Immunisations and imagining imperilled fertility: Women’s trials of COVID-19 vaccines and reproductive/citizenship transgressions in pandemic times

Abstract:
Drawing from a narrative interview study with people who had, and recovered from COVID-19, this paper examines participants’ concerns regarding imperilled fertility, which featured in many narratives about immunity to COVID-19 and decisions over COVID-19 vaccines, especially women participants. Approaching these vaccine anxieties from an intersectional perspective, we explore narratives of imagined fertility being disrupted by COVID-19 vaccines – narratives that are socially contoured by race/ethnicity, gender and life course stage, and position within families. Such participants faced the risk of transgressing gendered reproductive expectations which cast life-making as a hallowed and unquestioned – yet at the same time transgressing expectations that model citizens will accept the vaccine and not go against the herd. Taking forward work on the tensions between vaccines being between protective of extant life, and threatening to future life, we explore deferral of vaccine decisions as a way of accommodating multiple expectations of good reproductive citizenship, and consider how institutions could become more trustworthy in light of fertility anxieties.

Keywords: COVID-19 vaccines; fertility; reproduction; transgression; citizenship; gender

Introduction

In her 30s, at a juncture in her life where she and her husband were, she said, desperate to have children, Laxmi was diagnosed with ovarian cancer. The treatment did not clear the cancer, and it returned in 2020, amid the first wave of the COVID-19 pandemic in the UK. Her medical team advise[d] that she undergo a hysterectomy to reduce risk of the cancer recurring. She refused, holding on to the hope that she might be able to conceive in the future. Speaking to us, Laxmi reflected on how her personal concern with reproductive threat had been generalised during the pandemic:
I think there is definitely a lot more paranoia that’s been exacerbated with women’s fertility and stuff and, I think also they call it the lost year, is it? Because we’ve been in so much and, as women are getting older, you know – the clock is ticking and you effectively feel like you’ve lost a year of, I don’t know, finding a partner or having a baby. Is it safe to have a baby? Is it safe to have a vaccine? I heard something about how the vaccine was made of something like foetal cells or something and all my cousins didn’t want to have the vaccine and that I shouldn’t have it and I’m like, ‘Well, that’s your choice but I’m having the vaccine no matter what’. You know, a lot of the information you get about stuff is in the media and sometimes it can be fear mongering, and yeah, it is concerning.

Laxmi spoke to us in March 2021, when we were interviewing people as part of a study of diverse experiences of the pandemic. This was a time when the rollout of the first doses of COVID-19 vaccines was underway in the UK, working outwards from health and care professionals, those with existing health vulnerabilities, and the eldest age groups, and then step-wise down through younger age groups. It was the second wave of the pandemic, the daily death toll only slowly creeping down from its peak in January 2021. COVID-19 was still very deadly, necessitating the rapid implementation of a national-level vaccination programme. As one of the countries most dependent on targeting behaviours, the UK had hedged its pandemic response on mass vaccination, making combating ‘vaccine hesitancy’ an urgent priority (Jasanoff et al. 2021, p.12-13).

Amid the high speed and vigour of the vaccination programme, Laxmi – like others we spoke to – had been ‘hearing things’ about the vaccines, ‘fear mongering’, in social media and in her personal networks. What had most traction for her, and for the younger women in her family, was about the potential reproductive dangers of the vaccines. Laxmi reported and was aware of these concerns, but ultimately took the vaccine herself when invited to do so, adopting the diplomatic role of vaccine advocate within her family – seeking to enlist them into the protective body of herd immunity.
Lifting off from Laxmi’s account, this paper explores a particular discomfort that some of our participants expressed in relation to COVID-19 vaccines: the idea that vaccines could imperil fertility, shining a light on this aspect of the concerns harboured about the vaccines in 2021. We explore the social contours of these concerns about disrupted fertility, how they surfaced in relation to experiences – personal and historical – of the politics of reproductive control. We call this imperilled fertility, gesturing to the strength of sentiment our participants expressed, and the sense of threat and danger. Importantly this imperilled fertility is imagined, projected into possible futures. As expressed by Storer and Simpson (2022, p.1), during the pandemic ‘our ability to understand the present and to predict the future seemed to dissolve into a protracted crisis’. Our focus on imagining imperilled fertility allows us to capture people ‘grasping for some way of understanding… this deeply uncertain present’ (ibid.) and importantly, too, how they responded to these concerns. We refer to these responses as trials of COVID-19 vaccines, in the double sense of trials and tribulations but also scientific trials, as they sought and sifted through evidence, of many kinds and in different ways, in relation to their imagined reproductive futures. We highlight how these trials negotiated people’s ambivalence to transgressing normative orders of reproduction and citizenship. The next section provides initial historical context to the reproductive catastrophising precipitated by the pandemic, and introduces theorising around vaccines as technology, transgression and risk, how vaccination mobilises ideas of good citizenship, and reproductive control, through which this paper intervenes.

**Pandemics, vaccines and reproductive catastrophising**

Laxmi introduces her concerns around COVID-19 vaccines and imperilled fertility as part of a broader landscape of ‘paranoia’, as she put it, about women’s fertility that had been exacerbated by the conditions of the pandemic. Indeed, the events of the COVID-19 pandemic in 2020-21 can be sketched as a landscape of reproductive catastrophe, ‘wreak(ing) havoc on reproductive health’ (Aly et al. 2022, p.190). The COVID-19 pandemic has been documented to have manifold reproductive health impacts, including delayed pregnancies due to health and economic insecurities; a rise in unintended pregnancies resulting from barriers in access to contraceptives and abortion; pregnant
women’s vulnerability to severe maternal illness and complications if they are infected with COVID-19; and relatedly, their greater risks of contracting COVID-19 if they defer vaccines due to pregnancy. The effects of the vaccines themselves on reproduction must also be counted among these health impacts. Women anticipating or experiencing conception, pregnancy or breastfeeding were ‘faced with the difficult decision of being vaccinated, with novelty of the vaccine being a primary concern’ (p.195). Initially, the safety of the vaccines for women traversing the reproductive process was ‘complicated by the limitations of inclusionary scientific evidence because initial vaccine safety and efficacy trials mostly did not include pregnant and/or breastfeeding women in their cohorts’ (p.195). Later studies tested the safety, immunogenicity, reactogenicity, and efficacy in pregnant women, their effects on foetal programming and on lactation. This led to the ‘consensus by major medical societies to recommend vaccination of women regardless of pregnancy or lactating status’ (p.190).

In spite of the developing scientific consensus, controversies endured over reproductive impact of COVID-19 vaccines, in part due to people’s embodied experiences of vaccination, with widespread mainstream and social media coverage of reported menstrual changes after vaccination fuelling vaccine hesitancy or refusal (Sharp et al. 2022). Indeed, many people in the UK seemingly harboured concerns about the reproductive and fertility impacts of COVID-19 vaccines (see for instance Lockyer et al. 2021; Woodhead et al. 2022). In the UK, much attention has gone on the lower rates of vaccine acceptance in religious minorities and so-called Black, Asian and Minority Ethnic (BAME) groups (SAGE 2020; Razai et al. 2021; Hussain et al. 2022). However, others call for a less exceptionalising approach, for the racialized distrust of medical authorities articulated by minoritised groups to be seen as a token of how trust is, more broadly, crucial to all healthcare interactions (Kasstan et al. 2022), and for ‘public health systems to become more trustworthy and accessible’ rather than ‘placing the responsibility on minoritised groups to become less hesitant’ (Khan et al. 2021, p.1863).

Beyond the UK, too, fears about the fertility impacts of COVID-19 vaccines have been documented (see Diaz et al. 2021 on the USA; Ali et al. 2021; Leach et al. 2021), fuelled by various media outlets linking COVID-19 vaccines to millennial and apocalyptic endgame narratives (Sturm and Albrecht
In formerly colonised countries, childhood vaccines have earlier raised similar, sometimes epic-scale fertility scares (Feldman-Savelsberg et al. 2000; Kaler 2009; Renne 2010). In their important work on childhood vaccines, Leach and Fairhead (2008) offer a global perspective, highlighting how vaccine anxieties have been interpreted differently in countries like the UK, where vaccine hesitancy or refusal has been attributed to an ‘age of anxiety’ afflicting contemporary ‘western’ society, rooted in an ‘overblown sense of risk and loss of trust’, compared to discussions in Africa and Asia, where vaccine anxieties have been linked either with anti-vaccination ‘rumours’ or with collective resistance. In both settings however, ‘anxiety is imaged in its negative sense… interpreted in terms of “failure to understand”, a “breakdown of trust”, and so on’ (p.3). Rather, they argue that ‘it is more productive to ask, in a more positive sense, what people expect and desire around child health and why – and why at times vaccination is failing to match those desires’ (ibid.).

Echoing and building upon these insights, Kasstan (2023) makes a similar point in his important paper re-situating vaccination in the social study of reproduction, arguing that doing so ‘involves careful and critical attention to what people envision for their family life and children’s futures’. He argues compellingly that vaccines are, in a dual sense, ‘fundamentally concerned with reproduction’ (p.8). They are both life-enhancing technologies, which save lives and extend life. At the same time, those oppose vaccination do so in ways that resolve to protect children from bodily damage, or – especially in contexts where social inequality and marginalisation have been intractably reproduced across generations – because that most culturally valued resource, human fertility, is threatened.

This paper seeks to elaborate upon this duality of vaccine technologies as simultaneously protective of and threatening to life. We do this by relating COVID-19 vaccines to theoretical work on transgression and risk. Anthropologists Donnan and Magowan (2012) take transgression to be about crossing boundaries: actions which ‘challenge or confirm the moral, legal, economic, political, ethnic, racial and other limits’ in a particular context (p.4). These are thus ‘breaches of personal and group norms’ (p.6). Donnan and Magowan trace these ideas to Mary Douglas’s (1966) work on purity and danger, which analyses transgression as breaches of cultural precepts of pollution and ‘dirt
avoidance’. In her later book on risk, Douglas (1992) argues that taboo-thinking is conjoined to ‘modern’ conceptions of risk in that both are about reckoning with danger and casting blame. Whilst so-called ‘modern’ societies have ostensibly ‘disengaged dangers from politics and ideology, and deal with them by the light of science’ (p.4), sociological studies of knowledge show that scientific evidence is socially shaped and received. Whilst risk management and risk calculation have become more and more prominent in public policy and debate – hand-in-hand with the prominence of science, technology and the market – ‘dangers to the body, dangers to children, dangers to nature’ (p.7) remain politicized. The construction of certain behaviours as risky or dangerous means that a community has reached some ‘consensus in condemning the behaviour’ (p.27), making riskiness a sign of otherness. We build upon Kasstan’s argument by exploring the trials of those who were confronted starkly with the duality of vaccines as protective of and threatening to life, facing the transgression both of differentiated citizenship expectations, and differentiated reproductive expectations, and how they responded to this by pushing decisions into the future, while costing the transgression in the present.

Techniques of statecraft construct vaccination as a form of participation in citizenship, whereby ‘good’ citizens take the vaccine not only for their own sake but also for the greater good of the collective herd immunity. As Lim (2020) identifies, the figure of the ‘“good” coronavirus citizen’ was responsibilised, with a moral compass that considers the interests of others (p.78). This evokes broader thinking about forms of citizenship that are wrapped up in and connected to biomedical dominance, as in Ong’s (1995) descriptions of Cambodian refugees to the US being taught a hygienic ‘cultural citizenship’, where biomedicine ‘socializes biopolitical subjects of the modern welfare state’ (p.1244), Petryna’s (2004) ‘biological citizenship’, where Chernobyl disaster affectees must insert themselves within biomedical categories of radiation damage in order to claim entitlements to state care, or Nguyen’s (2007) ‘therapeutic citizenship’, where HIV status becomes the basis of claiming resources from public or NGO programmes. Common to this thinking, as Laurier Decocteau (2013) observes, is how ‘people who used to be the target of neglect are extended life lines, pathways to citizenship and inclusion in the body politic, but these life lines have disciplinary strings attached – requiring people to assume biomedical technologies of the self’ (p.426). Laurier Decocteau valuably
points to the zones of ‘exclusionary inclusion’, of groups internal to the nation-state but who do not yet enjoy all of its rights, that are inherent to ‘biomedical citizenship’ in the global South. On this point, particularly resonant in the context of contagion is Briggs’ (2003) study of a cholera epidemic in Venezuela in the 1990s, detailing how public health institutions demarcated ‘sanitary citizens’ from ‘unsanitary subjects’ in ways that deflected the blame for the epidemic towards indigenous culture, namely, upon the people most hit by the disease. We use this work to draw out how not-taking the vaccine may be read as anti-social, transgressing the norms of citizenship in pandemic times.

Briggs’ work leads to broader questions as to the racialization that underlies representations of good citizenship, and also, of what types of citizens states want to reproduce. It is pertinent to recall that race has long structured access to reproduction, as captured by Colen’s (1995) concept of ‘stratified reproduction’, developed through her contrast between West Indian nannies and their white American employers. Equally, stratified reproduction is tangible in the political realm, where ‘some forms of reproduction are encouraged and resourced while others are stigmatised and discouraged’ (Agigian 2007, p.4835). This provides one way of theorising, for instance, the racialized reproductive violence that Davis (2003) charts in the birth control movement in the US, which in the early twentieth century came to be increasingly infused with eugenics, advocating the compulsory sterilisation of the ‘unfit’, as well as mass birth control for Black people, as the flipside of Roosevelt’s accusation that the movement was promoting white ‘race suicide’. Davis tracks this historical legacy forward to the late twentieth century sterilisation abuses against Black, Native American and Latina women and forcible use of long-acting contraceptives in the US. At the global level, too, racialised stratified reproduction is witnessed in the agenda of family planning programming – which has also entailed egregious, widespread instances of forcible sterilisation and long-acting contraception – which Akhter (1988: 159) analyses as ‘Western depopulating strategies in Third World countries’ (and see also Hartmann 1995; Murphy 2017). Suggesting how these legacies of reproductive violence play out in people’s imaginations, in analysing COVID-19 misinformation and conspiracies in the US Prasad (2022) notes how different rumours developed traction with white and Black Americans depending on their framings, specifically how rumours of forcible population control resonated with Black historical
memories. Diagonal to the concept of stratified reproduction is Morgan and Roberts’ (2012) work of ‘reproductive governance’, highlighting ‘shifting political rationalities directed towards reproduction’ (p.241), and more broadly the politics of control over reproduction. The term governance highlights that this is control only partly the work of a state; it is also joined by non-state bodies, such as community organisations, and unofficial bodies, such as families, kinship groups and communities. Obvious, but important to draw out from the social study of reproduction, is how processes of reproductive control are gendered, with women’s bodies especially subject to labelling and control. This is because, as Yuval-Davis (1996) observes, ‘women reproduce biologically, culturally, and symbolically their ethnic and national collectivities as well as the workforce, their families, or the citizenry of their states’ (p.17). We use this work to theorise how, for those who worry about fertility risks, taking the vaccine and jeopardizing reproduction may also entail transgression, of normative expectations of reproduction, expectations that pinch particularly for women, shaped by racialized histories and positioning within collectivities at the various scales to which Morgan and Roberts point.

Before turning to these themes now deepened theoretically, and how they emerged in interviews with our research participants, we provide a brief account of the wider study from which this paper draws.

Research setting and methods

As noted above, public health concern about ‘vaccine hesitancy’ in the UK has been directed towards minoritised religious and ‘BAME’ communities (SAGE 2020; Razai et al. 2021; Hussain et al. 2022). This makes our study of COVID-19 infection, which had a primary concern with ‘diversity’ in COVID-19 experiences, an especially relevant corpus through which to explore vaccine perceptions.

Our study was funded by the UK Economic and Social Research Council between 2020-22 and sought to explore diversity of COVID-19 infection – from mild infection through to those who were admitted to Intensive Care – as well as diversity in social positioning, by virtue of geographic location
within the UK, social class, race/ethnicity, gender and age. We placed particular emphasis on ensuring representation with groups of people who have been hardest hit by COVID-19.

Our interviews had a narrative format. In the first part of the interview, participants were invited to tell their COVID-19 story in their own words and without significant probing. In the second part, we used a semi-structured topic guide to probe how COVID-19 had affected their health and wider aspects of their lives, communities, finances, work, education, family lives and interactions with health care services. Interviews were conducted online or via telephone. All were recorded on audio and/or video according to participant preference and lasted between 45 minutes and 2.5 hours. Four researchers completed interviews with 73 people, of whom 2/3 classified themselves in minoritised race/ethnicity or religious categories. Most of our participants were in their 30s, 40s and 50s.

Several aspects of the study make it especially illuminating with regards to people’s perception of vaccines and their relationship with fertility. The age range of the majority of our participants made for interviews with people at reproductive stages of their life courses, as well as parents of teenage or adult children at this stage, articulating stakes in their own reproduction as well as stakes in biological and cultural continuity. Interviews with both women and men highlight the gendered politics of reproductive control. Vaccines and imagined imperilled fertility was not a pre-determined focus of analysis, but the timing of our data collection foregrounded this topic of concern for some participants. Our recruitment was undertaken in 2021, at a conjuncture when, as we noted above, COVID-19 vaccines were just being rolled out. At the time of their interviews, some participants had already been called for vaccination, but others were still waiting to become eligible. Another particularity of the study is that these were interviews specifically with people who had been infected with COVID-19, giving them a distinct angle different to other qualitative studies of vaccine perceptions. Many participants described how their perceptions of COVID-19 vaccines changed in light of their own infection: sometimes recognising with greater urgency the need for the vaccines, and in other cases reassuring participants that they would have some COVID-19 antibodies already.
The rest of this article proceeds as follows. First we will explore how concerns about COVID-19 vaccines and imagined imperilled fertility surfaced in our interviews, in different ways for different people, as shaped by their race/ethnicity, gender and life course stage, and their position within families. We then turn to how participants responded to such concerns. In the concluding discussion, we return to the questions outlined above, regarding the negotiation of transgressions.

**Concerns: imagined imperilled fertility and the politics of reproductive control**

Across our corpus of interviews, numerous white participants expressed curiosity about vaccine hesitancy in BAME groups. Michaela, a white British support worker in her 50s, shared with us that:

> It does concern me though, some of this disinformation and the fact that and particularly I think BAME communities, some or South East Asian communities [sic], you know, this this sort of fake news or false information that’s being perpetrated about the risk of having a vaccine or that the Muslim community says it contains alcohol or for Hindus it contains some, some, something to do with cows or beef or whatever but, and that means that that possibly there won’t be this herd immunity in certain areas…

This tethering of vaccine hesitancy to minoritised groups suggests that, as with Briggs’ (2003) earlier work, racialized others were most likely to be thought about as anti-social citizens in pandemic times. Overall, our corpus evidences that this hesitancy was far more demographically diverse, and that as we will demonstrate, white, ethnic majority people also harboured reproductive fears about COVID-19 vaccines. Nonetheless, our interviews are very clear about how legacies of ‘stratified reproduction’ and historical memories of reproductive violence were reflected in the specific apprehensions that minoritised participants expressed about the vaccines. Suraiya, a British Pakistani teacher in her 50s, related the conspiracy theories surrounding the vaccines as form of forcible population control (see Prasad 2022, p.98-99) to the coercion of women’s bodies in Africa and South Asia:
You had a lot of conspiracy theories coming out, you know… Something could be people who just like they’re just scared people, you know. Or they think there’s one sector who want to control other sectors especially when you look at Bill Gates and what he did with the vaccination in Africa before, you know. Or when they went to India and they started vaccinating people, you know. And some people thought it was for sterilisation, you know.

Suraiya went from these thoughts about reproductive control, to talk about the COVID-19 pandemic as an event of eschatological significance, ‘if you look at the seven plagues that happened to Egypt, you know, was that a same, similar thing’. Such religious connections were brought up by other participants too. Augustine – an NHS worker in his 30s – stressed his own readiness to accept the invitation to be vaccinated, and lived up to expectations of good pandemic citizenship. He described advocating publicly for vaccine uptake in his local Black community. Nonetheless, he said he understood the reservations of those, like his mother, who remained unconvinced:

My mum prays, you know; she’s Christian, you know. And then what she say to me, you know, that this vaccine is, according to my mum, is not good. They are trying to basically to make one new world order, you know. She say people have to follow this, you know. They bring their illness. Now they’re going to have one army, have one government, have one thing. People have, they will have to [take the vaccine]. If you don’t get, they will come and say one day, if you don’t have a vaccine you won’t get a passport to go to this place, you won’t do this you won’t do that. So she’s against it. And then she said ‘this vaccine can do bad things to your body, you know. It can, you know, it can make you not have babies’.

This mistrust was posed explicitly, by other minoritised participants, as responses to legacies of impeding Black life. Enid, a retired Black British woman in her early 70s, connected her misgivings about the vaccine to her racialized fear of hospitals as institutional crucibles of Black death – the reason why when she had been sickest with COVID-19, when her blood oxygen levels had plummeted precipitously and an ambulance had come for her, she had not gone:
My first thought was, ‘Black and minority go in in hospital, are they deciding, “oh, why treat them, let them die?”’. And a lot of people think like that. You know, lots of people still believe that Black people and Asian people died because they weren’t treated. And they’re thinking, they’re just left to die, because if you’re a certain age you were Black, they probably look and think, ‘why give you all this oxygen and stuff, you ain’t going to live anyhow?’… And another thing is, because you couldn’t have any visitors, who the hell was going to talk for you? You know, it’s… who was going to say ‘what are you doing what are you giving that person? What are you giving my daughter or my husband?’ Who’s going to talk for you? You had no visitors, who cares? … People were saying ‘oh they’re giving all these Black people and Asian people the vaccine because they’re trying to cut the population down’, and a lot of people were beginning to believe it, and because more people were dying, Black and Asian were dying, they were saying yes it is true. You know, yes, it is true!

Enid’s reflections juxtapose the public concerns surrounding low vaccine uptake among ‘BAME’ groups with a profound concern over the absence of care for Black life and Black life-making. Enid had eventually taken the vaccine, but remained deeply ambivalent about it:

I had the vaccine, but sometime I said to myself, ‘in ten years time, what will this vaccine give me?’. At one time I debated not having it, including my daughter not to have it, but she has. And I think that’s why a lot of West Indian people still have not had the vaccine, because they do not believe. They’re thinking, what will this vaccine give them in years to come? What will this vaccine give these young people in years to come? Some form of cancer? Will they be able to have children?

Enid’s reflections capture how imagined imperilled fertility were voiced particularly in relation to the vaccine decisions of younger women, or women earlier in their reproductive careers. Neha, a British
Indian woman in her 40s, had taken the vaccine herself, reassured by the knowledge that she’d ‘had all my kids’, but worried about it in the longer term, in relation to her teenage daughters:

We don’t really know very much about what the long term implications are really going to be. Is it going to affect our children’s fertility, for example?... It is quite scary. It has been very scary, but the vaccinations, however, are also, in a way, all we have in terms of any type of hope of getting any type of normality back. Is that, what is the alternative? Getting COVID and possibly dying? Or getting the vaccination and getting the possibility of our life back to some sort of normality, you know? So it’s a very tricky decision but… // I mean I always knew that vaccine would have to happen and the fact that I’ve had all my kids. I mean it doesn’t necessarily directly affect me in that way for the whole if we’re talking about the aspect of fertility.

Whereas Neha expressed a firm sense of having completed her family, Fatima, a British Pakistani woman, was troubled by the possibility that the vaccine could affect pregnancy, as she was still on some level unsure about whether she had completed her family or not:

At first I was definitely no, don’t want it at all. If anyone should get it, it should maybe my parents. // As much as I know, I’ve stopped at number three. I don’t want any more children [clears throat]. But again, I’m 33. There might come a time where I go, ‘Uh, actually, I do have some time for more.’ That was my only hesitation in terms of they, they don’t have enough research whether if I was to have it done, what my pregnancies will show. [erm] That will only happen when women who have had the vaccine then your nine month’s period and then see the difference in the children. That’s my only hesitation. I sometimes think thats I sometimes I say to myself, ‘well, we’ve decided not to have any more children, so it’s okay, I can,’ but the possibility of getting pregnant and having a child and then see what the vaccine brings, yes, there is definitely—‘cos like I said, I’ve ruled out children. But [erm] I know accidents can happen and I know sometimes you don’t plan it and it happens.
The particular concerns regarding the reproductive health of younger women, and women with incomplete families relate to a final observation, which we will return to in the following section: our participants’ tendencies to become involved in the vaccine decisions of others in their families, an observation echoing Leach and Fairhead (2008) on how vaccine decision-making occurs in intimately social worlds ‘spanning genders and generations’ (p.2). Indeed, concerns about imagined imperilled fertility were prominent within influencing of others’ vaccine decisions, in ways shaped by contours of gender, the life course and position in families. In a similar way to how Enid debated ‘not having it, including my daughter not to have it’, and Neha worried in relation to her teenage daughters, Samantha, a white British woman in her 40s, described how she and her husband had greater concerns about the safety of the vaccine in relation to their daughter than themselves:

We’ve spoken to the hospital, about [late teenage daughter] having the COVID jab [um] and the fact that she’s only sixteen and not recommending it really because there’s not enough evidence out there how it can impact on somebody of her age. Because I’d hate it to affect her fertility in the future it’s got to outweigh the risks for me that, in the future, it could completely affect her life…. They’ve said recently that maybe she could have it, but no one can give anybody any guarantees about anything. I mean I’m older. I’ve had my COVID jab but I’m fine with not having any more babies… [With my husband] he’s not anti-vaccine at all but he says, these things about, [um] you know, thalidomide…

This section has detailed how concerns about COVID-19 vaccines imperilling fertility were expressed by participants of diverse socio-demographic locations. Fertility fears had a particular traction in the accounts of our participants from minoritised groups, in connection with histories of ‘stratified reproduction’ and reproductive violence. Further, we identify differentiated processes of ‘reproductive governance’ – the politics of control over reproduction, with public institutions pushing the vaccine read as part of a politics of impeding Black and Brown life and life-making; and to reproductive control at the level of families, kinship groups and communities. Here, gender and life course stage
were prominent, with decisions to accept made in one generation, but to refuse for their female children. The next section deepens this insight as to how people responded by playing with time.

**Responses: trials of transgressing citizenship and reproductive expectations**

We now turn to look in-depth at two participants who – despite their very different socio-demographic positioning – negotiated their ambivalence about the vaccines similarly. We explore what this similarity may reveal about the hold of the citizenship and reproductive norms being transgressed.

**Susan**

Susan is a white, middle-class British woman in her late 30s, working as a respiratory doctor in an Intensive Care Unit. As a result of her professional role, she described feeling under significant pressure throughout the pandemic to embody and perform the medically correct and prescribed courses of action with regards to COVID-19 control. Even her descriptions of navigating social distancing protocols over the course of 2020 expressed her perception of herself as a model citizen:

> Some of it was about performing the right thing to do, and I think whereas, I don’t think my husband felt such a pressure to perform the right thing to do… My position in society and in our local community is a… this is a… you know, I’m a local doctor and I think it’s important for me to set an example of what the right behaviour was.

She therefore described agonising over deciding whether to take the COVID-19 vaccine, when in late 2020 she discovered she was pregnant *just* as health professionals were being invited:

> Then just before Christmas the vaccine started arriving in the hospital and I, at the same time, I found out that I was pregnant. And [um] everyone was really excited about the vaccine and I was really excited about the vaccine, but then I didn't know whether or not I should have the
vaccine because I was pregnant. [um] And I also wanted to model having the vaccine, because I knew that was really important to demonstrate that we thought it was safe because the evidence showed it was safe, so that other people felt encouraged to take it. But also, on top of all of that it was... I was very early pregnancy; I was only like five weeks or something and [um] I'd had two miscarriages... we'd just been approved to be adoptive parents, and so, it was just generally [um] quite a kind of complex series of emotions really.

Whilst Susan was hesitant to describe herself as excited about the new pregnancy, she was explicit about her excitement towards the vaccine, something she could feel hopeful about – offering a reproductive potential she could comfortably imagine, in tension with the precarious reproductive potential of the early pregnancy. Just at this juncture she became sick with COVID-19, presumably acquired through work: ‘so I was like shit. Excuse my French [both laugh]. I’ve got COVID’.

Recognising the dilemma Susan had described, we asked her to unpack what had been going through her mind about the vaccine and the pregnancy at that time. Susan went further back in time, talking about a miscarriage she had been through in 2018, at a time when she had been working very hard – something her mother still made digs about (‘“well, you know, you work really [hard]… it’s too stressful, that’s what caused it” – you know, mums have a way of digging’). She and her husband had one child, but imagined an ideal family comprised of at least two children. In light of miscarriage and non-conceptions, they had decided to adopt. Yet events had turned out differently than expected:

We decided early… this was in fact January last year, that actually we’d look into adoption [um]… // Having spent three years trying to get pregnant, as soon as we were approved, we were trying not to get pregnant because we were starting to look at children to –; that we’d potentially have a match with who might come and join our family. And you know – spent three years trying to get pregnant, spent three months trying not to get pregnant; I got pregnant. Think it’s called Sod’s Law.
The pregnancy being so long-awaited, she described consternation about her deep-seated desire to grow her family on the one hand, and living up to model citizenship on the other. Erring from the biomedical ideal was a strange predicament for her to be in, as she had taken so much pride in embodying this ideal, even to the extent of ticking off other colleagues:

I remember one doctor saying to me, ‘Well, you know, I’m happy with my antibodies,’ and I was like, ‘Well, you might be happy with your antibodies, but you’re also a leader that other people are looking at and thinking that that type of action’s OK, and it’s not always about you, it’s about the people who are around you and the people who follow... either follow your lead or might be in contact with you and then get it from you and are not so happy with their antibodies.’

Susan resolved her worries by deferring to time – something she could do because of herself having COVID-19, as this gave her a kind of temporary respite with respect to the decision:

So, well, I phoned up the vaccine people at work who had been trying to contact me and said ‘well actually, I’m pregnant, but I’d like to talk about having the vaccine’. … Anyway I flagged it up… And then two days later I had COVID anyway, so even if I’d had the vaccine it would have been – it wouldn’t have stopped me getting COVID, I’d had all my exposure by then. And then once I'd had COVID, my kind of... you know, again my perception of risk changed again. So, you know, we... there is very little data on pregnant women; pregnant women are not included in the vaccine studies, but they think it's safe and many women have chosen to have the vaccine, but we still don't know long term data. But I've had COVID, so presumably I've got some antibodies and that they will last a period of time. The decision now I have to make is if I'm going to have the vaccine when do I have it, but I've got a bit more time to make that decision. I don't need to rush into it which is, you know, quite a nice position to be in. I think it's much more tricky for other people. And now the decision [um] or rather the concerns are if they make me like work from home which I'd hate.
Feeling safe in the thought that she had some antibodies, she allowed herself to feel hope:

It's really hard not to be excited when you've got a little baby growing; you see it wriggling on the screen [laugh] and it's still managing to hold on in despite coronavirus, and particularly in these times, I think, you know, it's nice to have a little bit of future hope.

Susan’s accounts describe her journey as a model citizen in COVID times, from telling off colleagues who were happy with their antibodies, to being happy with her antibodies, now allowing herself to feel hope about the pregnancy. Susan’s negotiation between reproductive and citizenship transgressions resonate with the account of Malaika, a British Pakistani woman in her late 20s.

*Malaika*

While different in her intersectional positioning, less educationally and professionally privileged, Malaika shared something of Susan’s identity of being a local figure with a position to live up to, as an NGO keyworker invested in the health and welfare of her local community. For instance, she had taken up COVID-19 awareness-raising work in 2020, encouraging mask-wearing, the use of hand sanitisers, and social distancing. Unlike Susan, Malaika described a context to the pandemic in which she and her networks had faced lots of ‘fake news’ circulating on social media, including about the vaccines. In spite of there being, by the time of our interview, lots of pro-vaccine counter-messages out there too, when her mother had been invited for the vaccine Malaika described her as ‘terrified’. She explained this with respect to her mother’s ‘lack of understanding, she doesn’t speak English, she doesn’t really know the government guidelines and rulings and what’s actually happening because she’s so illiterate’. Malaika was ambivalent too, because of being at the very outset of her reproductive career as a young unmarried woman, and concerned – like others for her – about fertility:
I think even for me personally, I was offered the vaccine and I’ll be very honest with you, my close friends and my family members said to me, ‘Don’t have it’. To this day, I’ve not been vaccinated, even though I’m a keyworker because they’re like, ‘You’re not married and it’s going to affect your fertility’. And I don’t know but I believe that they wouldn’t really give you a vaccination that’s going to affect your fertility and so through my work and being on social webinars and read things and I believe and I trust that the vaccination is safe. And I think with all the pressure of people saying, ‘Don’t take it. Don’t take it. Don’t take it.’ Towards the end, I got a bit of fear. I’m a bit scared so I didn’t take it.

She recognised the role model represented by people like Susan, and wanted to live up to it:

And a lot of my friends that are professional doctors, nurses, teachers, carers, they have taken the vaccination and they have got a lot of knowledge and understanding and, even ones that work in the lab that actually take part in producing this vaccination, if they feel it’s safe to take then, you know, I trust, I trust that.

Despite being pulled towards this model, and especially in recognition of the risks of her being exposed to COVID-19 through her keyworker professional role, she said she couldn’t quite bring herself to do it – she did not turn up to her vaccine appointment. To a greater extent than Susan, Malaika foregrounded her family’s opinions in her deliberation about taking the vaccine:

Because my dad passed away with COVID and because I am very active in the community now and I have [er] a lot of contact with people because obviously, I deal with emergency cases and work with people, most vulnerable people that come to us I’m [inclined towards] doing it [taking the vaccine], from the fact that I want to protect my mother. I want to protect my siblings but then I’m scared because they’re not in favour of me having the vaccine. So a big part of me actually booked it in and said, ‘this is for me to save my family from catching COVID because I am a keyworker, I’m probably out in the community more than anybody
else in this household. So, if anyone is going to bring anything in the house, it’s me so I need to protect them, so I’m going to take the vaccine’ and on the other half, when I spoke to my family, they were like, ‘No. No, we don’t think you should get it, we don’t think it’s safe’.

At a later point in the interview she deepened her reflections on the hold of her family’s opinions, alluding to the particular authority of men, making the decisions and prevailing over wider voices.

Personally, I think because in the Pakistani community, men are quite dominant and they like to take control and they want to be the decision maker. I think, when someone is telling you you need to do this, they’re like, ‘No, we make our own decisions’.

Malaika therefore made the expectations and opinions of the family and kinship group far more visible in her account than Susan, to such an extent that it was ambiguous whether she was actually concerned for her own future reproduction, or whether she had absorbed others’ fear. Nonetheless, like Susan, she resolved her ambivalences by playing with time, and deferring:

I just thought, you know what, right now, I’ll refuse the vaccination and then, in the coming weeks, if my mother takes it and they understand that my mother is okay, then they’ll be fine about me taking the vaccination.

Both Susan and Malaika were torn between maintaining extant life, by protecting people from potential death – as Malaika had experienced very intimately, with her own father’s death – against the reproduction of new life, and creating future generations. In the concluding discussion, we draw out the implications of these accounts for the transgression of reproduction and citizenship orders.

Concluding discussion: deferring decisions
Our interviews canvas all manner of reproductive catastrophising in relation to COVID-19 vaccines: that vaccines were monstrous mis-uses of foetal cells; that they could sterilise, or prevent conception; or impair the health or ability of a growing baby during pregnancy. Whilst vaccine anxieties were expressed by participants across diverse social positionings – including people privileged by their class and racial/ethnic majority background – because of long-standing histories of ‘stratified reproduction’ (Colen 1995), the traction of imperilled fertility ran particularly deep for minoritized participants (see also Prasad 2022 on the US). At the same time, participants recognised COVID-19 to be a deadly infection, in relation to which COVID-19 vaccines represent technologies of potential life-enhancement, saving lives and extending life. The accounts we explore therefore build upon Kasstan’s (2023) analysis of the duality of vaccines as reproductive technologies, extending this insight via exploration of the vivid imaginations of reproductive catastrophe in relation to both taking and not taking the vaccine, and the trials of transgressing citizenship and reproductive norms.

To these participants, COVID-19 vaccines posed problems of transgression, ‘breaches of personal and group norms’ (Donnan and Magowan 2012, p.6), with ‘dangers to the body, dangers to children, dangers to nature’ (Douglas 1992, p.7) remaining strongly politicized. Amid fertility fears, uptake of COVID-19 vaccines risked transgression of reproductive expectations regarding future life-making. These concerns were expressed at different levels. For some, their own imperilled reproduction was the primary concern, their hopes for or expectation that they would have children. Others talked about it in terms of imperilled ‘generativity’, to borrow Erikson’s (1997) conceptualisation of people’s desire to pass on some part of themselves so they may ‘live on’ in subsequent generations; their desire to hold a grandchild and see their family continue. Others, still, talked about reproductive expectations in terms of the imperilled continuity or survival of a group or a people, evoking histories of coerced sterilisations or fears of cutting down Black and Brown populations. These necropolitical imaginaries speak to historical experiences of oppression and negligence or uncare (Mbembe 2003). Across all these levels of imperilled reproductive expectations is the sense of life-making as hallowed, affording an unquestioned and unquestionable necessity. To some participants, not taking the vaccine posed reproductive problems too – articulated at the proximate level of cherished family members, who
could die as a result of exposure to one’s own COVID-19 infection, as well as at the more distant level of communities – their own racialized communities, as well as national collectives. This then jeopardised enacting the biologised notions of citizenship which prevail in pandemic times. Obvious, but important to draw out, is how these norms and expectations hold particular power over women, who ‘reproduce biologically, culturally, and symbolically’ the layers of collectivities in which they are positioned (Yuval-Davis 1996, p.17) and who we see also bearing disproportionate burdens of citizenship in pandemic times, as parents and carers – imagined and extant – charged with ‘seek[ing] to help their children flourish’ (Leach and Fairhead 2008, p.2) through their vaccine decisions.

The gender normativity of kinship is important here in unpacking the involvement of family members in vaccine decision-making. The detailed accounts of Susan and Malaika differ in the extent to which they respectively emphasised their own voices over the voices of family members and kinship groups. Malaika foregrounded her family and her family’s opinions to a far greater extent, indeed to such an extent that she didn’t ever actually describe her own hopes or intentions for having a family. Nonetheless, she presented a clear contrast between her own voice saying ‘I need to protect them, so I’m going to take the vaccine’ and their voice saying ‘no, we don’t think you should get it’.

Importantly with respect to theorisations of kinship and its hold in generating gender-normative practice around health behaviours, Malaika’ interview intimated to the particular hold of the strong views expressed by the men in her family over fertility and the vaccine, recalling how families are sites of gender and generational inequality. Dispelling the assumption that this might be specific to Malaika’s British Pakistani family, Susan’s mention of mother’s reproach about how her fast-paced working life had imperilled an earlier pregnancy, ‘you know, mums have a way of digging’, suggests the relevance for her, too, of reproductive expectations and control by families and kinship groups. Earlier we also glimpsed this from Enid and Neha, and in Samantha’s account of her husband’s strong views about COVID-19 vaccines and thalidomide-like risks, regarding their teenage daughter.

These interview extracts identifying the significance of the lifecourse and decisions to accept made in one decision but to refuse for one’s female children speak to the ways in which many of our
participants responded to the vaccine concerns through temporal strategies. Despite their
differences, as we note above, Susan’s and Malaika’s accounts chart out similar responses in how they
navigated these concerns by deferring acceptance of the vaccine. Susan wanted to wait to see what
happened with her pregnancy, whilst Malaika would wait to see how, if her mother volunteered for
the vaccine, this might change attitudes in her family. In some ways deferral might be a surprising
response, the opposite of a knee-jerk emergency reaction, such as would be the response to a
perceived catastrophe. Perhaps deferral, to safeguard the anticipation of future life-making, pushes the
potential for reproductive catastrophe further into the future? In both accounts nothing bad had yet
occurred – Susan’s baby was still growing, wriggling there on the screen; there had been no further
infections in Malaika’s household. Had issues arisen with Susan’s pregnancy, or had someone else in
Malaika’s family had got seriously ill, no doubt different, more urgent stories would have been told.

As a way of responding to jeopardized normative expectations, deferral to the future creates distance
from, but does not avoid transgression, which exacts its costs in the present. Susan still had to
navigate being a doctor who did not model the vaccine in her community and to junior colleagues,
whilst Malaika still had to sit with concerns about fertility issues at some point in the future. Deferral
appears to merely soften the transgression and make it more acceptable as an anticipated future
acceptance and contribution to saving collective life, softening it by containing it within a liminal and
transitionary time period, therefore forgivable because eventually it will conform. Particularly in
Malaika’s case, deferral appears to create space for multiple people to negotiate their contradictory
expectations. Deferral is, we propose, a means to accommodate multiple expectations of good
reproductive citizenship, those of the state, ethnic and national collectivities, and families.

There may be further implications of acknowledging deferral as a means of negotiating transgressions
of reproductive and citizenship norms. Deferral, as way of quietly, but actively playing with time,
could be an entry point for institutions to become more trustworthy in light of fertility anxieties.
Storer and Simpson (2022) critique the elusiveness of trust as a concept, and the forms of stigma,
racism, and marginalisation that such an elusive discourse may usher in to vaccine responses.
Returning to Kasstan et al. (2022) and Khan et al. (2022)’s concern with re-framing and deflecting the issue of mistrust, and seeing it not as an attribute of individuals or groups, but as generated by public health systems, what would a vaccine programme that acknowledged the complexity and tensions of reproductive crisis look like? Surely it would need to consider how multiple people’s concerns may be incorporated into ‘individual’ decisions, how past and future reproductive experiences may impact on present decisions, and treat vaccine decision-making as a temporal process – for which vaccinators’ time would need to be built in to supporting, from the outset and over the long duration.

References


