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Assisted Reproductive Technologies and the Conceptualization of Ageing in India

Anindita Majumdar

Indian Institute of Technology
anindita@la.iith.ac.in

Abstract

Through a mapping of field data collected from two parts of India: Hisar in North India and Hyderabad in South India, this paper looks at the ways in which reproductive decline and ageing have become part of the discourse on assisted reproduction in India. The importance of mapping reproductive decline in different clinics and regional spaces highlights certain shared and distinct conflicts. The thematic discussions of the research findings place the privileging of temporalities in an ambivalent relationship with chronological ageing and reproductive decline. The linkages between ageing and infertility/fertility are-more marked in the infertility clinic wherein the diagnostic protocols and treatment towards achieving parenthood are evaluated through the prism of social and moral judgements. Rural-urban differences, gendered expectations of familial roles and rules, and lived environments and lifestyles have a huge impact on the use and dissemination of assisted reproductive technologies in India. In this paper, social expectations surrounding fertility, children, and the family become part of the clinical discourse in the administration of assisted reproductive technologies; and carry important implications for ageing and age-related markers of status and role.

Keywords: *Temporality; Biological Clock; Reproduction; Masculinities; Egg Freezing; Menopause*

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Anindita Majumdar

Indian Institute of Technology
anindita@la.iith.ac.in

In this paper, I examine the role that assisted reproductive technologies (ARTs) such as in-vitro fertilization (henceforth ARTs/IVF) play in conceptualizing age and ageing in fertility treatments. Assisted reproductive technologies facilitate conception through various methods of clinical intervention. There are primarily three methods that are used: (1) intrauterine insemination (IUI) that involves the manual introduction of donated semen into the ovary through a syringe-like aperture; (2) in-vitro fertilization (IVF), the most popular method, that involves artificially fertilizing the egg and sperm in a laboratory before transferring the embryo directly into the uterus; and (3) intracytoplasmic sperm injection (ICSI) which involves direct micromanipulation of the sperm and egg in the laboratory to assist the formation of an embryo, that is then transferred into the uterus. When utilizing these technologies, couples or individuals, who want children, seek out gamete "donations," while "third-party" participants such as sperm donors, egg providers, and surrogates provide a form of "donation."

In this complex arrangement of gametes and medicine, the linkages between age and fertility may not be highly discussed or scrutinized. Yet, previous research in this area documents the ways age comes to be trapped in the metaphor of "ticking clocks" in reproduction (Friese, Becker, and Nachtigall 2006; Friese, Becker, and Nachtigall 2008), especially in relation to motherhood and the choices that women make while seeking IVF. However, a larger conversation that documents the framing of reproductive decline within assisted reproduction as a cultural phenomenon involving demography and popular discourse on decline and birthing, seems to be missing. It is argued that the numbers of those infertile is certainly not distressing enough to pursue a more concerted policy engagement (Jejeebhoy 1998), but representation and conversations around ARTs certainly suggest otherwise.

Globally, demographic discourse related to age and fertility is restricted to discussions on early marriage and chronicling the capacity to birth in a woman's lifetime (Bledsoe 2002). In India, this focus has been on high population indicated by rising or falling regional markers of total fertility rates (Jeffery and Jeffery 1997; Nagaraj 2010; Visaria 2010). Reduced to statistical markers and "targets," women have long been seen as pawns in a larger demographic game of population control (Jeffery and Jeffery 1997). Despite changes to a policy perspective that engages with universalized markers, population control proves to be inadequate as a prism of analyzing how age/ageing are dynamic markers for infertility and childlessness. In my research, I suggest that the age-fertility linkage must be expanded to determine how ARTs are reframing conversations around ageing and reproduction.

The discussion in this paper reflects upon the complexities of age and assisted reproduction by bringing together field data and narratives from IVF specialists and their patients. In the process, the representation of reproduction as being in inevitable decline, biologically, is contested through the meanings that clinicians put forth in their administration of fertility treatment. At the same time, this paper also engages with emerging findings about how the "treatment" of infertility becomes enmeshed

in other temporalities: marriage and sexual intimacy—both of which are important precursors to seeking IVF in India.

Methods and field sites

The fieldwork for this research study was part of a multi-sited ethnography conducted in 2018. Fieldwork took place in North India: in Delhi and in Hisar, Haryana, and in South India in the city of Hyderabad. In Hyderabad, a metropolitan city, and the capital of the state of Telangana, the fieldwork was primarily conducted in two clinics. One clinic catered exclusively to women, and the other provided reproductive health interventions for men. Both clinics operated together and referred spouses to each other. I seek to discuss some points of difference and similarity between the two clinics and the spaces within which they operate and present differences within each region which cannot necessarily be standardized. Ethical approval for this study was obtained from the Institute Ethics Committee of the Indian Institute of Hyderabad.

The North Indian town of Hisar (pop. 301383 as per Census of India 2011) is a predominantly agrarian culture. It's the biggest town in the otherwise small state of Haryana, which is 103 miles away from the Indian capital city of Delhi. Haryana has been part of a national portrayal of overt masochism and gender inequality ever since news of skewed sex ratios with a depleting female population and rampant honor killings of women have been reported (Chowdhry 1997; Kaur 2008; John *et al.* 2009). The impact of the existing patriarchal culture continues to predominate emerging research on Haryana (see Mishra and Kaur in this volume). In the city of Hisar, within an area of 3983 kilometers per square, there were approximately four IVF clinics operating at the same time. My fieldwork was primarily based in the oldest IVF clinic, where the doctor was known for facilitating IVF births amongst women and men who were past their reproductive prime. Dr. Rajesh (pseudonym) was popularly known as the "rogue doctor" in the mainstream English language press for encouraging women in their 50s and 60s to have babies. Amongst some of his successful cases were two women aged 66 and 70, who had carried a pregnancy and birthed triplets and a single baby, respectively. Most of Dr. Rajesh's clientele belonged to the landed gentry from rural Haryana, but some also came from the neighboring states of Punjab and belonged to peasantry with small landholdings.

In Hyderabad, which is a thriving multicultural metropolis with a long history of Islamic rule, the data primarily comprised of Hindu women at a multispecialty hospital that catered to women's fertility health. Along with other reproductive ailment care, and pregnancy and birthing interventions, the clinic had a very popular IVF wing. This clinic was one among many since Hyderabad has a thriving fertility industry with numerous clinics and commercial surrogacy facilities (Gupta and Prasad 2019). A significant portion of the fieldwork was also conducted in a clinic catering to men where a mixture of African[1] and Indian men formed the clientele. However, this paper focuses only on data gathered from Indian men and women, who frequented the clinics. The interviews were conducted primarily in English, with some respondents preferring to respond in Telugu and/ or Hindi.

SEX	NO. OF RESPONDENTS	AVERAGE AGE	AVERAGE YEARS OF MARRIAGE	AVERAGE AGE OF SPOUSE
Hyderabad (2018)				
Men*	13	31.07	3.8	24
Women	29	30.4	5.7	34.7
Hisar (2018)				
Men	14	45.8	22.07#	41
Women	17	40.7	21.5	44

Table 1. Age-Marriage data amongst those frequenting IVF clinics in Hyderabad and Hisar (as per sex).
*Excludes data on 22 African men interviewed at the same clinic.
#Includes bigamous unions and the cumulative years of both marriages.

The data discussed in Table 1 is from five different clinics. The Hyderabad data is drawn from two clinics, as identified earlier: a women's fertility clinic and a men's fertility clinic. The Hisar data is from three clinics, although the majority of the data also includes figures from men and women married to each other, which is not replicated in the Hyderabad data. The Table primarily discusses the data on Indian men and women, leaving out the complicated, but diverse data on African men visiting Indian clinics for fertility treatment.

I purposely seek to link age and fertility here with the linked data on spouse's age and years of marriage. This is significant because the rhetoric surrounding fertility at all the clinics was centered on heteronormative ideals of conjugal family-making.[2]

As evident from Table 1, the age of those frequenting IVF clinics in Hyderabad is much younger than those seeking treatment in Hisar. However, the Hisar data does not reflect the number of times that men and women may have visited or sought treatment earlier, only noting their age at the time of the ethnographic fieldwork. The paper goes on to discuss some of these elements later, in relation to the thematic discussions. What is also significant is the relationship between the respondents' ages and their marital years: as uniformly, there is a gap in the age between spouses, suggesting that husbands are older than wives in India—whether in the South or in the North (Pande 2012; Sarkar 2000). This combines cultural preferences and the legal age of marriage (for women 18, and for men 22). Increasingly, however, in Hyderabad, men seemed to visit the IVF clinic early into their marriage, as the data suggests. Erectile dysfunction (3), infertility (2), low sperm count (2), not known or undisclosed (5), and low testosterone (1) were the main fertility issues amongst the Indian men visiting the Hyderabad fertility clinic. This rise in fertility treatment could also be due to the increasing awareness regarding fertility and reproductive problems that men face, along with a heightened awareness regarding male infertility due to exposure mass media reportage and emerging forms of urban conjugal intimacy (Pathak 2020).

The commensurate data for the men frequenting the clinics in Hisar is unavailable due to the silence surrounding male infertility, which included the tacit approval of the IVF specialist, and the wives' positioning of infertility as embedded within their bodies. Similarly, a specialized diagnosis of women in Hisar and their specific reproductive/fertility ailment was not articulated. This was primarily due to the age of the women frequenting the clinic, and their "obvious" positioning as post-menopausal. Their medical history was marked by visits to local obstetricians and gynecologists, as well as faith healers

and mendicants—who were unable to diagnose the exact cause of infertility due to a paucity of available diagnostic technology in rural areas; but also due to the secrecy of the treatment and the pact of silence that couples entered into with their doctors. In Hisar, my questions regarding specific ailments and associated treatments were met with stoic silence. Among specific couples (both men and women) that I was interviewing, there was a refusal to discuss the kind of diagnosis that the clinician had suggested in identifying male or female factor infertility. The couples themselves did not know or did not wish to discuss their diagnosis (to protect each other from the social stigma of being labelled infertile)—they wanted a child, that's all that mattered.

In the later sections I discuss specific ailments that women in Hyderabad suffered from, along with details of their treatment; where there was certainly greater clarity, knowledge, and understanding of reproductive ailments and treatment protocols. The rural-urban divide is very important here, as is the fact that most of the patients at the Hisar clinics were school dropouts, and some of them had never received any formal education whatsoever. In Hyderabad, all 29 women were graduates with some of them pursuing full-time occupations. All, except two women amongst those interviewed in Hisar, were housewives.

Assisted reproduction in relation to reproductive decline

The relationship between age and fertility goes beyond its conceptualization in demography and population studies—though that remains important in many ways as well. In anthropology, this relationship has marked conversations on the life cycle by seeking to understand the ways in which social roles and ageing are linked in different cultural settings.

The most potent idea in relation to age and fertility has been that of the "biological clock." Its contemporary relevance has been spurred through mass media reportage and representations in popular culture. Within anthropology and sociology, the concept of the ticking clock in relation to declining fertility has become a source of contemporary research. In Carrie Friese' work (2015), the biological clock features both as a self-reflexive conversation and as a social representation. Relatedly, the connections with older motherhood and the fear of declining reproduction has been explored especially in relation to infertility medicine (Friese, Becker, and Nachtigall 2008). Franklin (2002) speaks of the ticking clock as an essential aspect of the planning associated with family-making.

Planning and the family-making enterprise are intrinsically linked, especially in the use and proliferation of contraceptives (Woodspring 2016). In essence, the oppositional, yet connected argument to the anxieties of declining reproduction through the "biological clock," are replicated in the linked anxieties of the "ticking" population bomb. The cultural/natural distinction between the two timekeepers could not be starker, and yet connected. To offset the fears of increasing populations in the Third World, the "population bomb" began to be used as an apt metaphor to fuel war-like investment into containing the multitudes of poor citizenry in the Global South, especially in India and Bangladesh (Rao 2004). That both sets of time depend upon temporal imaginaries that are dependent upon controlling women's reproductive bodies, is particularly telling. Biology is represented as naturally declining, but also uncontrolled in nature—if left unchecked. Yet, contraceptives do not only control undesirable fertility, but are, interestingly, also linked to the contingencies that life cycles are embodied with, which have very little to do with chronological time and the population bomb, and much more to do with the notion of experiential "tolls and tribulations" (Bledsoe 2002).

I find Bledsoe's (2002) conceptualization particularly stimulating when seen in relation to the ways in which age and ageing come undone in medical practice and diagnosis. Consequently, the idea of

"denaturalizing ageing" is linked to the medicalization of nature (Lock 2007). Again, medicalization has been most predominant in the conversations around women's reproductive bodies. Lock speaks of the medicalization of menopause in the West that is primarily concerned with creating a dysfunctional body, headed towards inevitable decline, with the end of menstruation (Lock 1994; Martin 2001).

In such a conceptualization, cultural manifestations of reproductive decline or reproductive bodies become universalized, which may not really be the case (Lock 1994). In the case of India, fertility and reproduction have been important to the conceptualization of gender, marriage, and kinship (Kumar 2006; Patel 2006), but their relationship to technology has been fleetingly analyzed. In India, fertility is greatly prized, and childlessness carries a social stigma that can be debilitating. A large part of this stigma is linked to the idea of intergenerational care wherein children, especially sons (Patel 2006), have the responsibility to care for their parents once they are old. In the Hindu conceptualization of the life cycle, the householder must inevitably retire to old age and be cared for by their children. However, old age does not mean social decline, for the elderly hold positions of power and prestige in the Hindu household (Lamb 2000; Madan 1989). Elderly women, for instance, are often desexualized from their reproductive selves and may come to occupy influential positions within the community (Lamb 2000).

Bledsoe (2002) finds this in the case of Gambia, wherein elderly women, who have birthed children, are seen as having fulfilled an important social role and wear the badge of mothering and care work with great pride. In India and Japan, menopause is the end of reproductive life but not social life (Kaulagekar 2011; Lock 1994). Thus, reproductive decline is marked in a gendered way on the woman's body across cultures, even though their manifestations may differ. Such a conceptualization also influences the linkages with the biological clock, forcing us to think of the premature loss of fertility only by women.

However, increasingly, men are also subjected to the critical gaze of declining fertility (Wentzell 2013). This includes a conscious move away from anxieties regarding sexual performance and impotence, to concerns regarding infertility (Inhorn 2003). Emerging medical findings suggest that aging men pass on certain genetic defects to their children the later they father (Malaspina *et al.* 2005).

Reproduction and its linkages with limited time is an important part of medical and anthropological engagements and comes to be framed through age and ageing. However, the conceptualization of temporal vicissitudes on reproduction seems to be limited to the process of circumventing infertility through IVF.

The ageing and the aged in IVF

Alexandra Crampton (2013) asks of her respondents, "Who is old?" to ascertain their answers surrounding age and ageing. While I didn't specifically ask such a question in the field, the notion of age came undone in specific ways in my ethnography. Crampton (2013) notes that a dominant notion of old age consumes policy discourse, but the lived experience differs from such construction—often existing in opposition (Lamb 2000).

But in assisted reproduction, the boundaries between defining age and lived experiences constantly get blurred in clinical experience. The absence of the "statistical" continues to provoke ambiguous meanings around fertility and ageing, despite the overwhelming discourse on the "biological clock." The ageing and the aged are part of a dynamic narrative within assisted reproduction that engages with lived experiences but also with the ways in which medicine and technology can reframe the social understandings of the body.

This is especially important since there are no age markers or limitations to get IVF administered. The Indian Council of Medical Research (ICMR) which is responsible for the draft legislation on assisted reproductive technologies in India mentions that couples seeking ARTs should cumulatively be aged at 100. Recently, the ICMR has been more precise, defining the limit to 45 for women and 50 for men. However, many clinics seeking to circumvent these specifications might use the cumulative age bracket to make IVF accessible to those who are in their 20s or early 30s, older husbands, and/or younger wives. While explicitly looking at the identification of ageing bodies in terms of the reproductive lifespans of men and women, IVF specialists in India also visualize a time frame from most "fertile" to obvious failure. Thus, the limits of reproductive fertility are contingent upon factors other than disease, such as the "tolls and tribulations" of one's life span (Bledsoe 2002). These tolls and tribulations are defined by factors such as late marriages and economic pursuits, often engaged with modern living and its trappings, or in other cases like bigamous marriages and long-term childlessness.

The ageing and the aged are two sides of the same coin in assisted reproduction in India.[3] Couples that visit the IVF clinic in their mid-30s are deemed as already ageing. Post-35 year-old women are aged. But is the post-60 woman who gets pregnant through IVF similar to the middle aged 35-year-old seeking ARTs? Dr. Rajesh, at the Hisar clinic, continued to assert that the level of pathology amongst elderly pregnant women was the same as that found amongst middle-aged women during pregnancy. He states, "The pregnancy in an older woman mimics the same forms of maternal mortality as the middle-aged woman. Thus, the clinical outcomes for women in their 60s are similar to those in their 40s."

The aged woman as an "anomaly," emerges from the potent identification of the "pathologized" middle-aged woman (Lock 1993). In examining such a representation, Lock engages with the biological clock through the lens of aging and middle age—as a spectrum that is constantly under scrutiny in Western medicine and epidemiology. Thus, the end of menstruation is for all practical purposes, the end of life, and to survive after that for a decade or more makes the aged woman an anomaly. The doctor in Hisar similarly pathologizes the elderly woman seeking a child post-menopause.

Nonetheless, age is a marker, here, of forms of abnormality that the already aberrant may generate. In such a context, it is important to note that fertility diagnosis by clinicians create markers of normal, abnormal, aberrant, and monstrous(sity) within IVF practice. Taking Canguilhem (1989) as my starting point, the four categories overlap to eventually normalize how ageing in IVF practice emerges as a dynamic concept. I purposely use the values attached to the conceptualization of these concepts to briefly understand how medicine creates values around the idea of reproduction and bodies that can, may, or may not reproduce. Here, age acts as the signifier for each value. However, age is not just a number but a process and a moment. In that sense, the categories of the normal, aberrant, and monstrous may constantly interchange, just as Canguilhem conceptualizes them.

Overturning reproductive clocks

The aged exhibit monstrosity in their identification as birthing parents. The monstrosity is marked in the horror of images that circulate of elderly women birthing emaciated, underweight babies. In newspaper reports on the birth of children through IVF amongst women who are aged, especially between the ages of 60 and 70, the mother and her children are symbolised through markers of debility—and decline:

> An Indian woman who had a baby in her seventies has said that being a mother is harder than she thought it would be. . . . Daljinder Kaur said her health had deteriorated since she gave birth to her first child, last year . . . 'since he's been crawling, I am on my

> hands and knees and its hard. My body can't take it. It's been harder than I thought. My blood pressure has suffered, and I get tired very easily now. I've seen several doctors, but they just give me medicines and a diet plan.' (England 2017)

In a recent reporting of a 73-year-old woman who gave birth to twin girls in a place close to Hyderabad, the "horror" of the event was continuously channelized through the depiction of debility, especially in the expected fears of death related to elderly parenting. "The husband of a woman aged 73 who is thought to have become the world's oldest mother after giving birth to twin girls [through IVF] . . . suffered a stroke just a day after his daughters were born" (Ledwith 2019).

The conversations surrounding elderly parenting through IVF often invoke the looming consequences of death for the newborn. Therefore, concerns about the children's future after the inevitable, and dangerously close, death of the parents leads to questions about the aberrant nature of their desire as well. In an article on facilitating birth amongst elderly couples, Dr. Narendra Malhotra, Head of Indian Society of Assisted Conception (ISAC) is quoted as saying: "We don't endorse making mothers out of grandmothers . . . it's too risky for the woman. Their bodies are not designed to bear children after 50" (England 2017).

Here, the monstrous commingles with the aberrant in creating an unfriendly and dangerous representation of overturning biological clocks. But what does this overturning of biological clocks truly entail? Is the medico-technological "overturning" problematic only socially? Are the "monstrous" only socially marked this way? Amongst those infertile couples who went on to have children through IVF at a later stage—that was deemed to be socially unacceptable—perceptions have changed. "When our babies came home from the hospital, everyone in the village turned up! The local political representative also came with his entourage. Many said they had prayed for us to have a child," says Ahir Poonia, 52, father of twins—when his wife at 50 gave birth to them through IVF. For Ahir and his wife Dharam, decades of "inauspiciousness" (*abshagun*) brought on by their infertility was miraculously and effectively overturned by technology. It did not turn back time but upended the social markings of age in terms of a social-chronological progression.

Overturning the biological clock carries social stigma—it is an act "against" nature. ARTs "assist" nature but do not necessarily challenge it. Thus, an elderly parent is a "miracle" that cannot be replicated or should not be replicated. Within the oft-quoted representation of IVF births as miraculous, the elderly parent is almost like a nightmare.

There is also the question of repeated IVF use that incites reproductive decline before "it's time." ARTs are notorious for their flawed claims to high rate of pregnancies, in the constant positioning of IVF clinics through aggressive "success rates" (Sarojini *et al.* 2011). After 20 years of marriage, nine miscarriages, and multiple cycles of both IUIs and IVFs, Dalip Singh became a father to an infant son in Hisar at the age of 51. Dalip had given up: "I told my wife, it doesn't matter. We will adopt, or take care of our nephews and nieces," until his wife gave birth in their last IVF attempt at the age of 41. The fertility timeline is also induced and constructed by ARTs, as we will see next.

Mapping reproductive decline

At the same time, the aberrant young couple who is unable to birth a child and goes to IVF clinics, is not turned away. They are often incorporated and pursued by IVF specialists in the hopes of a higher success rate that will promote their clinics. In Hyderabad, Dr. Reddy notes,

> I wish they [couples seeking fertility treatment] would come to me for treatment after a year and half of being married. Instead, most couples come after five years of trying after getting married, which delays their chances of conception even further. This is particularly problematic if you are already in your 30s. I don't expect them to come in the first year of their marriage, as that does not qualify as infertility, but after a year and a half would be ideal.

Their absorption into fertility treatment despite unexplained causes of infertility, such as issues with sexual compatibility, physical debility (such as a missing uterus, or a pin hole vagina), early menopause, or a life-threatening disease—nonetheless, do not invite retribution or horror. Here, debility is not inevitable or in progress but in a state of unintended suspension: an aberration but not a monstrosity. Their debility has social consequences that are not marked by death or immediate decline, thus requiring active intervention.

Dr. Maithili notes regarding women in their 20s opting to freeze their eggs for use later,

> So, what they are doing is they come in their late 20s or early 30s and freeze them [eggs]. We have not had people coming back for it because it is only a recent norm isn't it with google, that is past last year I am thinking.[4] It's such a strange thing for girls to come and freeze their oocytes, but because it was made possible by Google, we have a lot of girls coming in for that. I am thinking they won't come before a decade because they are in their early 20s and early 30s. And when we talk to them, most don't even have their partners, they are not even seeing anybody. Very smart girls who knew what they were doing in terms of their careers. So, I like that.

Dr. Maithili is an exception amongst practicing IVF specialists and obstetricians who largely espouse the need to adhere to a time frame to not only produce through sexual reproduction, but also through IVF.

In the data from the Hyderabad women's fertility clinic, 13 women (out of 29) were in the age group of 20-29 years. In Haryana, only one female respondent (out of 17 women) belonged to the 20-29 age bracket. But Dr. Rajesh found an increasing number of young couples coming to his clinic, unlike his earlier clientele of elderly men and women. "They come in early nowadays because of familial pressure to have children soon after marriage." In another clinic, close to Dr. Rajesh's in Hisar, the doctor was explicit in her avoidance of women above 45 seeking IVF, as it went against the medical guidelines, even though they received many cases from that particular age group.

The 25-year-old woman who was in her first trimester after undergoing a successful IUI at Dr. Rajesh's clinic, had been married for four years and did not have a child, prompting her visit to the clinic. "We tried a lot of things for the past four years until tests at this clinic pointed to my husband's low sperm count. I had to undergo lots of social censure even though I am educated, and a government schoolteacher and my husband is a farmer." In Hyderabad, the 20-year-olds battled polycystic ovarian syndrome/diagnosis (PCOS/ PCOD), husband's low sperm count, and unexplained infertility. Most came to the clinic within four years of marriage, with an average of two years of unprotected coitus and no pregnancy. Some did conceive but had miscarriages or abortions. Here, reproductive decline was not the reason for the visit, but reproductive health was mapped and marked through the rhetoric of impending decline.

Ultimately, these 20-year-olds become "normalized" as they try to become pregnant through multiple failed IUI and IVF treatments and enter their 30s. Many of the 30-45-year-olds had already been through 5-10 years of treatment. At the Hyderabad women's fertility clinic, out of 29 women, 16 were between 30-45 years of age and had been through, on an average of two cycles of IUI, with a few of them later transitioning to IVF. The preference for IUI was linked to factors such as a younger age, the possibility of a pregnancy that closely mimicked the "natural" process, and the cheaper cost of the treatment. All those between 30-35 years were undergoing IUI, while those above 35 were gently nudged towards IVF, especially in cases of a history of failed IUIs, or due to their "advancing" age—implying increasing deterioration and decline.

But it is the 35-45-year-olds who are the true "normals" of IVF treatment. Childless women aged 30 and above are abnormal in case of delayed marriage and childbirth but normalized in the quest and recourse to IVF. IVF is an inevitable aspect of declining reproduction marked by the age range identified above. Couples must prepare for entry into treatment, even if they have birthed a child through sexual intercourse (or "normally"), as they may come to suffer from secondary infertility.[5]

The mapping of infertility is predominantly concentrated on primary infertility or the inability to have a child after one year of unprotected coitus. Secondary infertility does not engage public interest as the couple are seen to have "proven" their fertility by already having a surviving child. However, the stigma attached with secondary fertility is very real, especially for women who have daughters. A majority of those who came for secondary infertility in Haryana and Hyderabad were women in the age bracket of 35-45 years, and their normalization within IVF was part of the treatment protocol. In Hyderabad, the son preference was not as acute as it was in Haryana, largely due to the overwhelming culture of sex selective abortions and low female sex ratio in the North (John *et al.* 2009). Proven fertility was easier to work with for IVF clinics, as opposed to primary infertility which was also associated with unexplained causes.

Thus, the "normal" was marked in particular ways in IVF discourse—which did not necessarily link age with reproductive decline but was nonetheless identified through it. Age becomes a maneuverable category that may be used to "transfer" infertility to fertility and vice versa depending upon how the technology facilitates the birth of a baby. Yet, it is marriage and sexual compatibility that brings forth the most important linkages between age and fertility within assisted conception.

Marriage and sex as markers of temporality in infertility treatment

The repeated emphasis on marriage and marital ties becomes the central trope in using and administering infertility medicine in India. The column in Table 1 that highlights the years of marriage is also important in identifying the role that sexual intimacy plays in the birth of children. Thus, number of years being married, in the case of Hyderabad couples, is less considering their age bracket. That of the Hisar couples is longer. The ways in which age is constructed in ARTs comes to carry within it this paradox of marriage and the marital years that a couple share.

Marital longevity and childlessness become potent tools in the hands of IVF specialists in claiming eligibility for using the technology. As per the WHO and ICMR guidelines, the inability to conceive after a year's unprotected intercourse means that you are deemed infertile but eligible to use ARTs. In a pro-natal culture like India, marriages must reproduce children and kin soon, with many life cycle rituals embedded in childbirth, pregnancy, and motherhood (Jeffery and Jeffery 1996; Patel 2006).

But within the conversation on how marital longevity impacts the imagination of ARTs-induced reproduction, divorce always operates as a silent and potent threat. The termination of companionship—arranged or through love, is especially threatening to reproductive temporalities as I discuss below.

Managing reproductive intimacies

Due to the public outcry against the Hisar clinic for facilitating birthing amongst elderly women, especially the birth of triplets by a 66-year-old woman in 2010, Dr. Rajesh had to reinvent the way he presented his clinic. His focus was on facilitating the success of marriages that have remained steadfast despite the debilitating impact that childlessness can have. In most of the publicity material that the clinic exhibited, successful couples who had had children at the clinic were identified by the years of their marriage, rather than their respective ages. Dr. Rajesh wanted to "reward" women, who had been through years of social debility and abuse due to their childlessness, by giving them the "gift" of a child born through IVF.

The idea of marital commitment in the heterosexual marriage is particularly marked on the woman. In rural Haryana, as elsewhere across the world (Inhorn and Van Balen 2002), infertility and childlessness are positioned on the woman as her "lack." Ideas regarding a man's potency are never under scrutiny though they may be talked of in whispers, if after more than two marriages the man is unable to beget a child. Bigamy is commonly practiced amongst men in Haryana, especially amongst those who have been unable to have a child. In many cases, the wives facilitate the second marriage, in open contravention of the Hindu Marriage Act 1955 which penalizes bigamy. While in my sample, only two men had two wives, I heard and read about multiple cases of bigamous unions undertaken due to infertility. Here, the first wife would retain her position in the household as senior co-wife, with divorce being a non-option.

Divorce was not an option for many of the women faced with childlessness and co-wives. The economic and social stakes were too high, especially when marriages were arranged by families. Divorce has been identified as antithetical to the "sacralized" bond of Hindu marriage, however, its existence and recent predominance points towards various dynamics that may operate within the Hindu social structure. Caste endogamy remains the driving force in a majority of Hindu marriage practices, and its violation is met with violent reprisals from kin, as Chowdhry (1997) has documented in her research on honor killings in Haryana. However, the circumvention of rules and customary laws, was found in the solemnization of what Parry (2001) identifies as "secondary marriage" (following Louis Dumont's classification). Primary marriages are "pure unions" that follow caste and community norms, but the secondary union following the breakdown and dissolution of the first one involved self-choice and an affirmation of companionate marriages over arranged marriages. However, it is not necessary that the fluidity of the secondary union is applicable to both partners in a marital arrangement. That is, the marriage or union may be secondary-primary based on the position the individual occupies within the familial structure in terms of descent and gender.[6] The documented bigamous unions in my ethnography in rural Haryana were mostly primary unions for younger women marrying elderly already-married men, seeking to circumvent childlessness; all marriages, whether secondary or primary, were arranged by kin. Besides the fertility of the second wife (again embedded in her youth), considerations of inheritance and spousal support were important in choosing the second wife.

Often, the wife would suggest a young woman from amongst her natal kin as a suitable co-wife.[7] Thus, Sadhu, 60, who had married his wife, Rajo's younger sister, after 15 years of childlessness strengthened his ties with his affinal kin, while his first wife sought safety in her position by bringing in a relative as

a co-wife. Eventually, his second wife, Dhanno, who was in her 30s, was also unable to conceive naturally, leading them to Dr. Rajesh's clinic. Both wives underwent an embryo transfer, but it was Rajo, at 55, who conceived surprisingly. She had a daughter but relinquished care to her co-wife and sister, Dhanno. Sadhu's 90-year-old mother spoke to me about the decision to seek a second wife for him:

> We waited for Rajo to get pregnant, but it was taking too long. Sadhu is my only son, and we have all this land. He must have an heir. I told Rajo (because Sadhu was refusing to marry again), she could choose her co-wife. . . . a woman from her own family if that helped. And Rajo would always be the first wife. Now look, look at God's will! Rajo got pregnant before Dhanno!

Their marital commitment was steadfast as Sadhu successfully navigated his life with Dhanno and Rajo. In agrarian, rural societies in the North, with property and dowry as the prime movers of patriarchy, multiple marriages worked to keep land and kin close.

Yet, as per law, bigamy is outlawed. Socially, the endorsement of a secondary marriage for those suffering from childlessness, while retaining the first wife—was seen as legitimate. But such a right was extended only to the man and not to the woman. Despite the availability and use of fertility technologies and treatment, childlessness was identified in relation to the woman. And most importantly, the child belonged to the patrilineage—and to the father. His contribution was non-negotiable, especially if he was the eldest son, slated to inherit the family land or already managing them.

Dr. Rajesh's intention was ostensibly to prevent such second marriages so that fertility was not compromised. He sold IVF as a "feminist technology" that protected women's rights within a marriage. "I support those marriages where the husband remains in love with his wife and does not remarry despite childlessness. There are many such men who remain committed after 30-40 years of marriage. They deserve IVF, and I am celebrating their love and support, and not their age." The longer the marriage, the more suitable for IVF intervention.

Awkward intimacies

On the other hand, in Hyderabad,[8] marriage and intimacy were under the scanner with many couples coming to the clinic within a year of their marriage. Often these couples were in their early to mid-twenties. Here, the meaning of intimacy was marked by troubled associations with modernity and women's choices. The desire to reproduce was "tainted" by the failure of marriage itself. In Hyderabad city, couples did not seek intimacy but children. Factors such as stressful work environments and schedules pushed many couples into the IVF clinic early into their marriage. All of the IVF specialists interviewed in Hyderabad city reiterated the impact "lifestyle choices" have on fertility. Excessive smoking, drinking, eating out, and hectic work schedules with associated stress contributed to difficulties in conceiving:

> Many of the couples who come to me for treatment work in information technology. This means they have demanding corporate jobs and grueling schedules. If both husband and wife are working till late, when do they have sex? On weekends. They have quick, disconnected sex on holidays, which may not match with ovulation cycles and lead to zero chances of conception. (Dr. Reddy)

Others mentioned increasing promiscuity as another reason for the collapse of conception within marriage itself.

However, what is interesting to note is that in the Hyderabad data, out of 29 women, a majority of them (20) were stay-at-home, while information technology professionals and other currently employed women were a minority. Similarly, amongst the 13 Indian men visiting the men's clinic for fertility treatment, three of them were in information technology, and the majority (6) were in the service sector including teaching and public service. The association with particular professions was a trope that IVF specialists frequently used to explain failed treatment. But what emerged was a gendered notion of damaging lifestyle choices that impact sexual intimacy over a long period of time. Thus, women pursuing demanding careers were at a risk of infertility, while men pursing supposedly "hedonistic" lifestyles were reneging on their role as responsible householders. Here, the choice to pursue a particular lifestyle over traditional norms of marriage and the household, especially for women, was tied into the loss of conception—and the fulfilment of marriage.

Choice is an important trope when engaging with the question of marriage and divorce. Just like rural Haryana, amongst urban middle-class families in Hyderabad city, the value given to marriage within the same caste and community is deeply gendered, with family-arranged unions being given precedence over love or choice marriages (Saavala 2010). Choice marriages (Fruzzetti 2013) often involve the circumvention and rejection of parental authority as well as of community norms of endogamy (Mody 2008), especially if they are primary unions. In Saavala's (2010) study, many of the couples who had chosen to go against their families to have inter-caste and interreligious marriages found love to be fleeting, which "disappears" soon after marriage. Yet, in an interview with the clinic counsellor in Hyderabad, love marriages seemed to work better in the support that the woman got from her spouse during the infertility treatment. This was especially potent in case of sexual intimacy:

> See, unconsummated marriages make up almost 30 percent of the cases that come to me in the infertility clinic. Surprisingly, most of them are love marriages. I don't know, but in my experience, I have seen that in an arranged marriage it is rare that husbands or wives will be understanding, or will say its ok take your time [to have sex]. Because an arranged marriage is an agreement where the spouses know close to nothing about each other, and seek immediate parental intervention to solve any problem. In places like Andhra and Telangana, parents are more involved in the lives of children, so either the wife goes and complains to her parents or the husband goes and complains, and this is followed by both sides intervening. When it comes to love marriage during courtship, couples are comfortable and may try foreplay and stuff, but they still abstain till marriage. But after marriage, the lack of sexual intimacy continues. Most of the times because they are comfortable and know that they love each other so much, they don't want to force each other.

But there is more to it than just love. Familial abuse or past episodes impact women's negotiation with sex and intimacy. In marriages arranged by families, this becomes exacerbated as couples know each other fleetingly before they marry. The familial pressure to birth soon after marriage along with the inability to do so puts pressure on them. ARTs are an easy resort to overcome the pressures of sexual intimacy and also avoid divorce. In interviews with young women frequenting IVF clinics in their 20s, many mentioned familial pressure as the main reason for visiting the clinic. Here, spousal support is a very important part of navigating the treatment in the face of stigma and social approbation (Becker 1994; Franklin 2002). Yet, divorce due to infertility is not unheard of. Dr. Maithili had become trapped in a potential lawsuit when the husband suddenly refused consent to transferring embryos fertilized from his sperm and his wife's eggs into her uterus:

> This man walks in, and I can see something has changed in him. He says he wants out from the entire IVF procedure and wants a divorce! Suddenly! I don't know what happened. Earlier he used to be very timid, and his wife would openly berate him as being unmanly. I think when his tests showed that he had a good sperm count, he regained some sense of his manliness.

ARTs continue to uphold heteronormativity as the ideal for marriage and fertility, while at the same time debunking its value through conflicting conversations on sexual compatibility and marital commitment. Divorce is seen as a legitimate recourse in the case of childlessness, but not everywhere—often being replaced by bigamy. The temporal element of marriage compatibility comes to be positioned on their collective age, as much as on the desire for procreation.

Conclusion

In this paper, I sought to discuss the ways in which age and ageing become important markers of seeking and administering assisted reproductive technologies to overcome infertility and childlessness. The two field sites belonging to different parts of India exhibit both points of cultural difference, and larger similarities. Yet, age and ageing come across as dynamic symbols of the discourse surrounding the administration of a provocative technological intervention.

The dynamism lies primarily in the ways in which temporalities come to represent the markings of age and fertility. In Bledsoe's conceptualization, "[T]emporalities . . . are not necessarily reducible to fixed points in history [unlike time] . . . [but] are a rich source for describing experience" (2002, 60). Thus, marriage and sexual intimacy make their way into thinking about reproductive decline and become important markers of fertilities, or the lack thereof within clinical discourse.

In the clinical practice and discourse of ARTs, the idea of decline is split; fertility and reproduction do not match and do not carry the same form of implications. Here, one is not only talking about terminological or policy distinctions in conceptualizing the two ideas, but in how technology continues to create and problematize the idea of nature and biology. Age is critical in manufacturing reproductive decline for women as they inch towards menopause, but their fertility and ability to birth is under threat early on itself. The medicalization of pregnancy and childbirth has explicitly created the female body as already compromised in its ability to birth due to the limited number of eggs a woman produces over her lifetime, with menopause being a form of "symbolic death" (Lock 1993; Martin 2001). Within such an obvious split subject of eggs and wombs (further exacerbated by surrogacy), the reproductive timeline now embodies "already" declining, and "always already" declining in thinking about fertility and reproduction. But as I suggested earlier and do so through the discussion of ARTs clinical discourse, the ageing and aged are both stuck in their own chronologies. Even though the consumption of ARTs continues to complicate it. And despite the emerging acknowledgement that infertility and reproductive decline are equally marked on men, the practice of ARTs continues to privilege patriarchal desires.

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Notes

1. Amongst my African respondents, all of them were on medical visas to seek reproductive interventions.

2. I did not encounter any gay or lesbian couples visiting the clinics, even though foreign gay men were a large section of my respondents during my previous research on transnational surrogacy. There are some reasons for this: as per the draft legislation, only heterosexual married couples can access ARTs (with some leeway for single men and women); homosexuality was recently decriminalized in India, the road to legalization and acceptance is still far away; and the clinics that are part of the ethnography were very invested in projecting socially acceptable practices.

3. Here, I am following Bledsoe in thinking of age as a non-temporal process of physical deterioration or senescence, as well as the ways in which chronological time becomes enmeshed in clinical discourse.

4. In 2017, Google and Facebook offered their female employees the "perk" to freeze their eggs to be able to pursue family planning according to their own "timeline," that "allowed" them to pursue their career choices.

5. The discussion on secondary fertility presents interesting findings from the data gathered from the two sites. In Hyderabad, 3 out of 29 women had surviving children, and were aged 33-40 years of age. An overwhelming majority had no surviving children, though they may have suffered through miscarriages or stillbirths. In Hisar, out of the 17 women interviewed, 6 had previous children, mainly daughters. Again, the age range for seeking interventions for secondary infertility is between 35-42 years. In case of Hisar, the data is also particularly provocative as it documents visits to the IVF clinic to circumvent secondary infertility, as much as to seek a son.

6. In research on cross-region bridal traffic in the state of Haryana, where Hisar is located, the practice of marrying the younger brothers to women belonging to different caste, religious and ethnic communities, has become popular since the decline in women in the area due to the practice of sex-selective abortions. These are primary unions that buck the caste and community endogamy rule, primarily because younger male kin are not a priority in the familial inheritance hierarchy (Mishra and Kaur, this volume).

7. In an interesting linkage to the established practice of '*karewa*' (Chowdhry 2007), or the marriage of the elder brother's widow to the younger brother, which was popular in rural Haryana, in my ethnography, the wife would suggest her younger sister or other women from her natal kin in marriage.

8. Hyderabad is known as a hub for information technology, with all international and national IT companies operating out of the city. It is also known as "Cyberabad."

References

Becker, Gay. 1994. "Metaphors in Disrupted Lives: Infertility and Cultural Constructions of Continuity." *Medical Anthropology Quarterly* 8 (4): 383-410.

Bledsoe, Caroline H. (with Fatoumatta Banja). 2002. *Contingent Lives: Fertility, Time, and Aging in West Africa*. Chicago: University of Chicago Press.

"Census of India Website: Office of the Registrar General & Census Commissioner, India." n.d. https://censusindia.gov.in/2011census/population_enumeration.html.

Chowdhry, Prem. 1997. "Enforcing Cultural Codes: Gender and Violence in Northern India." *Economic and Political Weekly*, 1019-1028.

Crampton, Alexandra. 2013. "Population Aging as the Social Body in Representation and Real Life." *Anthropology & Aging* 34 (3): 100-112.

England, Charlotte. 2017. "Indian Woman who had Baby at 72 says she has No Regrets, but being a Mother is Harder than she Expected." *The Independent*, March 9, 2017. https://www.independent.co.uk/news/indian-woman-who-had-baby-at-72-says-she-has-no-regrets-but-being-a-mother-is-hard-a7621631.html

Franklin, Sarah. 2002. *Embodied Progress: A Cultural Account of Assisted Conception*. New York: Routledge.

Friese, Carrie, Gay Becker, and Robert D. Nachtigall. 2006. "Rethinking the Biological Clock: Eleventh-hour Moms, Miracle Moms and Meanings of Age-related Infertility." *Social science & medicine* 63 (6): 1550-1560.

Friese, Carrie, Gay Becker, and Robert D. Nachtigall. 2008. "Older Motherhood and the Changing Life Course in the Era of Assisted Reproductive Technologies." *Journal of Aging Studies* 22 (1: 65-73.

Friese, Carrie. 2015. "When Research Bleeds into Real Life: Studying Reproductive Ageing while Ageing Reproductively." *Somatosphere*. Accessed November 25, 2019. http://somatosphere.net/2015/when-research-bleeds-into-real-life-studying-reproductive-ageing-while-ageing-reproductively.html/

Fruzzetti, Lina. 2013. *When Marriages go Astray: Choices Made, Choices Challenged*. New Delhi: Orient BlackSwan.

Ganguly, Sujata, and Sayeed Unisa. 2010. "Trends of Infertility and Childlessness in India: Findings from NFHS Data." *Facts, views & vision in ObGyn* 2 (2): 131-138

Gupta, Anu, and Sheela Prasad. 2019. "'Outsourced Pregnancy': Surrogate Narratives from Hyderabad." *Contributions to Indian Sociology* 53 (2): 299-327.

Inhorn, Marcia C. 1996. *Infertility and Patriarchy: The Cultural Politics of Gender and Family Life in Egypt*. Philadelphia, PA: University of Pennsylvania Press.

Inhorn, Marcia C. 2003. "'The Worms are Weak': Male Infertility and Patriarchal Paradoxes in Egypt." *Men and Masculinities* 5 (3): 236-256.

Inhorn, Marcia, and Frank Van Balen, eds. 2002. *Infertility around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies*. Berkeley, CA: University of California Press.

Jeffery, Patricia, and Roger Jeffery. 1996. *Don't Marry Me to a Plowman! Women's Everyday Lives in Rural North India.* Lanham: Boulder Press.

Jeffery, Roger, and Patricia Jeffery. 1997. *Population, Gender and Politics*. Cambridge: Cambridge University Press.

Jejeebhoy, Shireen J. 1998. "Infertility in India: Levels, Patterns and Consequences: Priorities for Social Science Research," *Journal of Family Welfare* 44 (2): 15-24.

John, Mary E., Ravinder Kaur, Rajni Palriwala, and Saraswati Raju. 2009. "Dispensing with Daughters: Technology, Society, Economy in North India." *Economic and Political Weekly*: 16-19.

Kaulagekar, Aarti. 2011. "Age of Menopause and Menopausal Symptoms among Urban Women in Pune, Maharashtra." *The Journal of Obstetrics and Gynecology of India* 61 (3): 323.

Kaur, Ravinder. 2008. "Dispensable Daughters and Bachelor Sons: Sex Discrimination in North India." *Economic and Political Weekly*: 109-114.

Kumar, Pushpesh. 2006. "Gender and Procreative Ideologies among the Kolams of Maharashtra." *Contributions to Indian Sociology* 40 (3): 279-310.

Lamb, Sarah. 2000. *White Saris and Sweet Mangoes: Aging, Gender, and Body in North India*. Berekely, CA: Univ of California Press.

Ledwith, Mario. 2019. "Husband, 82, of Indian Woman, 74, thought to be the World's Oldest Mother after giving Birth to 'Medical Miracle' IVF Twins has Stroke the Day After they are Born." *Daily Mail*, September 6, 2019. https://www.dailymail.co.uk/news/article-7436963/Husband-Indian-woman-74-gave-birth-IVF-medical-miracle-stroke-day-after.html

Lock, Margaret M. 1994. *Encounters with Aging: Mythologies of Menopause in Japan and North America*. Berkeley, CA: Univ of California Press.

Lock, Margaret. 2007. "The Final Disruption? Biopolitics of Post-Reproductive Life." In *Reproductive Disruptions: Gender, Technology, and Biopolitics in the New Millennium*. Edited by Marcia Inhorn. Berghahn Books.

Madan, Triloki Nath. 1989. *Family and Kinship: A Study of the Pandits of Rural Kashmir*. New Delhi: Oxford University Press, USA, 1989.

Malaspina, Dolores, Avi Reichenberg, Mark Weiser, Shmuel Fennig, Michael Davidson, Susan Harlap, Rachel Wolitzky, Jonathan Rabinowitz, Ezra Susser, and Haim Y. Knobler. 2005. "Paternal Age and Intelligence: Implications for Age-related Genomic Changes in Male Germ Cells." *Psychiatric Genetics* 15 (2): 117-125.

Martin, Emily. 2001. *The Woman in the Body: A Cultural Analysis of Reproduction*. Beacon Press.

Mody, Perveez. 2008. *The Intimate State: Love-marriage and the Law in Delhi*. New Delhi: Routledge.

Nagaraj, K. 2010. "Fertility Decline in the South Indian States." In *The Oxford Handbook of Population and Development*. Edited by AK Shiva Kumar, Pradeep Panda, and Rajani R. Ved, 101-110. New Delhi: Oxford University Press.

Pande, I. 2012. "Coming of Age: Law, Sex and Childhood in late Colonial India." *Gender & History* 24 (1): 205-230.

Parry, J. 2001. "Ankalu's Errant Wife: Sex, Marriage and Industry in Contemporary Chattisgarh." *Modern Asian Studies* 35 (4): 783-820.

Patel, Tulsi. 2006. *Fertility Behaviour: Population and Society in a Rajasthan Village*. New Delhi: OUP.

Pathak, Gauri. 2020. "'They Think of a Family Only in Their Thirties': Gendered Subfertility and Emergent Intimate Modernities in India." *Journal of the Royal Anthropological Institute* 25 (4): 778-792.

Rao, M. 2004. *From Population Control to Reproductive Health: Malthusian Arithmetic*. New Delhi Sage Publications Pvt Ltd.

Säävälä, Minna. 2010. *Middle-class Moralities: Everyday Struggle over Belonging and Prestige in India*. New Delhi: Orient BlackSwan.

Sarkar, Tanika. 2000. "A Prehistory of Rights: The Age of Consent Debate in Colonial Bengal." *Feminist Studies 26* (3): 601-622.

Sarojini, N., V. Marwah, and A. Shenoi. 2011. "GlobaliZation of Birth Markets: A Case Study of Assisted Reproductive Technologies in India." *Globalization and Health 7* (1): 27.

Van Hollen, Cecilia. 2003. *Birth on the Threshold: Childbirth and Modernity in South India*. Berkeley: Univ of California Press.

Visaria, Leela. 2010. "Fertility Transition: Lessons from South India." In *The Oxford Handbook of Population and Development*. Edited by AK Shiva Kumar, Pradeep Panda, and Rajani R. Ved, 111-118. New Delhi: Oxford University Press.

Wentzell, Emily A. 2013. *Maturing Masculinities: Aging, Chronic Illness, and Viagra in Mexico*. Durham, NC: Duke University Press.

Woodspring, Naomi. 2016. *Baby Boomers: Time and Ageing Bodies*. UK: Policy Press.