees emphasized that Hungarians should have more children even though other parts of the world are overpopulated, because they worry about the death of the nation. As Noemi (twenty-seven, university student, childless, from a town) explained,

It is not necessarily our problem that India, Asia, and Africa are overpopulated, because Europe is shrinking, and the Hungarian population, in particular, is shrinking rapidly, so I understand that it is a shared responsibility of the world to protect the Earth, but not at the expense of our own race.

Other women voiced the same concerns as Noemi about the declining population and the death of the nation, and most agreed with the Hungarian family policy aimed at countering the ageing population by encouraging more children via financial support and tax refunds. However, some expressed concerns that if someone fails to meet the non-repayable loan condition of three children, they will have to pay it back later, or about families with school-age children receiving insufficient support from the state. However, we also found women who expressed complete disagreement with the pronatalist family policies as they felt it violated the important value of gender equality. Dora (twenty-one, university student, childless, from Budapest), who was considering adoption because of her high level of climate anxiety, emphasized, “Women are being diminished, so to speak, to live only for the purpose of being mothers and having children, and that’s all they are.” A similar opinion was expressed by Lily (thirty-six, highly educated, mother, from a village), who works as an entrepreneur, and raises a four-year-old child, “They want to buy women’s wombs, [ . . . ], it’s outrageous. I absolutely refuse to have children for money or support.” Otherwise, she was unsure whether she wanted to have another child due to the changed circumstances and increased financial and health-related uncertainties of the Covid-19 pandemic context. The basis of this uncertainty was that her partner had lost his job during the pandemic.

As in the case of climate change, here we also found arguments for that concerns about overpopulation are just an excuse for foregoing motherhood. For example, Clara (thirty-four, highly educated, mother, from Budapest), who herself is eco-conscious in her everyday life and believes in the power of environmentally conscious upbringing, describes it as follows:

I think, for anyone who says they don't want children because of overpopulation, it is just a good excuse; they never really wanted them. It [overpopulation] is a blanket under which they can hide so that others don't question their choice.

As voluntary childlessness is not a widely accepted choice in Hungary, women whose reproductive decisions are affected by worries regarding overpopulation or climate change are seen as hiding behind these macro-level concerns to avoid the motherhood mandate.

*Climate change has negative effects on the future of children.* All the women in our sample want to have children, though some expressed worries about their future. Emma (twenty-six, highly educated, mother, from Budapest) perceives the future of children born today as quite dramatic: "I think they will have to deal with serious problems that were partly caused by us. This includes climate change." Other participants had similar negative views: concerns emerged about sources of healthy nutrition, lack of water, and the consequent economic crisis. Yet, these worries did not influence their own childbearing decisions. Isabelle's (thirty-two, highly educated, mother, from a town) example illustrates the dilemma well: "I do regard climate change as a serious threat, so much that I even asked my husband whether I should give birth to a child at all. I mean, will they be able to grow up at all?" Despite her concern, she still decided to have a child recently. In her case, this question emerged only rather theoretically, because in other parts of the interview, she declared she could not imagine her life without children, and that she also plans to have two more. However, she is uncertain whether she will be able to realize her intention of a third child because of her age. This hesitancy signalled the presence of macro-level uncertainties, such as concerns about climate change, Covid-19, and also about the Russian-Ukrainian war. She overcame this kind of hesitancy by realizing that she must accept uncertainties that she cannot change, since these were also present "in our mothers' time," and children were still born that time. However, she takes actions to mitigate climate change by trying to avoid unnecessary hoarding, and she also tried to involve her husband in her climate-conscious behaviour.

Reflecting on the view that some people do not want to expose children to the adversities of a warming planet, Frida (twenty-three, university student, childless, from a town) said, "My sister sees the world through a similar lens; she thinks it would not necessarily be good for a child to live in this world. I can identify with this viewpoint sometimes, but not so blindly." Here we see that, for young people, the way to get information on this topic is often to share related ideas with each other.

None of the interviewees agreed that one should give up having children because the future is uncertain. This standpoint was often evaluated as "extreme," as Kate (twenty-six, highly educated, pregnant, from Budapest) described it: "I have some friends whose decision to have children has been affected by climate change. I consider them extreme examples." Kate shares information on the subject with her peers, but she does not accept her friends' view that they should bring children into this

world, but rather identifies them as having extreme views on the subject. It is interesting that we cannot find a simple mechanism that leads those who are most concerned about the climate to be the ones who adapt their reproductive choices. Susan (twenty-seven, highly educated, mother, from Budapest) was of the same opinion, even though she perceived climate change as a profoundly serious threat:

There are things we cannot really foresee, and anyway, we cannot spare our children, so then people shouldn't have had children during the plague either, or then, during the whole twentieth century, all children were exposed to such things that no one wants for their children.

She was not alone in explicitly stating that childbearing should not depend on negative narratives.

The other alignment strategy between climate change and a concern about the children's future is to emphasize that future generations will be more environmentally aware. Emma (twenty-six, highly educated, mother, from Budapest), a doctor currently on maternity leave with her one-year-old child, believes women should have children because the new generation will have a different attitude to the environment:

That's why I think that we do need to reproduce, and we do need to have a generation growing up, because many middle-aged people have learned or got used to a certain way of life, so they're not going to change. And unfortunately, it's going to be up to the new generation.

While Emma's conclusion is that children born now have a role to play in mitigating climate change, Marta (thirty-one, highly educated, childless, from Budapest) and Lena (thirty-nine, highly educated, mother, from a town), mother of a four-year-old, believe that parents have a role to play too: it should be the parents' duty to raise their children to be environmentally aware, and if they do so, from an environmental perspective, parents will contribute more to the planet's future than if their children had never been born. As Marta argued,

Yes, you have to have children, and yes, you can have children in this world, but you have to raise them in such a way that they are aware of these things and that they don't contribute even more to climate change.

Yet another viewpoint appeared among the participants: Amy (twenty-six, highly educated, mother, from Budapest) explained that how parents raise their children is also important. She focuses on raising her child in a way to do the least harm to the planet: "I am in a position where I can afford washable diapers and package-free detergent, so our financial status allows us to have a child while trying our best to do it in the most environmentally friendly way." However, she stressed that to raise children in a sustainable way requires a good financial status.



## Discussion

The aim of this study was to explore how reproductive choices and eco-anxiety intersect with each other in Hungary by conducting forty-four semi-structured interviews with women. We found, in line with Eurobarometer data,<sup>47</sup> that concern about climate change is a relevant issue in Hungary, since our interviewees reported some level of concern in this regard. It seems that weather observations are the primary method for people to perceive climate change in Hungary. Highly educated women or those enrolled in higher education reported stronger worries or climate anxiety than their less educated counterparts which may indicate that high levels of education can lead to eco-anxiety because of the greater chance of learning about climate change and environmental issues. We also found that young women's main information sources are their peers.

Furthermore, also in line with the European Commission,<sup>48</sup> we found that people rarely see climate change as an individual responsibility. Accordingly, a pattern can be detected in that there are women with high levels of concern who are not willing to change their reproductive choices because of climate change. Nevertheless, they do many other things at an individual level to mitigate the change, for example, by selective waste collection or various forms of waste reduction such as carrying reusable bags, going to package-free shops, using washable diapers, and buying second-hand clothes. However, we found an opposite pattern which shows that women who are highly worried about climate change might modify their original reproductive choices by choosing to have fewer children or planning to adopt a child instead of having their own biological one. Sometimes, concern about climate change is not the only macro-level factor causing uncertainty about reproductive choices. A combination of different uncertainties such as climate change concern, the Russian–Ukrainian war, and Covid-19 together cause reproductive choices to be uncertain.

Moreover, we have found a new phenomenon in the Hungarian sample: some interviewees condemned women who do not want children because of the consequences of climate change. Our interviewees generally regard women who choose to be child-free as selfish. Moreover, they consider climate change and overpopulation as false reasons for not having children. It seems that the motherhood mandate overwrites all negative narratives in Hungary: no matter how concerned a woman is about the future (including climate change), she has no right to break the social norm that expects her to become a mother. This may also be the reason that in our sample, of the four groups identified by Schneider-Mayerson,<sup>49</sup> only the two classifications which explain the positive link between climate change and reproductive choices were present. No individuals felt that the cost of parenting would impede them from focusing on climate change, or that they would be using their reproductive choice as a sociopolitical tool. However, our results may differ from those of Schneider-Mayerson because our sample was not composed of climate activists.



Regarding overpopulation, our participants see it as a non-relevant issue in Europe, and some of them emphasize that the number of children should be reduced among women in the developing world. This result coincides with previous research,<sup>50</sup> where women living in developing countries are blamed for overpopulation. Some mentioned they would not approve having more than two to three children in countries where there is a lack of resources, while others stressed, on the contrary, that childbearing should be an individual decision everywhere. Nevertheless, in the European context and especially in Hungary, rather than overpopulation, population decline is considered a more important problem. Furthermore, the position of many interviewees fits into the nationalist discourse which states that having children is important to avoid the death of the nation.<sup>51</sup> Most women also agree with the pronatalist family policy, which generously supports families with three or more children. However, some participants feel that the state degrades women by treating them only according to their role as mothers.

We have found a strong link between eco-anxiety and concerns about the well-being of one's children. This result is consistent with previous research that found a positive association between fertility and climate change-related concerns.<sup>52</sup> To reduce the contradiction between having children and worrying about climate change, most people view having children from the viewpoint that this is a possible solution to climate change. They believe future generations will be more environmentally aware, and some of them also mentioned feeling responsible for raising their children in a sustainable way and teaching them to be environmentally conscious.

Even though this is not a representative sample, and these women were not specifically chosen according to their views on climate change (none of them was a climate activist), it is striking that there was no childless woman in our sample who definitely would not want to have children: even those who currently do not feel that way have left the question open for the future. This can indicate that in a pronatalist society, not having a child can be perceived as a violation of norms. These findings partly contradict previous research in Anglo-Saxon settings, where the choice of voluntary childlessness because of environmental reasons can be observed among young people.<sup>53</sup> This contrary result may be due to two reasons. One is the widespread attitude in Hungary that a woman can only be happy if she has children,<sup>54</sup> and the another is that our sample is not based on climate activists like Schneider-Mayerson's sample.<sup>55</sup>

## **Limitations and Further Research**

This study was an explanatory one since no other studies have examined how anxiety about climate change can affect women's reproductive choices in a pronatalist context. However, our study has a few limitations. One of them is that the inter-

views were conducted during the Covid-19 pandemic, which may have influenced our results by introducing an additional factor of uncertainty into the process of making reproductive decisions, and these factors might interact and amplify the uncertainties related to reproductive choices. For example, some participants mentioned that earlier they did not consider climate change a serious threat, but during the pandemic, they started to collect more information on the environmental crisis, because the pandemic brought their attention to other global problems such as climate change. However, for others, the pandemic suppressed their earlier environmental awareness because they focused more on avoiding a Covid-19 infection. To eliminate the pandemic effect, it would be beneficial to repeat the study in the post-pandemic era. However, there can always be macro-level uncertainties which cannot be eliminated. For example, the outbreak of the war between Russia and Ukraine has also exacerbated the shadows of the future among our interviewees who were interviewed after February 2022. The other limitation of the study is that women with degrees in higher education were overrepresented in the sample, which might cause some bias, given that our highly-educated interviewees were more concerned about climate change than individuals with lower level of education. To obtain an overall picture of the link between eco-anxiety and reproductive choices, we need a representative study conducted after the pandemic. It might also be important to explore whether similar patterns are found in other CEE countries, and it is necessary to further examine the link between climate change and reproductive choice in other societies. Future research should focus on the perspectives and attitudes of men, as well.

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## Notes

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