

MAPPING REPRODUCTIVE LOSS AND HOPE: A STUDY OF INFERTILITY IN HYDERABAD AND KOLKATA

*A thesis submitted during 2021 to the University of Hyderabad in partial
fulfillment of the award of a Ph.D. degree in Regional Studies*

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I hereby declare that the research embodied in the present thesis entitled, '**Mapping Reproductive Loss and Hope: A Study of Infertility in Hyderabad and Kolkata**' is carried out under the supervision of **Prof. Sheela Prasad**, Centre for Regional Studies, School of Social Sciences, University of Hyderabad, Hyderabad, for the award of the degree of Doctor of Philosophy, is an original work of mine and to the best of my knowledge no part of this dissertation has been submitted for the award of any research degree or diploma at any university. I also declare that this is a bonafide research work which is free from plagiarism. I hereby agree that my thesis can be deposited in Shodhganga/INFLIBNET.

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A. Published as:

Gupta, Anu and Sheela Prasad (2019). 'Outsourced Pregnancy': Surrogate Narratives from Hyderabad. *Contributions to Indian Sociology*, Vol. 53 (2), pp: 299-327 [ISSN number: 0069-9667]

B. Presented in the following conferences:

1. (2017). "'Come as a Couple, Leave as a Family': Narratives of the 'Invisible' Surrogates in Hyderabad" in the conference on *Neoliberalism, Consumption and Culture* , organised by the All India Sociological Society, held at Lucknow.

2. (2018). “‘Hope’ and the Baby Business: Insights from Infertility Clinics in Hyderabad and Kolkata” at Annual Graduate Meet, organised by IIT Guwahati, Guwahati.
3. (2018). “Mother for others’: Migration, Intimate Labour and Commercial Surrogacy in Hyderabad, India” in the Conference on *Love’s Labour’s Cost? Asian Migration, Intimate Labour and the Politics of Gender*, organised by the National University of Singapore, held at Asia Research Institute, Singapore.
4. (2019). “Invisible mothers’: City, Intimate labour and Commercial Surrogacy in Hyderabad, India” in the Conference on *In and Beyond the City: Emerging Ontologies, Persistent Challenges and Hopeful Futures*, organised by Research Committee 21 – Sociology of Urban and Regional Development of the International Sociological Association, held at Delhi.

Further, the student has passed the following courses towards the fulfillment of coursework requirement for Ph.D. programme.

Course Code	Name	Credits	Pass/Fail
RS-801	Research Methodology Course	4	Pass
RS-802	Advanced Theories on Region and Space: The Indian Context	4	Pass
RS-803	Topic Related Course	4	Pass

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ACKNOWLEDGEMENTS

No work of this magnitude is possible without the help and guidance of many individuals. Therefore, it becomes necessary to thank them for their love, care, support, understanding and confidence at the very beginning.

I would like to begin by thanking my supervisor Prof. Sheela Prasad, for her guidance, understanding and above all patience. I strongly believe this work would not be possible in this shape without her. She has guided me through this process, not only with her important insights, suggestions and comments but also with her words of wisdom, encouragement and support. It is only because of her that this thesis has achieved its present shape. All the discussions with her have motivated to work a little harder, think critically and to give my best. Working under her supervision both as a pre-doctoral and doctoral student has been an enriching experience for me. This journey would have been very difficult without her love, care, and support.

I would like to take this opportunity to thank my Doctoral Committee members, Prof. Aparna Rayaprol and Dr. Deepa Sreenivas for their valuable inputs and feedbacks which gave the structure and form to this thesis. I thank all the faculty members of Centre for Regional Studies, University of Hyderabad, and the Centre head Prof. V Srinivas Rao.

The Centre for Regional Studies has been my second home for the past six years. It has been an enriching experience to be part of this Centre and to learn to look at things from a different perspective altogether. I would like to thank Dr. Arvind Susarla for introducing me to Regional studies, all this thought provoking questions, guidance and motivation, which gave me the confidence to pursue research. I would also like to thank Dr. Salah P, for his critical questions and suggestions during the work in progress sessions, which guided and gave a direction to my work.

I would also like to thank all my teachers at the Department of Sociology, University of Hyderabad who trained me in the discipline during my post-graduation which helped me in honing my skills and in preparing me for my future endeavours.

I must convey my heartfelt gratitude to all my respondents who gave me their time, and shared their insights and life stories. I especially thank Dr. Prasad Munaganuru from Hyderabad and Dr. Debashree Ganguly from Kolkata, for trusting me and allowing the research to be conducted at their respective fertility clinics.

I am grateful to the University Grants Commission (UGC) for awarding the Junior Research Fellowship and funding my field work and other research related expenses.

The non-teaching staff at the Centre for Regional Studies has been very helpful and cooperative. I thank Murali Sir, Balakrishna Naik Sir, Yadigiri Sir for their timely help in the office related processes and Pandu Anna for the countless teas that he served, which refreshed our thoughts. I also thank Geetha, from Department of Sociology for always responding to the numerous queries and readily offering solutions to various problems.

I express my sincere gratitude to all my CRS friends for spending time to listen to the WIP sessions and the critical questions they have asked. I thank Pullanna, Greeshma, Deepthi, Seena, for helping me in their own ways.

I thank Shreyasee particularly, for being with me throughout the research journey. She has been a caring and compassionate friend without whom it would have been a difficult journey. I thank her for being the best roommate, a reviewer for all my work and a fellow traveller. She has been the biggest support system that I could ever hope for and stood by me through thick and thin.

I must convey my heartfelt gratitude to my friends and seniors who have been my constant support throughout this journey. Namrata, Debapriya di, Rakesh bhaiya, and Sinjini di – all deserve special mention, as they have been there with me and helped me when I doubted my abilities. Without their constant support, motivation and their belief in me, I would not have been able to move on with my pessimism, complete my thesis and give it the shape it has achieved. I also thank Sangeeta, Sreejani and Sayani for being my constant support. They saw me through this entire process, always encouraged me and pushed me to look at the brighter side of things.

I owe my thanks to Sandeep, for being my support in the last few years of my research. His constant encouragement and belief in me instilled confidence in my work and my

abilities. I thank him for his support, encouragement and the numerous bottles of water which he kept refilling so that I am hydrated and not fall sick.

I also thank Shampa di, my teacher and friend who believed in me and encouraged me to pursue whatever I wanted to.

I thank Attayya, Mamayya for supporting me. I thank Maansi for being the craziest, funniest, and bringing a smile on my face always.

I also thank Swarnava da, Neha and Vicky for being there with me always. Without their support and love I would not have completed this work.

Last, but not the least I thank my parents. It is not enough to say that I am indebted to them for being where I am today. I most humbly thank them for their love and good wishes. Maa and Baba have been the source of all my strength, motivating me and helping to shun away all kinds of negativities. I especially thank my father, for not drawing any boundaries in my life and for the confidence he had in me and in my abilities. His belief in me, has always made me work harder and harder. Maa's unconditional love and care has driven me to work harder. The lessons of sincerity and integrity towards work that I have received from them are priceless and their contribution in this dissertation is invaluable.

Anu

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CHAPTER 1

Introduction

“People only asked *why are you not pregnant and what are you doing about it?* Infertility was not an affliction. It was not cancer or typhoid or arthritis with painful symptoms which had to be ‘cured’ by medicine to return the body to its normal state of being. Infertility had no palpable presence inside my body, it could only be defined by absence, the absence of conception.”

(Rajagopal, 2021, pp. 183-184)

1.1. Background

These words by Rohini S. Rajagopal, who underwent infertility treatment for five years and is now a mother of a son, highlights the uncomfortable questions people in general ask (mostly to women). It also contrasts infertility with other diseases which are symptomatic and can be cured, unlike infertility. Such stories of intense personal struggle with infertility or/and reproductive loss are often over shadowed by the global/national/regional concern for fertility /population control and contraception in the developing countries. Unpacking the concept of reproductive loss and/or infertility and its relationship with modern Assisted Reproductive Technologies (ARTs) is crucial. This understanding along with the idea of ‘hope’ helps in gaining insights regarding the social structures and individual experiences that affect and get affected by these phenomena.

Women’s health has been an issue engaging the disciplines of medicine and social sciences for long, with a focus mostly on reproductive health. Until recently, fertility concerns were restricted to family planning, contraception and other fertility control measures. However, infertility has emerged as a major area of research for demographers and social scientists with the growing expansion and penetration of the fertility industry across cities, towns and villages; and with population growth reaching below replacement level in some parts of the world. Historically, both fertility as well as infertility has been an issue of concern depending on one’s location and cultural context. World Health Organization defines infertility as – “*a disease of the male or female reproductive system defined by the failure to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse. Infertility may be caused by a number of different factors, in either the male or female reproductive systems. However, it is sometimes not possible to explain the causes of infertility*” (World Health

Organization (WHO), 2018)¹. However, the difference in infertility rates across the world also suggests that there are no standard criteria for defining infertility. The causes of infertility can be many – from physiological to social conditions. In India, higher level of infertility is associated with higher prevalence of infection and under-nutrition or higher use of unsafe contraceptives (Qadeer, 2010).

Infertility and/or reproductive loss can be understood to have two dimensions to it – physiological and social. The physiological aspect deals with the medically diagnosed characteristics, (which one might also call reproductive impairment) and is different from infertility as a socially constructed reality of couples (Berger & Luckmann, 1966). Medical sociologists have focused their attention on how patients experience illness and how social factors condition this experience. The existence of a physiological impairment in one or both partners does not determine the course of a couple's experience of infertility. Drawing from this argument, according to Greil, Leitko & Porter (1988), *'the process of "becoming infertile"'* is a dialectical one in which husbands and wives interpret, respond to and give meaning to physical symptoms and physiological conditions (Greil, Leitko, & Porter, 1988). Diagnoses and treatment recommendations provided by physicians help to shape the couples interpretations of their infertility, but they do not dictate the nature of husbands and wives interpretations.

Similarly, reproductive loss is defined by Earle et al (2008), as *"experiences of miscarriage, stillbirth, and perinatal and infant death, as well as maternal death, and, more broadly, to the loss of 'normal' reproductive experience such as those associated with infertility and assisted reproduction"* (Earle, Foley, Komaromy, & Lloyd, 2008). Taking these definitions of infertility and reproductive loss as working definition for this research, this study makes an attempt to understand the experience of infertility and/or reproductive loss in the light of ARTs and its varied complexities.

1.2. Signifying the Research Problem

Taking leads from social-cultural anthropology and health sociology, this research is located in the highly complex urban social setting where the understanding of gender and power dynamics becomes crucial. This study locates itself in the domain of critical medical anthropology. Merrill Singer (1986) defines critical medical anthropology as an

¹ <https://www.who.int/news-room/fact-sheets/detail/infertility> last accessed on 18.10.2021.

approach that – *“understands health issues in light of the larger political and economic forces that pattern human relationships, shape social behaviour, and condition collective experience, including forces of institutional, national and global scale.”* (Singer, 1986, p. 128). Integrating critical medical anthropology and feminist theory, this research is largely located in the genre of feminist critical medical anthropology, which broadly takes leads from Emily Martin (1987), Faye Ginsburg and Rayna Rapp (1995), Cecilia Van Hollen (2016), Marcia Inhorn & Frank van Balen (2002). It makes an attempt to understand the links between medicalisation, commodification of reproduction and the control of a woman’s body in respect to changing political economies, social relations and prevailing cultural value systems.

The present study is located in the broader context of reproductive loss, infertility and is informed by a feminist perspective. This thesis attempts an unpacking of the nature and consequences of reproductive loss and/or infertility, with ARTs projected as offering ‘hope’. ARTs are deeply rooted in the ideas of science, progress and hope, thriving on the commodification of the female and male body. With rise in infertility rates, and increasing demand for fertility treatment the ARTs market is growing as observed in the mushrooming of fertility clinics across the country. It is against this background that the study attempts an understanding of reproductive loss and/or infertility emphasising the lived experience of the individuals undergoing such treatments. The ways in which the life-world of those undergoing fertility treatment is imagined, conceived, manifested, emerge from the socio-cultural-political-economic matrix of the society. It has strong linkages with the larger developments taking place at the local, regional, national and global levels. The fertility clinics are therefore the sites where all the stakeholders, these ideas and processes converge. To explore these ideas, the thesis has focused on two metro cities of Hyderabad in the state of Telangana and Kolkata in the state of West Bengal.

While infertility is the central theme that drives this research, the thesis also tries to engage with the larger picture related to reproductive loss which is not restricted to only infertility. However one may term it – reproductive loss, reproductive disruptions, reproductive impairments, and reproductive failures and so on - the core idea underlying this research is - when one faces difficulty in achieving parenthood as a normal life course due to any of these circumstances. This research aimed to accommodate a heterogeneous group of respondents as far as possible. The respondents

included individuals and married heterosexual couples struggling with infertility and its treatment, parents who have become infertile after the untimely death of their child, a mother who has adopted a child but still considers herself infertile as she did not experience pregnancy. It also includes a woman who lost her reproductive capabilities after the torture met by her in-laws, a woman who believes she was used for clinical trial for ART medicines without her consent, and others. The purpose was to uncover the stories of fertility treatment seeking individuals about their struggle with infertility and reproductive loss. It also aimed to draw linkages with the broader discussions on medicalisation and commodification of (women's) health, patriarchy and feminisation of infertility, stigma, ideas of family, kinship and motherhood pertaining to the Indian urban context.

Looking at infertility treatment services and other ARTs as 'hope technologies', the thesis captures the everyday experiences of these treatment seeking individuals and their journey of living with infertility in the two cities of Hyderabad and Kolkata. This is illustrated through the narratives of different stakeholders in the fertility industry – doctors, treatment seeking individuals, and clinic staff. The study also makes an attempt to map the place making process of the clinic space vis.-à-vis. reproductive loss, especially infertility. Beginning with Wilbert Gesler's (1992) concept of 'therapeutic landscape', extended by Allison Williams (2017) to expand the scope of the concept, this study makes an attempt to understand the fertility clinic space. The cartography of place making of hospital spaces is also navigated to illustrate how different individuals understand the same space differently, and how it is dependent upon one's location in the treatment journey. Furthermore, the thesis elaborates how fertility clinic spaces are projected as 'spaces of hope' through different marketing strategies. Extending Majumdar's (2015) analysis of waiting rooms of surrogacy clinics, the research tries to provide a reading of the waiting rooms of fertility clinics, in order to understand the role of visual aesthetics, the waiting room anxiety and its role in treatment seeking individual's clinic experience. The structure of the thesis draws on these frameworks of understanding and analysis.

1.3. Research Objectives and Questions

For the purpose of this research married heterosexual couples undergoing any kind of medical treatment for pregnancy were identified as potential respondents. Therefore, for the research a working definition of infertility was - a condition where a couple could not conceive naturally and required medical intervention, with the hope that they can get pregnant and have a biological child of their own. Cases of male/female/couple/primary/secondary infertility, along with couples who have faced reproductive loss, are integral part of the research.

Research Objectives:

1. To map infertility at different scales - global, national, regional, and understand the place making process of the clinic space in Hyderabad and Kolkata.
2. To understand 'hope' as a tool in reproductive loss, and how it is manufactured, managed and reproduced through different stakeholders.
3. To identify the factors behind the marketing and consumption of assisted reproductive technologies (ARTs) and track the treatment seeking behaviour of the respondents.
4. To map out the lived experience of 'reproductive loss', and being 'infertile'.

Research Questions:

- a. How do the regional and spatial variations in infertility and fertility clinics specific to Hyderabad and Kolkata influence its treatment?
- b. How does the clinic space play a role in the treatment experience of individuals?
- c. How does the idea of 'hope' play a role in the functioning of the fertility industry?
- d. What are the different reasons behind the consumption of such aggressive treatments?
- e. How does one's life change after being diagnosed with any fertility issue?
- f. How do different factors play a role in constructing infertility and/or reproductive loss as a specific type of experience for both women and men?

1.4. Choice of Research Sites

The selection of the two cities of Hyderabad and Kolkata for this study is primarily based on the District Household Survey (2007) which reported that West Bengal had highest infertility rate (14.1%), and the undivided state of Andhra Pradesh had high fertility seeking behaviour (10.9%). Hence, prime urban centres were identified in both the states, where the research can be conducted. Kolkata and Hyderabad being the capitals of the respective states were chosen as the research sites. For conducting the research, fertility clinics across both the cities were identified using online search engine. The listed clinics were approached for conducting the interviews, and the clinic which agreed to participate in the research first was selected. One clinic each in Hyderabad and Kolkata were selected for in-depth study.

A comparison has been made between the two research clinics (C1 in Hyderabad and C2 in Kolkata) (refer: Table 1) to understand the differences and similarities between them. The difference between the structural organisation of the two selected clinics, its clientele class and the cost of treatment emphasises not only the difference between clinics but also indicates the importance of the history of fertility industry in the respective states/regions. Although the clientele class visiting these clinics largely hails from the upper middle, middle to lower middle class; there is a considerable difference between the cost of treatment. The fertility industry had a head start in Hyderabad in comparison to West Bengal, making Hyderabad a major node for private medical facilities and an important hub for medical tourism (both at the national and global level). West Bengal had a late entry to corporate health care, but is now trying to capture a wide market in East/Northeast India.

Table 1: Comparison of Clinic 1 and Clinic 2

Variables	C1 (Hyderabad)	C2 (Kolkata)
Model Type (see chapter 4)	Model 2	Model 3
Location	Well connected, close to a local railway station	Well connected, close to a local railway station
Clientele Class	Monthly income between Rs. 10,000 – 2 lakhs	Monthly income between Rs. 3000 – 1 lakh
Cost of common procedures	IUI – Rs 30,000 – 40,000 IVF – Rs. 1,00,000 onwards Sperm freezing – Rs. 8000- 10000. Oocyte freezing – Rs. 1,10,000 onwards	IUI – Rs. 10,000 onwards IVF – Rs. 1,35,000 onwards Sperm freezing – Rs. 5000 Oocyte freezing – Rs. 50,000 onwards
Religious symbols	Pictures of Lord Krishna, Jesus with mother Mary, and of Kaaba.	Idol of lord Ganesh
Success rate claimed	IVF: 10 - 38% ICSI : 12 - 43% IUI: 3 – 13%	10 – 50%
No of doctors	18	6
Reception friendly	Yes	Yes

Source: Compiled based on field work done in July, 2017 - February, 2020.

1.5. Methodology and Data Sources

This research is a qualitative ethnographic study of reproductive loss, infertility and assisted conception in two cities of India - Hyderabad and Kolkata, and is principally based on narratives of clinicians, individuals struggling with reproductive loss, infertility and undergoing assisted conception, and on clinic-based ethnographic observations. Different secondary sources have been used to provide a systematic

background for the research objectives. The secondary sources include books, articles, newspaper reports, leaflets, and reports by different NGOs. Primary data was collected through field work conducted in the two selected clinics to supplement the secondary data.

Research tools such as the interview guide and permission letter were prepared to initiate the interviews. After submission of all the documents (interview guide samples for patients and doctors, identification proof, letter from the supervisor and a written declaration agreeing to the confidentiality and anonymity clause), interviews were 'allowed' to be conducted with 'patients' coming to that particular clinic for treatment. The techniques used in collecting primary data include Observation and Non-Participant in-depth interviewing. The observation technique was used widely to both, observe and analyse the activities going on in the clinics. To observe different kinds of activities in the field, an observation schedule was prepared, similar to that of interview schedule. Broad questions in both the observation schedule and semi structured in-depth interview schedule helped the researcher to stay focused and not miss any interesting and insightful information.

The in-depth interview was carried out with the help of an interview schedule. Two different sets of interview schedules were prepared and used for the different set of respondents (patients and doctors) with some overlapping questions and some specific questions to suit the purpose of the research. Qualitative interviewing, which has been followed here, is also referred to as a non-directive, unstructured, non-standardised and open ended interviewing. By in-depth qualitative interviewing, one means "*face-to-face encounters between the researcher and informants directed toward understanding informants' perspectives on their lives, experiences, or situations as expressed in their own words.*" (Taylor, Bogdan, & DeVault, 2016, p. 102). The in-depth interview technique was used for collecting data from 75 patients or treatment seeking individuals or/and couples and 8 doctors.

A field diary, which included the notes and observations made during the fieldwork, was maintained. All interviews were tape recorded, transcribed, translated (where required), and certain important points and information regarding their body language was noted down immediately. Due to the lack of knowledge in the local language of Hyderabad, i.e., Telugu, a translator was deployed for any interview that required translation. Since, there is a bureaucratic medical structure within which fertility clinics

operate, it was difficult to contact the respondents outside the clinic. All the interviews had to be conducted within the premise of the clinic, and in some cases in the presence of the clinic staff. The names of the respondents have been replaced by pseudonyms to maintain confidentiality. However, when analysing the market reports and doing a content analysis based on advertisements, brochures, media reports, no attempt has been made to conceal identities of the clinics or any individuals, as the names were already present in the public domain. The age and the marital duration of the respondents mentioned are at the time of the interview.

1.5.1. Hospital/Clinic Ethnography and Narrative Analysis

Hospital studies have long been a focus of research in disciplines like Sociology and Anthropology. Major contributions have led to the birth of Health Sociology and Medical Anthropology as important sub fields in the respective disciplines. From Goffman's (1961) study of asylums as total institutions, Foucault's study of the birth of the clinic (1963), Parson's understanding of 'sick role' (1951), Anselm Strauss's work on grounded theory and qualitative analysis (1987) to Peter Conrad's work on the medicalisation of the society (2007) – the focus of research has consistently been on biomedicine, health, illness, recovery, treatment and medical settings.

Anchored in the discipline of health sociology and critical medical anthropology, this research is broadly situated within the feminist discourse of gendered understanding of reproductive loss and its treatment. Specifically it focuses on understanding reproductive loss, infertility, embodiment of stigma and gendered medicalisation of reproductive failures. Following Reinharz (1992) methods of feminist research and using Riessman's (1993) narrative analysis for qualitative research, this thesis aims to understand the lived experiences of reproductive loss with the help of multisite ethnography in Hyderabad and Kolkata.

With globalisation and the increasing domination of biomedicine, there is a renewed interest in hospital studies or hospital ethnography. Hospital symbolises the pinnacle of modern technological advancement and sophistication, progress and modernity irrespective of its location. The nature of ownership of hospitals and its cultural composition might differ across nation states and cultures, but the core principle of hospital organization remain similar (Finkler, 2008). They are not identical clones of a

particular (Western biomedical) model; rather they take different forms in different regions, cultures, and societies. They are an important site for medical ethnography or hospital ethnography. However, the problems of accessibility act as a hurdle for hospital ethnography. In the context of ethnography in infertility studies, the issue of access plays a critical deciding role. As pointed out by Marcia Inhorn (2004), infertility is a stigmatised condition and infertility treatment seeking patients generally desire privacy or rather total secrecy, due to cultural issues of stigmatisation. Therefore, this raises the concern of ethics. Moreover, the privatisation of infertility industry across the world has pushed the site of research to private fertility clinics, further complicating questions of privatisation and accessibility (Inhorn, 2004), which is discussed later.

Since hospitals are viewed as sites of medical treatment, care, scientific progress and better health outcomes, hospital research invariably involves illness, suffering and treatment. While Arthur Frank (2001) believes that one cannot research illness and suffering until and unless one goes through the same experience (Frank, 2001), Arthur Kleinmann is of the opinion that health-oriented ethnographies can understand suffering through highly focused mini ethnographies and by moving to and forth between the macro and micro level (Kleinman, 1992). This research is largely located in the latter perspective, but also acknowledges the limitations of researching illness and suffering as pointed out by Frank (Frank, 2001).

Frank (2001) rightly says that suffering is not a concept but a lived reality, which is difficult to define and research, and is beyond pain and illness. He is against the practice in social science research where the stories of individuals are fragmented and portions of their narrative are used to further the research agendas of the researcher. For Frank, it not only disintegrates the patient's story, but makes it impersonal when isolated from the larger narrative, to suit extra-local texts or categories. In contrast, Kleinman believes *"ethnography deepens the study of human suffering by reframing the experience of illness as interpersonal processes in a moral context"* (Kleinman, 1992, p. 127). Kleinman endorses mini-ethnographies where local worlds must be described at the outset, followed by the subjective reality of a particular group. For Kleinman, an ethnographer must not give primacy to the subjective reality of a single individual but to the social reality of a particular group. Therefore, research on suffering does not take away the importance of the experience of suffering, but *"it seeks to place the suffering of the personal within the social, psychological and moral processes that*

connect that interiority through the medium of interpersonal experience to a social context.” (Kleinman, 1992, pp. 129-130).

Moreover, for Kleinman (1992) the narratives of illness and suffering must be enriched and deepened by the analytic process of going back and forth between macro and micro levels enabling the ethnographer to draw connections between societal, local and individual issues. This research has chosen to follow Kleinman’s approach and to understand the experience of infertility and reproductive loss in the larger socio-political-cultural-regional context of India. It makes an attempt to understand and analyse different aspects of suffering associated with infertility and reproductive loss with the help of broad thematic categories, thick descriptions and voices of the respondents. This thematisation does not take away from the experience of suffering of the respondents, but rather identifies the treatment seeking individuals as a diverse group with varied nuances.

Participant observation is an important part of ethnography in any setting. However, many anthropologists are of the opinion that in hospital research or hospital ethnography, participant observation in the true sense of the term is an oxymoron. To carry fieldwork in a hospital setting *“a researcher has three possibilities to choose from – joining the staff, the patients or the visitors.”* (Geest & Finkler, 2004, pp. 1998-1999) For this research since none of the roles were undertaken, the ethnography was conducted with the true identity of being a researcher, where each respondent was informed about the research at the outset, the identity of the researcher, promise of secrecy and confidentiality, and an assurance that they can opt out of the research or can refrain from answering any questions if they are uncomfortable. This research used in-depth ethnographic interviews to understand the perspectives of these fertility treatment seeking individuals by soliciting their own narrative accounts of events that pertain to their experience of reproductive loss, infertility, and fertility treatment.

Narrative analysis method is used in reading and analysing the in-depth interviews conducted among the different categories of respondents – doctors, patients/treatment seeking individuals, and clinic staff. As pointed out by Wang and Geale (2015), narrative approach in qualitative research not only provides a window to the experiences of the respondents, but also *“allows for a rich description of these experiences and an exploration of the meanings that the participants derive from their experiences.”* (Wang & Geale, 2015, p. 195). It acknowledges the dynamic nature of

human experiences and helps to bring forward the meanings of personal stories and events. Highlighting personal experiences, the paradigms that shape their experiences and how they identify themselves, emphasising their social location and context. Narrative analysis is essentially deconstructing story, where the respondents travel across their past and present actions and situations related to the specific phenomenon of research. In this context, Wang and Geale (2015) write “*narrative inquiry is not simply storytelling, it is a method of inquiry that uses storytelling to uncover nuance....The process of storytelling, a fundamental element in narrative inquiry, provides the opportunity for dialogue and reflection, each intertwined and cyclical*” (Wang & Geale, 2015, p. 198).

Since this research deals with health, illness, suffering and loss, the method of narrative enquiry or narrative analysis was considered to lend itself to understand the experiences of the respondents. In depth interviews with open ended questions which were structured more like a conversation and storytelling, allowed the respondents to relive their past with a perspective from their present situation. Therefore, their story telling not only included a description of their past situations but also how they make meaning in the present, about their past actions or experiences. The narratives are recollections revisited from the past and their present, often with a sense of despair at their current situation in their treatment journey. This allowed the researcher to understand the respondent’s life and their other societal relationships through the trope of storytelling.

1.6. Profile of the Respondents

This study is based on in-depth interviews of 75 treatment seeking individuals and couples and 8 doctors at the two fertility clinics (C1 and C2) in Hyderabad and Kolkata respectively (refer: Table 2). With selection of a particular clinic which agreed to participate for the research, the respondents gets defined by the clientele of the clinic itself, thus limiting its representativeness. Therefore, both the respondents and the clinic under study are dependent on each other. All the treatment seeking individuals in the study are heterosexual and married. The age of the female respondents interviewed ranged between 25 - 45 years, and the age of the male respondents ranged between 30 – 47 years.

Table 2: Total Respondents Interviewed

Respondent type	Hyderabad	Kolkata	Total
Doctor	4	4	8
Treatment seeking individuals/ patients	40	35	75
Total	44	39	83

Source: Compiled based on field work done in July, 2017 - February, 2020.

In Hyderabad, out of 40 treatment seeking individuals who were interviewed, there were 35 primary infertility² cases and 5 secondary infertility³ cases. Similarly, in Kolkata, out of 35 treatment seeking individuals interviewed, there were 27 primary infertility cases and 8 secondary infertility cases, which includes cases of reproductive loss (refer: Table 3).

Table 3: Type of Infertility among the Respondents

	Primary Infertility	Secondary Infertility	Total
Hyderabad	35	05	40
Kolkata	27	8	35

Source: Compiled based on field work done in July, 2017 - February, 2020.

In Hyderabad, out of 40 treatment seeking respondents interviewed, 11 cases were related to male infertility, 13 cases of female infertility, 10 cases of couple infertility and 6 cases of unexplained infertility. In Kolkata out of 35 treatment seeking respondents interviewed 10 cases were related to male infertility, 12 cases to female infertility, 8 cases of couple infertility and 5 cases of unexplained infertility (refer: Table 4). The Table clearly shows that infertility should no longer be seen as only a

² Primary infertility is when a pregnancy has never been achieved by a person. (Source: <https://www.who.int/news-room/fact-sheets/detail/infertility> accessed on 16.09.21) Further explained in Chapter 2

³ Secondary infertility is when at least one prior pregnancy has been achieved. (Source: <https://www.who.int/news-room/fact-sheets/detail/infertility> accessed on 16.09.21) Further explained in Chapter 2

problem of women, as male infertility numbers are as high. The respondents included cases of both infertility and reproductive loss.

Table 4: Factors Affecting Infertility

	Male factor	Female factor	Unexplained/ Unidentified infertility	Couple infertility (combined male and female factors)
Hyderabad	11	13	06	10
Kolkata	10	12	05	08

Source: Compiled based on field work done in July, 2017 - February, 2020.

Table 5: Profile of the Treatment Seeking Individuals Interviewed in Hyderabad

Sl. No	Indicators					
1.	Patients interviewed	Men - 05	Women – 24	Couple - 11	Total - 40	
2.	Age profile	Men – 30 - 47 years	Women – 25- 45 years			
3.	Religious profile	Hindu - 23	Muslim – 13	Christian - 04		
4.	Caste profile	General (OC) - 19	Backward Caste (BC) -3	Scheduled Caste (SC)- 1		
5.	Occupation (Men)	IT - 20	Business – 6	Agricultural - 2	Army -1	Other - 11
	Occupation (women)	Housewife – 30	IT – 6	Informal work - 2	Teacher - 2	
6.	Monthly income	>Rs.10,000 – 2	Rs.10,000- 25,000 - 5	Rs.25,000- 50,000 - 9	Rs.50,000 – 1 lakh - 17	<Rs.1lakh - 7
7.	Alternative Medicine	Nil - 21	Homeopathy- 08	Ayurveda – 03	Hakim/ jaributi - 06	Unani - 02

Source: Compiled based on field work done in July, 2017 - February, 2020.

In Hyderabad, out of 40 patients interviewed, 5 are men (they were either unaccompanied by anyone other than their partners or the partner did not understand any other language other than Telugu), 24 women (either alone or accompanied by any other family member other than their husbands) and 6 couples (husband and wife together) (refer: Table 5). Among the respondents interviewed in Hyderabad there are 23 Hindus, 13 Muslim and 4 Christians. The caste profile of the respondents in Hyderabad is also elaborated. Out of the 23 Hindu respondents interviewed, 19 respondents belonged to the general category or the OC category, 3 respondents belonged to backward caste and 1 respondent is from the scheduled caste category. In Hyderabad, it was observed that respondents were well aware of their caste identity unlike in Kolkata. Due to the demography of Hyderabad and the location of the clinic, there is a higher number of Muslim respondents in comparison to Kolkata. Similarly, owing to the established IT sector in the city, majority of the men interviewed or otherwise were employed in the IT sector. While 6 women reported working in the IT sector when the interviews were conducted, there were many women who confessed of quitting their IT jobs to pursue fertility treatment as it was time consuming and they could not maintain their jobs due to the hectic treatment schedule. This speaks of the added financial loss that many working women suffer due to the long drawn treatment protocol.

On the basis of family income and class, Hyderabad has a higher number of respondents who fall in the higher bracket of income and very few respondents from the lower economic background. Owing to the selection of the clinic, the class, religion, caste dynamics of the respondents got automatically defined and restricted. 7 respondents reported a monthly income above Rs. 1 lakh, 17 respondents were in the bracket of Rs. 50,000-1 lakh; and 9 respondents were in bracket of Rs. 25,000-50,000. There were also 2 respondents whose monthly income was less than Rs. 10,000, and 5 respondents who fall in the bracket of Rs. 10,000-25,000.

On the prevalence of alternative medicine, Hyderabad has a long history of alternate medicine and healthcare practices like Unani, Ayurveda and Homeopathy. Out of the 40 respondents interviewed, 21 did not use any alternate medicine other than the allopathic treatment. However, 8 of them admitted using homeopathy, 3 Ayurveda and 2 Unani medicine at some point of time (usually in the first stage) in their infertility journey. Six

of the respondents also admitted to consulting Hakims and using different *jari -butis*⁴ for treating their infertility. While for some alternate medicines were their first line of treatment, for others they continued alternate medicine along with allopathic treatment.

Table 6: Profile of the Treatment Seeking Individuals Interviewed in Kolkata

Sl. No.	Indicators				
1.	Patient interviewed	Men - 03	Women - 23	Couple - 9	Total - 35
2.	Age profile	Men – 30-47 years	Women – 25-45 years		
3.	Religious profile	Hindu - 23	Muslim - 07	Christian - 05	
4.	Occupation (Men)	IT – 5	Business - 11	Agricultural - 1	Army – 2
	Occupation (women)	Housewife - 20	IT – 4	Informal work - 2	Teacher – 6
5.	Monthly income	>Rs.10,000 (2)	Rs.10,000-25,000 (6)	Rs.25,000-50,000 (17)	Rs.50,000 –1 lakh (6)
6.	Alternative Medicine	Nil - 17	Homeopathy- 10	Ayurveda - 05	Hakim/ jari-buti – 03
7.	Nationality	Indian - 34	Bangladeshi – 1		

Source: Compiled based on field work done in July, 2017 - February, 2020.

In Kolkata out of 35 patients interviewed, 3 are men, 23 women (either alone or accompanied by any other family member other than their husbands) and 9 couples (husband and wife together) (refer: Table 6). Among the respondents interviewed in Kolkata, there are 23 Hindus, 7 Muslims and 5 Christians. There is a domination of

⁴ Jadi-Buti roughly translates to roots and herbs. Local healers and priests use different herbs and roots to cure any illness. These herbs and roots are either consumed in some form of powder or paste or tied around the body to provide magical healing.

Hindu respondents in the study unintentionally which was conditioned by the location of the clinic and its clientele population. The caste profile of the respondents in Kolkata cannot be identified, due to the lack of awareness of their caste identity or they were uncomfortable to disclose their caste identity and avoided providing that information. In a few instances, respondents in Kolkata even got offended upon being asked about their religion and caste details.

Since Kolkata has less thriving IT sector than Hyderabad, this was reflected in the job profiles of the respondents. Out of the 35 respondents interviewed, 5 men are in IT companies, 2 are in the Indian Army, 1 engaged in farming, 11 respondents had individual businesses. Sixteen male members were in occupations which included tailoring, cab driving, auto driving, shop assistant. With regard to the class profile, majority of the respondents, i.e., 17 respondents belonged to the income group with monthly income of Rs. 25000-50000, 2 respondents belonged to the category with monthly income of less than Rs. 10000, 6 respondents were in the bracket of Rs.10000-25000, 6 respondents were in the bracket of Rs. 50,000-1 lakh monthly income. Only 4 respondents belonged to the category with a monthly income of more than Rs. 1 lakh. 17 respondents in Kolkata admitted to not using any alternative medicine and only preferring allopathic treatment, 3 respondents either visited a Hakim and followed herbal or *jari-buti* medicine, and 5 have used Ayurveda for treatment.

The long history and a strong presence of homeopathy in West Bengal was reflected in the respondent group with 10 respondents reporting using homeopathy medicine at some point of time. Some even used homeopathy as a first line of treatment and after unsuccessful attempts, shifted to allopathic treatment and ART procedures. In Kolkata, one respondent is from Bangladesh who came to India to undergo infertility treatment at the chosen fertility clinic, with the hope of a successful result. They have been undergoing fertility treatment in Bangladesh for the past 3 years but without any success. After hearing positive reviews about the clinic in Kolkata from their relatives in India, they considered undergoing their fertility treatment at the select research site in Kolkata.

Table 7: Profile of the Doctors Interviewed

Sl No.	Respondent code	Location	Specialisation	Years of experience
1.	D1H (male)	Hyderabad	Embryologist	More than 30 years.
2.	D2H (female)	Hyderabad	Obstetrician & Gynaecologist	More than 30 years.
3.	D3H (female)	Hyderabad	Fertility Consultant	More than 10 years.
4.	D4H (female)	Hyderabad	Obstetrician & Gynaecologist	More than 20 years.
5.	D1K (female)	Kolkata	Embryologist	More than 20years
6.	D2K (female)	Kolkata	Fertility Consultant, Specialist in Assisted Conception (IVF)	More than 20years
7.	D3K (female)	Kolkata	Obstetrician, Gynaecologist, Advanced Laparoscopic Surgeon	More than 10 years
8.	D4K (male)	Kolkata	Obstetrician & Gynaecologist	More than 5 years

Source: Compiled based on field work done in July, 2017 - February, 2020

For this research out of 83 respondents, 8 were doctors, 4 from Hyderabad and 4 from Kolkata (refer: Table 7). They include doctors not only from the two research sites, but also from other clinics which refused to participate in the research and disclose information about their patients, citing reasons of confidentiality and ethics. However, few doctors in Hyderabad and Kolkata agreed to be interviewed individually and they are part of the study. Out of the four doctors in each site, 3 are female doctors and 1 male doctor. As the research deals with a sensitive topic like reproduction and infertility, the gender of the doctor also becomes important in understanding the clientele profile. Among the respondents across Hyderabad and Kolkata, women are particular about the gender of the gynecologist or the infertility specialist they want to consult. There is a sense of initial hesitation by both men and women to speak about their sexual life to a doctor of the opposite gender. There is an underlying preference for

a female gynecologist among women for two reasons – (i) a sense of sisterhood and comfort; (ii) they believe only a woman can understand another woman's issues pertaining to reproduction and sexual health. The few men interviewed confessed to being more comfortable to speak to a male doctor than a female doctor. However, across clinics in both Hyderabad and Kolkata, the first point of contact for treatment of infertility is a female doctor, and then based on the successive diagnosis the 'patients' are allocated different specialists depending on their medical condition.

1.7. Doing Field Work – A Self-Reflexive Note

The fieldwork for the study began in July 2017, with contact being established with fertility clinics providing fertility treatments in the cities of Hyderabad and Kolkata. The fieldwork was completed in February 2020. Multiple private fertility clinics, corporate hospitals and government hospital units dedicated to fertility services were visited to get an overview of the fertility treatment facilities in the two cities. Initially it was difficult to approach treatment seeking individuals as most of the fertility clinics expressed unwillingness to participate in the study. Getting access and appointments proved to be very difficult and disappointing. In most cases, meetings with doctors or clinic management personnel were not fruitful, either they were busy to spare time for the research or they were unwilling to share information. There was a general reluctance among the medical fraternity to participate in the research. After approaching multiple clinics, one clinic each in Hyderabad and Kolkata agreed to participate and allowed interviews with their patients but with certain conditions. The treatment seeking individuals or patients could not be contacted independently of the clinic and all the interviews had to be conducted within the clinic premise, which has to some extent compromised the quality of the interview.

As the current IVF industry in India is largely dominated by the private sector, gaining access to private hospital spaces became a major challenge in conducting ethnography. Before outlining the field work journey, it would be important to flag two important methodological challenges which were faced in the research process. Firstly, drawing on Marcia Inhorn (2004), an attempt was made to understand the power of medical regimes and its relation to ethnography. As Inhorn rightly points out, "*when those who are not physicians attempt to penetrate the hospital clinic in order to apply an*

‘ethnographic gaze on the medical gaze’ (in part to examine structures of power), their ethnographic penetration may be viewed as unwelcome.” (Inhorn M. C., 2004, p. 2096)

While conducting ethnography in Hyderabad and Kolkata, this assertion of medical power manifested itself in four ways – (i) clinics/hospitals outright refused to participate in the research study; (ii) limiting access to patients (under the pretext of patient’s confidentiality); (iii) clinic’s Board of Directors or Human Resource executive rejecting the interview schedule multiple times and ultimately refusing to participate (citing conflict of interest with the hospital’s policy); or simply (iv) by allowing interviews to be conducted in the clinic space in the presence of a hospital staff. Multiple clinics in Hyderabad and Kolkata cited issues of privacy as a major reason to prevent in depth interviews to be conducted with patients in their clinic.

Second, following Geest & Finkler (2004), while studying culturally sensitive medical subjects; medical ethnographers’ obligation to informants (respondents) is important. In such cases, the patients themselves may refuse to participate in the study – rejecting the ethnographic gaze, or may agree to speak only under the strictest assurances of confidentiality and anonymity (Geest & Finkler, 2004). In India, both infertility and its treatment are culturally sensitive, and stigmatised. Stigmatisation has led to secrecy surrounding the medical condition of infertility and its treatment, thus making ethnographic research more difficult (Bharadwaj, 2002). To overcome this constraint, oral informed consent was sought for both conducting the interview and to tape record the session. Most importantly, only those patients who volunteered or readily agreed to participate in the research after knowing the aim of the study were interviewed; no means of coercion or persuasion was used.

After introducing the researcher, the aim and purpose of the study was explained to the patients in Hindi, or Bengali, or English (depending on the language they preferred). It was clearly emphasised that participation in the study was voluntary and confidential, and their name and address was optional for them to reveal, if they want to maintain anonymity. However, there were a few instances where the presence and the interest of the researcher in the topic of reproductive loss were questioned and rejected. There were quite a few individuals who refused to be part of the research, citing reasons like – (i) lack of time to participate, (ii) not convinced with the purpose of the research, (iii) not sure about the confidentiality and trust assured by the researcher, or lastly, (iv) not in a frame of mind to talk about their ordeal.

It took a lot of time to convince not only the fertility clinic management, but also the respondents to accept both, the research and the researcher. Gaining their acceptance and confidence was a slow process, occasionally frustrating. The informed consent process was of utmost importance in reassuring both men and women that their stories - their lived experiences would be held in the strictest confidence and their names would never be used in any published document. These setting up of the context helped not only in rapport building with the participants, but also overtime a relationship of trust where intimate experiences were shared. There are also instances where the participants explicitly asked about the researcher's marital status, reason behind her interest in infertility, whether she is infertile herself or struggling with any infertility related issues. Some also showed concern for the researcher being unmarried at her age (nearing her 30s). While some were dismissive of the researcher as someone young and unmarried (stating she lacks the personal experience to understand their suffering), others praised her interest in understanding other people's suffering – because they never had an opportunity to share their personal stories filled with suffering, pain, anxiety and trauma. For some this opportunity was cathartic, because they just wanted a patient ear. While some were pleased to be a part of the research as they felt they had important knowledge to share and they felt others should know about their experience (which might help them in their journey with infertility or reproductive loss).

One clinic per city in both Kolkata and Hyderabad agreed to participate in the research. In Hyderabad, the senior embryologist of that particular clinic (C1) became the 'gatekeeper'⁵. When the clinic was approached in person to explain clearly about the research and to seek their permission to participate, it was found that he is an alumnus of the same university as the researcher. Belonging to the same institution provided a sense of solidarity and enabled one to trust each other. It was clearly articulated (and a written statement was submitted) that the identity of the clinic and its patients will be kept in strict confidence. The doctor allotted two days of a week (Tuesdays and Thursdays) for interviews, where he instructed one of the clinic staff who also acts as the receptionist to help the researcher by introducing fertility treatment seeking patients for the study. The clinic staff was helpful and convinced patients on behalf of the

⁵ Gatekeepers are important mediators in qualitative research. They enable access to study settings and participants for a particular research. They can be individuals or group of individuals who have the connections, knowledge and power to grant or withhold access to any individual or group of individuals required for the research.

researcher to participate in the study, and was also curious about the purpose of the study and how it will benefit the researcher and others.

To recruit the respondents, she first informed the individuals about the research, the institutional affiliation, recommendation of the senior embryologist of the clinic and introduced the researcher to the patients. A small consultation room was allotted for the interview but at times when there was a lack of space due to increase in number of patients visiting the clinic; interviews had to be conducted at the corner of the crowded and noisy lounge area. While some of the staff members were curious about how stories of infertile patients can be a topic for a research study, two of them were happy to help and saw some purpose in the work. In Hyderabad, language played an important role in selection of the participants. Since the researcher could neither speak nor understand the local language Telugu, it was made clear at the outset that patients who could speak in either Hindi or English should only be approached for participation in the study. However, in the later phase of the field work some Telugu speaking patients were interviewed where one of the clinic staff helped in translation. She readily volunteered to translate and help in the interviews.

In Kolkata, at the onset several clinics were approached over phone. Among them some agreed to meet the researcher in person to decide whether they wanted to participate in the research or not. Like Hyderabad, many clinics followed the same sequence of rejection – the head of Human Resource or one of the Board members met for initial meeting and after a short interview with the researcher, discussion about the purpose of the work, and whether (and how) it will benefit them - they instructed the researcher to mail all the required documents and once that is processed by the senior doctors and other Board members, they will contact the researcher. However, after multiple follow ups, those clinics never got in touch or refused to participate in the research citing their hospital policy and/or confidentiality of its patients.

One private clinic in Kolkata (C2) agreed to participate in the research because one of its senior doctors is also an academician and maybe saw some value with the premise of the work. She became the ‘gatekeeper’ in the Kolkata research site, where she instructed the receptionist and the lab technician to help in recruiting patients and to provide a room to conduct the interviews. The two receptionists and one lab technician in that clinic were initially apprehensive about the nature and purpose of the research – while one thought the researcher to be a psychologist, the other thought her to be

infertile herself and hence the choice of research topic. After multiple meetings, interactions during lunch break the confusion about the research and the researcher was resolved and the relationship became of friends, where one of the receptionists felt comfortable to share her struggle with pregnancy and how she suffered from post-partum depression and how she continues to deal with it. She gave detailed introduction about the potential respondents and their duration of treatment and some background details. These anecdotes helped in structuring the interview schedule and later to tie the interviews together.

Although the same interview schedule was used in Hyderabad and Kolkata, there were few differences in the process of field work which was mainly because of the size of the clinic and the clientele. While the clinic in Hyderabad was spacious with two floors dedicated for the clinic, the clinic in Kolkata was cramped with little space for privacy. The functioning of the clinics was also different, mainly on how they dealt with clients. In Hyderabad, the clinic had colour coded files for patients – classifying patients into groups. The different groups are – patients with male infertility, patients with female infertility, patients with thyroid and diabetes, and patients with unknown infertility. The procedure which the patients are undergoing or opt to undergo (such as IUI, IVF, and Surrogacy) is written on top of each file. In Kolkata the clinic did not have colour coded patient files, but the procedure which they are undergoing and the package which they have opted for is written on top of each file in bold letters. The researcher being a non-local in Hyderabad (non-Telugu, and from a different State) seemed to make it easier for people to talk about their personal life, but not knowing the local language always created a sense of distance from them.

In contrast, in Kolkata being a Bengali and a local resident possibly made people a bit apprehensive or reluctant about opening up about their personal problems. In Kolkata knowing the local language (Bengali) helped in understanding the conversations in the waiting lobby, listening to the different verbal exchanges in the clinic, which was not a part of the actual interview, but helped in framing a better understanding of the research site. Mostly, the interviews were conducted in Hindi, Bengali and sometimes English. The Hindi and Bengali interviews were translated and transcribed in English with an attempt to maintain an approximate translation to correspond with the larger meaning being conveyed (in their local languages).

There was no conscious attempt to interview individuals separately as couples, husbands and wives. However, due to the sensitive nature of the research and problems of access, it was not always possible to interview the couples together (which would have been desirable, as it would have helped in avoiding gender bias). On many occasions, women came alone to the clinic or accompanied by a family member as their husbands were busy at work. There were also instances where only the husbands could be interviewed as their wives were either undergoing an embryo transfer or sonogram. The personal nature of the research and the question of access also shaped the nature of interviews, wherein the interviews could only be conducted in the clinic space.

The scope for a follow up interview was minimised considerably since many of these couples were struggling with personal issues related to their treatment – financial difficulty, familial pressure, IVF or IUI bound clinic visits, long gap between visits due to distance and accessibility. In most cases, it was difficult to get a correct response with regard to their caste and economic background, especially monthly income. In some cases, questions related to the attitude of their family members and their spouse was avoided and was met with either a long silence or an ambiguous reply. All the respondents were in various stages of undergoing assisted conceptive interventions, and taken together they do make a composite class or a social group. As Bharadwaj writes, “...they are a group in themselves by the virtue of their inability to reproduce biologically.” (Bharadwaj, 2003, p. 1869)

In conclusion, one has to confess that conducting field work related to reproductive loss and infertility was not an easy task. Convincing the fertility clinics and the treatment seeking individuals to be part of the study took a lot of time and was met with rejection most of the time. This early stage of research was sometimes demoralising and disheartening. Preparing different documents as and when asked by different clinics as a prerequisite for them to evaluate whether they would participate in the research or not was both time taking and often futile. Bureaucratic processes in the fertility clinics consumed a lot of time initially during the preliminary days of research. The act of ‘waiting’ also became important lesson for the researcher just like the respondents! Although some clinics gave an appointment in the morning to meet and understand the purpose of the research, they made the researcher wait the entire day to finally meet at the end of the day after completing all the patient consultations, meeting with medical representatives were over. In the initial stage, this waiting was annoying and made the

researcher restless, but as and when the researcher spent more time in the field and with more experience, waiting came to be more accepted and was a presumed part of the field work.

There were days, when all the identified treatment seeking individuals refused to participate, and when no respondents were free or available at a particular clinic, and the day ended with zero interviews. On such occasions there were moments of self-doubt and frustration where the uncertainty and slow progress in fieldwork made the researcher question not only the choice of topic and purpose of the study and the entire research degree in particular, but also a larger existential crisis. There were times when intense interviews and listening to heart wrenching stories of the respondent's life experiences made the researcher so involved and shaken and that she had to cancel interviews and vent to the supervisor, friends, and family, the frustration and emotional upheaval the interviews brought upon her. There were also occasions where the researcher slipped into being judgmental of the respondents based on their narratives, and had to constantly guard against it with help from the supervisor and friends.

There were certain situations faced where the researcher was mentally upset and came close to giving up conducting the research in a clinic. When the researcher got to know about clinics doing illegal practices like sex selection of the fetus, PNDT, clinical trial without consent, poor treatment of surrogates in the surrogate hostels – the larger question of social change and the treatment of women in our society haunted the researcher for days. There were also instances where the naivety and ignorance of people made the researcher realise how misinformed many are even in a metro city. For e.g., on a hot, humid afternoon in the Kolkata clinic, while the researcher was waiting in the lounge to conduct interviews, two men came to the reception to inquire about fertility treatment and questioned the receptionist about 'test-tube babies' showing a test tube by gesture and asked how a baby can develop in a glass test tube! After hearing this, on having a casual conversation with the receptionist of the clinic, she shared anecdotes she faced since she joined this job. She narrated how the enquiries made by the patients are so problematic and disturbing – she had enquiries over phone asking whether fertility treatment can provide them with a male child, or a 'fair' complexioned girl child! Listening to such stories and from observing the vibrancy and poignancy of the clinic space not only enriched the experience of conducting field work but also helped the researcher to evolve as a more sensitive human being and more specifically

as a woman. Conducting this research not only reinstated ‘hope’ in the researcher, but also sowed seeds of doubt, apprehension and fear about her own reproductive future.

1.8. Chapter Scheme

The thesis has been organised into six chapters. The *first* chapter introduces the research premise, the research problem, the key objectives and questions and the research sites. This is followed by the discussion on the methodology, focusing on hospital ethnography, the sampling style, the profile of the respondents and selected clinics. The chapter includes a self-reflexive note that documents the experience of conducting this research as it dealt with a very intimate and confidential problem of infertility and/or reproductive loss. The concluding section presents the organisation of the chapters of the thesis and the limitations in the study.

The *second* chapter focuses on theoretical perspectives and conceptual frameworks which guided the research design. Major debates pertaining to reproductive loss and infertility are reviewed to provide a background for setting up the key frames of analysis for the study, which includes – recognising infertility and reproductive loss as a reproductive problem; ART and the medicalisation model; biological clock and infertility; family-kinship-parenthood; the feminist discourse on infertility and reproductive loss, and the framework of Hope.

The *third* chapter maps infertility across different scales – global, national (India) and regional (Andhra Pradesh and West Bengal). With the help of the District Level Household Survey 3, 2007-2008 a national picture of infertility is presented, followed by trends in infertility in the states of undivided Andhra Pradesh and West Bengal. The chapter further examines the presence of the infertility industry in the largest urban centres of these two states – i.e., Hyderabad and Kolkata. After investigating the growth of the infertility industry in Hyderabad and Kolkata and presenting a closer look at the two selected clinics, the chapter attempts to capture the place making process of the clinic space, with the help of concepts like ‘spaces of hope’, ‘therapeutic landscape’ and ‘waiting room aesthetics’.

The *fourth* chapter concentrates on the narratives of the different stakeholders of the infertility industry by situating them in the entire schema of the ART industry. Beginning with the organisation of fertility clinics based on field work, three broad

models are identified. While these models cannot be generalized, they are fairly representative of the clinics found in Hyderabad and Kolkata. The next section covers key themes centered on the economics of the fertility industry that were identified after a critical reading and analysis of the interviews conducted in Hyderabad and Kolkata.

The *fifth* chapter is primarily focused on the everyday experiences of living with infertility or/and reproductive loss and hope. Beginning with stigma, it highlights how reproductive failures are stigmatized across the world and how this discrimination becomes personal and gendered. Moving forward the gendered nature of infertility is highlighted – elaborating how infertility is feminised and the emerging concerns around male infertility. The last two sections of the chapter highlight the role of religious beliefs and alternate treatment options associated with infertility and reproductive loss. Finally, the chapter concludes by articulating the role of hope and how it is packaged and aggressively marketed by the fertility industry and medical establishment. The consumers of this ‘selling of hope’ are the infertile treatment seeking individuals who internalise the hope narratives of parenthood.

The *sixth* chapter is the Conclusion which presents a summary of the main findings of the study. It also raises questions for further research which this study could not address.

1.9. Limitations of the Study

Since a thesis is inevitably open to criticism and has shortcomings, this section of the thesis highlights some of the key constraints that emerged in conducting and completing this study. As Ocejo (2013) points out, one of the important ‘strategies of data collection’ for an urban ethnographer studying the social world is to ‘cross social boundaries’. He elaborates,

“For ethnographers who study people who are from different backgrounds from them and identify with different groups, key obstacles in the way of communication and understanding are the socially constructed boundaries and stratifying categories that create social distance. Along with the establishment of trust, fieldworkers must learn how to cross social boundaries and balance social closeness and critical distance between them and the participants.”
(Ocejo, 2013, p. 11)

One of the reasons behind selecting two study sites, where the researcher is familiar with one, but not the other, was to dismiss the possibility of being only in a 'comfort zone'. However, this decision also posed some challenges. The central issue being what is often referred to in social sciences as the 'insider-outsider' complexity. Although in contemporary research it is commonplace to study the 'unknown', nonetheless it has potential to entail certain difficulties for the researcher. In the context of this study, the research sites were fertility clinics which had restricted access, thus limiting the scope of the research, as the interviews had to be approved and be conducted in accordance with the convenience of the respective clinics. As a result, interviews within the clinic space may have influenced answers when questions about the clinic were asked and otherwise.

Moreover, the research topic deals with intimate questions which might come across as intrusive for others. Therefore, in order to be extra cautious in not hurting anyone's emotions and maintain research ethics, certain questions were reframed and even dropped depending on the situation. Moreover, since the researcher was an unmarried female who has crossed the ideal age of marriage (nearing her 30s) during the field work; it affected the rapport building and relationship with some of the field respondents. The research experience was highly self-reflexive, but also involved apprehensions regarding adequate understanding and interpretation of the reproductive health and the journey towards parenthood of the respondents, as the researcher lacked the personal experience.

A challenge faced was communicating and understanding in Telugu in Hyderabad. Since the researcher does not understand Telugu, it was difficult to communicate with many field respondents, and hence the respondents in Hyderabad got limited to treatment seeking individuals who were fluent either in Hindi or English. In a few cases, the clinic staff acted as translators and helped in communicating between the researcher and those respondents who did not know any language other than Telugu. In such situations, it was felt that many minute details of the narratives may have been lost in translation and a true sense of the interviews could not be achieved by the researcher.

A major limitation of the study was that the selection of the clinic automatically defined the respondent population. It got restricted to a homogeneous class group (largely upper middle and middle class, with only few cases of lower middle class couples), where differences of religion and caste did not emerge strongly. While one recognises the

importance of these intersections, this research could not address those issues. The thesis acknowledges the convergence of diversity with an intersectional approach in the Indian context. It can be assumed that a larger group of respondents with multiple fertility clinics as research sites might have provided more heterogeneity in terms of class, religion and caste of the respondents and the thesis would have benefitted from a more nuanced understanding.

Furthermore, another limitation is that when one is studying and framing arguments on illness, suffering, pain and loss, the question that often appears is whether one can really understand and represent their suffering and whether the respondents selected is representative of the population? Although certain reasoning and methods have been applied for choosing the respondents, the possibility remains for broadening the scope of the research universe and further detailed longitudinal research.

Finally, due to constrain of time and the Covid – 19 pandemic, follow ups could not be conducted. Revisiting field was restricted and few follow ups had to be conducted over telephonic interviews, compromising on the quality of interview.

CHAPTER 2

Debates on (In) Fertility: A Select Literature Review

Human reproduction has long been an interest of research for demographers and medical researchers. However, until recently population studies has been focusing only on demographic patterns and profiling of population based on its location. But in recent times, there is a growing interest among social scientists to understand the biological process of human reproduction through social and cultural lenses. The inclusion of context in explaining the differential patterns across the world provides an in – depth nuanced understanding of the phenomena. Women’s health has been a topic of study in the disciplines of medicine and social sciences for long, but it was majorly concentrated in understanding only the women’s reproductive health. History is witness to the reductionist approach deployed by the patriarchal society across the globe, leading to the sexualisation and medicalisation of a woman’s body. Owing to the feminist movements, and with more and more women entering the academia, it not only enabled women to gain rights over their own bodies, but more research about social construction and cultural elaboration of women’s experiences came into the forefront. Broadly situating the thesis in this trajectory, the chapter aims to highlight a few important debates and discourses related to reproductive loss and infertility which have guided the present study conceptually and theoretically.

2.1. Recognising Infertility and Reproductive loss as a Reproductive Problem

With the increasing interest in reproduction, anthropologists and other social scientists have generated a range of research on reproduction. However, despite the rise in research on reproduction and its relationship with culture and politics, certain topics in the area continue to be privileged over the others. Mainly, research used to concentrate on normative human reproduction, which included high fertility controlled through modern contraceptive technologies and the domination of medical and scientific control over childbirth. In general, reproductive success or the struggle to achieve reproductive success has been the focus of study without acknowledging common experiences of reproductive loss. There is a lacuna in understanding non-normative reproductive scenarios and experiences (Inhorn & Balen, 2002). Scenarios where the standard linear

narrative of conception, birth, and the progress of the next generation is interrupted has always been ignored and considered irrelevant. Conversations around pregnancy loss, reproductive pathology, abortion and childlessness have been on the periphery with little impact at the policy or the ground level. There has been a universal taken-for-grantedness of fertility, pregnancy, and reproduction. The possibility of reproduction going wrong and affecting individuals, communities and the larger society was not acknowledged. ‘Reproductive disruptions’ (Nash, 2014) can be because of – various sexually transmitted diseases (STDs), ectopic (tubal) pregnancy, reproductive loss through miscarriage and stillbirth, neonatal morbidity and mortality, maternal mortality, unwanted pregnancies leading to safe and unsafe abortions, life threatening reproductive diseases (such as cervical and ovarian cancer), premature menopause, infertility leading to childlessness.

It becomes important to understand how infertility is recognised and defined at the global level, as it is a political process which impacts the individual experiences. At the 18th World Health Assembly (1965), the right to address human reproductive needs (whether fertility control or/and fertility problems) was recognised, and a World Health Organization (WHO) unit dedicated to human reproduction - Human Reproduction Programme (or HRP) was established (Poel, 2012, p. 218). Thereafter, the 21st World Health Assembly (1968) recognised that *“planning a family impinges on issues associated with social and economic development”* and *“identified the need for every individual to have the opportunity to obtain information and advice on problems connected with forming a family unit”* (Poel, 2012, p. 218). To further this vision, a WHO Scientific Group on the Biological Components of Human Reproduction was established in 1969, which stated - fertility problems can be understood based on research on understanding global burden of infertility and needs assessment (Poel, 2012). Over the course of time, the scientific Groups merged with different other units which resulted in the change of aims and scope of the research unit⁶.

However, there are two watersheds in the institutional recognition and study of infertility – first, the year 1987 is important, where there was a shift in the emphasis and priority on human reproduction research. WHO shifted its focus from ‘cure’ to ‘prevention’ of infertility (Poel, 2012). Public health matters became important where

⁶ For further details refer: Poel, Sheryl Ziemer (2012) Historical Walk: The HRP Special Programme and Infertility. *Gynecologic and Obstetric Investigation* (74): 218-227.

infertility was recognised as a health problem which needed prevention by improving basic life standards. The HRP prioritised ‘prevention’ as a key strategy to address the global burden of infertility, and addressing or sponsoring research for innovations, support for diagnosis, management, or affordable treatment for those already infertile was given less importance. The second important year is 1998 (after the Cairo Conference 1994) when the programme on infertility merged with the WHO division of Reproductive Health, forming the Department of Reproductive Health and Research (RHR). This led to the change in priorities and a new vision for family planning resulting in the closing down of Infertility Task Force⁷. In 2001, the HRP recognised the need for access to affordable treatments in developing countries and the importance of harmonised data collection on medical aspects of the couples together with the prevalent national and international assisted reproductive practices (Poel, 2012).

Now since clinical research studies which dealt with diagnosing infertility with adjustments to predict the prevalence values were not supported by HRP, the Programme invested in an analysis of Demographic Health Survey (DHS) to understand the differentials based on regional, socio-economic and other demographics (Poel, 2012). However, due to the lack of global recognition of infertility as an important health problem, there has been a dearth of comparable data on infertility at a global, national or regional scale. The DHS Comparative Report (2004) titled ‘Infecundity, Infertility and Childlessness in Developing Countries’ and a journal article titled ‘National, Regional, and Global Trends in Infertility Prevalence Since 1990: A Systematic Analysis of 277 Health Surveys’ (2012) are relevant studies which provide data representative of multicenter, multi-country infertility rates. However, there are other comparative studies on infertility (see Boivin et al, 2007; Larsen, 2000; Ericksen & Brunette, 1996) and an array of literature on micro level region specific studies on infertility (Bhatti, Fikree, & Khan, 1999; Fledderjohann, 2012; Hollos, Larsen, Obono, & Whitehouse, 2009; Pujari & Unisa, 2014), but these studies do not use a standard, universal, comparable definition of infertility. Therefore this shift from childlessness to infertility, i.e., from a social problem model to a medical problem model is linked to the

⁷ The Task Force on the Diagnosis and Treatment of Infertility was established in 1979. The Task Force was dedicated to the ‘Year of the Child’ focusing on those ‘missing’ children for couples eager but unable to have a child. It initiated its first epidemiological studies in Brazil, China and India and found that not only the determination of prevalence of infertility is important to understand but also the causality in both men and woman. This will enable to understand the public health needs assessment and burden (Poel 2012).

larger political economy and marketisation of these technologies. Greater medical acknowledgement and intense medicalisation is linked to greater consumption of these technologies.

Marcia C. Inhorn and Frank van Balen (2002) in their book 'Infertility Around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies' try to understand the reason behind the global neglect towards infertility. They highlight four probable reasons behind the same. They include – (i) the medicalisation of infertility in the West, which has restricted the research agenda to the domains of medicine, epidemiology and medical psychology. With an over domination of psychological understanding of infertility and its medical interventions; (ii) infertility has largely been a taboo subject as it invariably involved discussions related to sexuality and sexual failure; (iii) in West childlessness became a lifestyle option and a feminist statement; and (iv) infertility has only been discussed as a critique of the so called new reproductive technologies in a philosophical manner dismissing the lived realities of individual experiences (Balen & Inhorn, 2002). The Euro – American domination on infertility research neglected the non – Western societies where infertility is a social issue leading to stigmatisation and discrimination. In the Western understanding, non-Western societies is understood as “hyperfertile”, where Third World women are not considered worthy to access high priced, high-tech Western infertility interventions (Balen & Inhorn, 2002).

Against this backdrop it becomes important to understand the difference between infertility and involuntary childlessness. The fundamental difference is that infertility can be defined as *the process* of not being able to have children; involuntary childlessness can be viewed as the *state or condition* resulting from infertility. In simpler terms, involuntary childlessness is the final result or the state and infertility can be one of the causes for the same. Furthermore, while infertility is understood as a medical problem, childlessness is largely understood as a social problem which is nothing but an unfulfilled personal desire. Recognising infertility as a medical problem automatically makes treatment acceptable as a necessary form of ‘cure’; and in many societies due to the institutional recognition the cost of the treatment is either paid or reimbursed by national health care system. On the contrary, defining childlessness as a social problem pushes the burden to the individual where the absence of children is understood as a personal issue for which society bears no responsibility. In this

understanding, children may just be one thing in life that an individual may desire but cannot necessarily have – like a car, a house, or a job. Childlessness in this sense becomes a matter of fate that one must accept, and the society's health care system cannot be expected to play any role to remedy. In India, this change in the discourse from childlessness to infertility can be seen with the growth of fertility industry and marketisation of these technologies.

2.1.1. Types of Infertility

Infertility can be defined as a condition where a couple is considered infertile, if the wife has not conceived after 12 months of unprotected intercourse or if either partner has a known condition that makes conception unlikely (Balen & Inhorn, 2002). This definition, and the term of 12 months (as a criterion) has already been debated and discussed by different scholars across disciplines. While reproductive impairments can be an individual condition, it is typically the couples who are considered infertile. Yet, there is a gender dimension, infertility is more often than not seen as a woman's problem irrespective of whether the husband or wife or both may have medical problems. Various studies have reflected on the social aspect of infertility across the world (Bhatti, Fikree, & Khan, 1999; Fledderjohann, 2012; Franklin, 1995, 1997; Hollos, Larsen, Obono, & Whitehouse, 2009; Inhorn M. C., 2008; Inhorn & Balen, 2002). To be infertile is to become isolated; occupy a stigmatised social status; contempt and abandonment, which is laden with the idea of role failure for both women and men – challenge to their womanhood and role of provider or protector respectively.

Before understanding its impact, it is necessary to elaborate on the reasons behind infertility. The causes can be many – from physiological to social conditions. Infertility is categorised into multiple types depending on certain criteria. However, this categorisation is not exhaustive in nature. From a medical perspective infertility is broadly categorised into four types, which include:

- a. **Male Factor Infertility** – In this case, it is the male partner who is diagnosed with infertile conditions or rather problems which prevent a couple from a natural pregnancy.

- b. **Female Factor Infertility** – In this case, it is the female partner who is diagnosed with infertile conditions or rather problems which prevent a couple from having a natural pregnancy.
- c. **Couple Factor Infertility** – In this case, both the partners are diagnosed with infertile conditions or rather problems which prevent them from having a natural pregnancy.
- d. **Unexplained/Unidentified Infertility** – In this case, neither the male nor the female partner is identified with any infertile condition, still they are unable to have a natural pregnancy.

Other than the medical categorisation, infertility is also divided into few types depending on the kind of infertility:

- i. **Primary Infertility** - When a woman is unable to ever bear a child, either due to the inability to become pregnant or the inability to carry a pregnancy to a live birth, she (or rather the couple) would be classified as having primary infertility. Thus women whose pregnancy spontaneously miscarries, or whose pregnancy results in a still born child, without ever having had a live birth would present with primarily infertility (WHO webpage)⁸.
- ii. **Secondary Infertility** - When a woman is unable to bear a child, either due to the inability to become pregnant or the inability to carry a pregnancy to a live birth following either a previous pregnancy or a previous ability to carry a pregnancy to a live birth, she (or rather the couple) would be classified as having secondary infertility. Thus, those who repeatedly spontaneously miscarry or whose pregnancy results in a stillbirth, or following a previous pregnancy or a previous ability to do so, are then not unable to carry a pregnancy to a live birth would present with secondarily infertile (WHO webpage)⁹.
- iii. **Social Infertility** – This is a concept which has emerged from the African literature on understanding fertility-infertility discourse. Although it is not a medical category, it is widely prevalent in the global South, non-Western countries where child bearing is associated with patriarchal norms. This is used to understand the local meanings of

⁸ <https://www.who.int/reproductivehealth/topics/infertility/definitions/en/> accessed on 05 February, 2019.

⁹ <https://www.who.int/reproductivehealth/topics/infertility/definitions/en/> accessed on 05 February, 2019.

infertility situated in a particular socio-cultural context, community, and the larger society. When a couple does not have a desired number or the ideal number of children as prescribed by its own culture and community, they are considered as socially infertile. They are subjected to stigmatisation, social discrimination and they seek treatment (medical and non-medical help) to overcome their social infertility (Hollos, Larsen, Obono, & Whitehouse, 2009).

Infertility can be understood to have two dimensions to it – physiological and social. The physiological aspect deals with the medically diagnosed characteristics, (which one might also call reproductive impairment) and is different from infertility as a socially constructed reality of couples (Berger and Luckman, 1967). Medical sociologists have focused their attention on how patients experience illness and how social factors condition this experience. The existence of a physiological impairment in one or both partners does not in and of itself determine the course of couples' experience of infertility. Drawing from this argument, according to Greil and Leitko (1988), *'the process of "becoming infertile"'* is a dialectical one in which husbands and wives interpret, respond to and give meaning to physical symptoms and physiological conditions.

With the multitude of type of infertility based on its factors, there are multiple approaches to study infertility and reproductive loss. While these approaches are not exhaustive, they still provide a broad idea of varied lenses used to understand reproductive disruptions over a period of time.

2.2. Different Approaches to Study Infertility and Reproductive Loss

Navigating through the broad area of reproductive loss, reproductive disruptions and focusing on infertility studies, certain frameworks have been identified on the basis of the review. The select literature on infertility studies can be broadly categorised into four dominant frameworks. They include:

- 1. Psychosocial Approach:** This approach mainly looks at 'infertility' or 'reproductive loss' as an individual or a couple experiences. It emphasises on emotional categories like stress, anxiety, emotions, marital distress and trauma. This literature can be further divided into two sub approaches – where the first tries to understand the psychological

origins of infertility (psychogenic hypothesis), and the other tries to understand the psychological consequences of infertility (psychological consequence hypothesis).

The psychogenic hypothesis model is based on the assumption that many cases of infertility, especially non-organic infertility, are caused by an unconscious resistance to motherhood on the part of the infertile women (Greil, 1997, p. 1680). Though the psychogenic hypothesis is now rejected by most researchers, some have identified stress as a causal factor for infertility. Several writers have suggested that stress causes hormonal imbalances and thus can be a causal factor in male and female infertility.

The psychological consequence hypothesis assumes that infertility is the source of psychological distress. The literature which suggests that infertility leads to stress and trauma can be further divided into two categories: (i) descriptive literature, which tries to characterize the nature of the infertility experience, and (ii) attempts to test the hypothesis that infertility causes psychological distress (Greil, 1997, p. 1682).

The descriptive literature is mostly based on qualitative interviews, which presents a picture of infertility as a devastating experience, especially for women. Some of the dominant themes which emerge from the descriptive literature on infertility experience are: infertility as a central focus for identity (especially for women); feelings of loss of control; feelings of defectiveness and reduced competence; stress on marital and sexual relations; a sense of social stigma; immersion in the treatment process and many others (Greil, 1997).

On the other hand, the psychological consequences hypothesis testing literature is mainly based on quantitative methods where the psychological characteristics of the infertile population is compared to those of the population at large. This comparison can be either made in respect to a general population in a large or a control group. The results of such studies have been somewhat ambiguous, making different claims.

The literature on infertility traces back to psychosocial approach in the early and mid-1990s. However, with more interdisciplinary studies across the world, this approach started becoming redundant and criticised on multiple grounds. The major limitations of this approach include: (i) over emphasis on women, (ii) the use of convenience samples, a tendency to assume that infertile women in therapy were representative of all infertile women, (iii) failure to specify the mechanism by which psychological states were

presumed to have an impact on physiological functioning, (iv) seen as a mechanism for minimising the reality of the suffering associated with infertility and as a means of blaming victims for their own suffering, (v) non-representative samples; (vi) people who do not seek treatment have been left totally unstudied, and many others (Greil, 1997; Boivin, 2003)

2. **Gender Approach:** Across the infertility literature there is a dominance of studies on gendered experiences of infertility. Both quantitative and qualitative methods have been used to understand the similarities and dissimilarities between women and men's experiences of infertility. A large part of this literature deals with the experience of women concluding it as more stressful for them than men. Since fertility/infertility and reproductive loss is synonymously understood as women's reproductive health issues there has been a gender bias in the sample. This approach foregrounds itself in the social construction of infertility and can be roughly categorised into two categories:

- a. **Feminist Approach** – As there has been an over emphasis on women in the study of infertility, the feminist approach criticises this historical processes of reducing women's health to reproductive health. Across societies the burden of infertility lies with women irrespective of whether the couple suffers from female factor infertility, male factor infertility or unidentified infertility. Therefore, feminist scholars and activists are against the medicalisation of women's bodies and against the patriarchal reductionism of womanhood to motherhood. This approach largely criticises the existent literature from a feminist perspective and calls for an inclusive approach without any gender bias or stereotypes, where women can have the choice 'to be a mother' or 'not to be a mother' (see Ginsburg & Rapp, 1991; Johnson & Fledderjohann, 2012; Rothman, 1988, 1989; Corea, 1985; Franklin, 1995; Inhorn & Balen, 2002; Strathern, 1995).
- b. **Masculinity Studies** – The masculinity studies approach criticises the existing literature for its exclusion of men in the study of infertility. The studies focused on the experience of infertility among men, claim that men suffer from higher level of stress and anxiety as they are under the double pressure of stereotyped gender roles (of being strong, balanced) and being incompetent or incomplete (with infertility their masculinity is questioned). Men have always been on the periphery of infertility studies literature. Therefore, this approach advocates not only for an inclusion of men in the research but also to treat them as central subjects in understanding infertility

experiences (see Culley, Hudson, & Lohan, 2013; Hinton & Miller, 2013; Inhorn, 2012; Wischmann & Thorn, 2013).

In a sense both the streams of gender approach, i.e. feminist studies and masculinity studies – call for one to move beyond gender biases and stereotypes. There is a need to understand infertility as a ‘couple experience’ where both the partners need not have similar experiences, but need to be treated equally, moving away from any kind of essentialism. One has to locate individuals in their respective socio-cultural-economic contexts, and understand their experiences in the light of their expected gender roles. Both the streams call for a holistic understanding of infertility and/or reproductive loss.

3. Biomedical Approach

The biomedical approach of understanding infertility and reproductive loss is guided by the medical definition of infertility prescribed by WHO (failure of conception within one year of unprotected intercourse). It understands the human body as a project, where its parts need to be fixed/repaired/corrected. In this approach there is a shift in the language of medical discourse from ‘involuntary childlessness’ to ‘infertility’. Here, infertility is understood as a medical loss, and Assisted Reproductive Technologies (ART) are considered as the miraculous solution to treat that loss. It includes important concepts like – medicalisation; medical gaze; medical surveillance; feminisation of diseases. However, this approach is critiqued for understanding the human body as an autonomous unit. Moreover, it considers infertility as a homogenous experience, ignoring the social construction of infertility. It is highly objective and positivist in its approach (Johnson & Fledderjohann, 2012).

4. Regional/Local Perspective

This perspective mainly originates from the Global South and African countries. Since the Western understanding of infertility and reproductive loss would be inadequate to understand non-Western settings, there emerged a new perspective especially from the African countries. It is informed by the above three perspectives, but also brings in the importance of context and cultural meanings. It emphasises local meanings and regional variation of infertility, leading to the birth of the concept of ‘social infertility’. This approach highlights the importance of socio-cultural understanding and interpretation of infertility and reproductive loss, drawing attention to the subjective understanding,

articulation and consequences of infertility and reproductive loss (see: Fledderjohann, 2012; Hollos, Larsen, Obono, & Whitehouse, 2009; Richards, 2002).

2.3. Assisted Reproductive Technologies (ART) and the Medicalisation Model

In general, the study of human reproduction focuses on reproductive 'success' or the struggle to achieve reproductive success, rather than on reproductive 'failure'. Social scientists have noted that the discourse that surround pregnancy and childbirth highlight positive outcomes and happy endings without acknowledging experiences of reproductive loss. Like many medicalised processes, infertility is also rooted in class, sexuality, and gender norms (Steinberg, 1997). Some argue that socioeconomic factors played a major role in the medicalisation of infertility. Prior to the 1950s, infertility was considered an emotional or moral problem rather than a medical one. However in the 1960s and 1970s, with the development of laparoscopic technology and drugs to control ovulatory cycles, the medical treatment of infertility began to flourish. (Whiteford & Gonzalez, 1995).

Early accounts of third party interventions to achieve conception had their origins in animal husbandry. It first started from animals and then passed on to humans consequently. Recent developments in medical technologies have transformed the way in which one can diagnose and treat illness. In case of infertility as an illness, these developments have come in the name of assisted reproductive technologies (ARTs). Assisted reproductive technology (ART) is the technology used to achieve pregnancy in procedures such as fertility medication, artificial insemination, in vitro fertilization and surrogacy. It is a reproductive technology used primarily for infertility treatments, and is also known as fertility treatment. The Centers for Disease Control and Prevention (CDC) (1992), Atlanta, USA, defines ART to include *"all fertility treatments in which both eggs and sperm are handled. In general, ART procedures involve surgically removing eggs from a woman's ovaries, combining them with sperm in the laboratory, and returning them to the woman's body or donating them to another woman."* According to CDC, *"they do not include treatments in which only sperm are handled (i.e., intrauterine—or artificial—insemination) or procedures in which a woman takes medicine only to stimulate egg production without the intention of having eggs"*

retrieved."¹⁰ Different ART procedures are – fertility medication, In-vitro fertilization (IVF), Gamete Intra-fallopian Transfer (GIFT), Cryopreservation and many others.

Fig. 1: Types of Major Fertility Treatment

ART and/or fertility treatment includes a variety of different procedures ranging from the basic timed intercourse (TI), to various technologically advanced procedures. These include – (i) the least invasive method of Intra Uterine Insemination (IUI) where either husband's or donor sperm ejaculated in a container, subjected to standard laboratory preparation procedure is inserted through the vagina into the woman's uterus; (ii) In Vitro Fertilization (IVF) with its multiple variations where both sperm and ova are retrieved from the body (either it can be husband and wife or egg and/or sperm donor), placed and fertilised under laboratory conditions in a petri dish, and then transferred into the woman's uterus in the early embryonic stage, with the hope that fertilization and pregnancy will occur; (iii) Intracytoplasmic Sperm Injection (ICSI) is a variation of IVF used in severe male-factor infertility involving micromanipulation of techniques, whereby one spermatozoon is injected directly into an oocyte under laboratory condition; (Inhorn & Balen, 2002) (iv) procedures like Testicular Sperm Extraction (TESE) and Percutaneous Epididymal Sperm Aspiration (PESA) are also used in extreme cases of male factor infertility where no sperms are present in the ejaculate; (v) other procedures like GIFT (Gamete Intrafallopian Transfer), ZIFT (Zygote Intrafallopian Transfer) and others are also prevalent.

Source: Fieldwork and secondary sources

With the advent of Assisted Reproductive Technologies (ARTs) and other fertility treatments, infertility has become synonymous with its medical treatment. What used to be considered a natural, yet disappointing process to be coped and lived with is now considered a medical issue requiring treatment (Bell, 2016). Lately, infertility is constructed as a medical problem to such an extent that any delay in pregnancy prompts people to consider medical opinion. Jyotsna Agnihotri Gupta (2000) traces the global processes behind this medicalisation of infertility. According to her, until the 1950s,

¹⁰ <https://www.cdc.gov/art/whatis.html> last accessed on 19.10. 2021

infertility was often thought of as emotional rather than medical in origin. With the development of synthetic drugs and technology of laparoscopy in 1960s and 1970s, the physicians got a control over the ovulatory cycle and an entry to women's internal reproductive biology (Gupta, 2000). Some scholars suggest that while new drugs and technology were significant developments in the medicalisation of infertility, the treatment of infertility became a large scale industry, partially in response to few socioeconomic factors. They include:

- i. Between 1950s and 1970s, U.S. fertility rates fell, and at the same time there was an increased supply of physicians trained in Obstetrics.
- ii. The decreased availability of healthy white infants for adoption.
- iii. The sexual revolution and the increased incidence of sexually transmitted diseases.
- iv. The increased frequency with which women entered the job market and delayed onset of child bearing (Gupta, 2000).

These changes transformed infertility from an acute, private agony that was accepted as fate, into a chronic, public stigma from which there were costly and often unfulfilled hopes, of deliverance. Infertility was re-conceptualised as part of the medical model with the woman's body seen as a diseased organ, and treatment focused on the control or removal of the damaged organs. This has also changed the language of describing infertile patients, where instead of infertile they are identified as 'not yet pregnant'. This label of 'not yet pregnant' resonates the idea of hope, and the possibility of becoming pregnant and delivering a biological child in the near future. Ann Bell (2016) rightly points out that with medicalisation of infertility, "*what used to be considered a natural, yet disappointing process to be coped with, is now considered a medical issue requiring treatment*" (Bell, 2016, p. 39). This phenomenon of construction of illness is pointed out by Mishler (1981), who argues that illness is constructed through human action. Medical diagnosis plays an important interpretative role through which illnesses are constructed (Mishler, 1986) (cited in Pierret, 2003, p. 11).

In India, infertility care and management are low on the public health priority scale (Qadeer & John, 2009). Although infertility treatment is said to be available at government facilities, effective treatment is often difficult to access as there is little coordination between gynaecologists, infertility specialists, surgeons and laboratory

technicians. The same has been found in the field study of Hyderabad and Kolkata. The public health system does not offer adequate preventive, curative, and counseling services. *“The National Population Policy (2000) mentions infertility treatment in the context of providing information, counselling, and a regular supply of medication only for communities like the tribals and for displaced and migrant populations who ‘may not need infertility regulation’”* (MoHFW, 2005) (quoted in SAMA, 2010, p. 9). However, there is little to no focus on services for the infertile in the Reproductive and Child Health (RCH) Programme and in the National Rural Health Mission (NRHM) Document.

The introduction of ARTs in India has transformed the character of fertility treatment in the country. The entry of ARTs gave a new meaning to the expression “baby making” and the fertility became a good business, involved in commerce associated with body parts and body processes (Srinivasan, 2010). The panic over high infertility rates in the West substantially contributed to the emergence of Assisted Reproductive Technology and eventually its spread to the non-Western countries. However, it would be very naïve to locate and understand ART as only a medical innovation in the domain of science and technology or health. It has a larger social implication across different categories of society. Due to its high price, there is a wide gap between the consumers and the providers of ART in general. Hence, there is use and abuse of this technology by the medical establishment and industry. This calls for regulation of these technologies across the globe, so that the interests of all the actors involved are protected.

ARTs in India are part of a growing ‘industry’ that is valued at Rupees 25,000 crore (approximately USD 4.49 billion) (Law Commission of India, 2009, p. 11) (quoted in Majumdar, 2015). The reproductive tourism industry, as it is generally known, attracts a large number of clients across the world. However, since its inception in India, ART has always served a certain section of the society while exploiting the poor. This has led to the debate related to the regulation of ART in India – the draft ART Bill. This draft bill has been submitted to the legislature of India, with various modifications over a period of time, and it is yet to be passed¹¹.

¹¹ The Government of India in 2019-2020 introduced a number of bills related to reproductive health, reproductive rights and assisted reproduction. The Assisted Reproductive Technology Regulation (ART)

In India, the proliferation of these services has become rampant in the past decade. ART clinics are no longer concentrated in metros and big towns, but are also reaching semi-urban townships and rural areas that otherwise lack even basic amenities and necessary health care facilities. Not only has the industry proliferated, but the quality and standards of clinic in bigger cities are also being replicated in smaller cities and towns, thus reducing the need for non-urban residents to access big cities for this purpose alone. The growth of the fertility industry is becoming not metro-centric. Clinics offering fertility treatments are not only situated in the major metropolitan cities (like Kolkata, Delhi, Mumbai, Bengaluru, Hyderabad and Chennai) alone, but have also sprung up in other large cities like Pune, Indore, Kochi, Bhopal, Ahmedabad, Lucknow, Raipur and Madurai (Sarojini, 2014, p. 99). A question that often comes up in discussions on infertility is what makes these aggressive, expensive treatments acceptable and high in demand? The answer lies in understanding the functioning of these technologies and its location in the socio-cultural matrix of a particular society. Some probable answers are discussed below.

2.4. Biological Clock and Infertility

With the intense popularity and acceptance of the medical model of infertility and the consequent advent of the Assisted Reproductive Technologies the concept of ‘biological clock’ gained currency. The term ‘biological clock’ is used to describe the operation of bodily functions, such as sleeping patterns and circadian rhythms. However, in this context it is used to refer to the reproductive timing of an individual, specifically the female body. It is assumed that the reproductive capability of an individual is temporal and related to age. With the increase in age, the reproductive capability decreases, and hence the phrase “the ticking of the biological clock” is used. This concept of biological clock determines reproductive time as quantitative, linear,

Bill, 2019; The Surrogacy (Regulation) Bill, 2019 and the amendment to the Medical Termination of Pregnancy (Amendment) Bill, 2020 is aimed to protect reproductive rights of the women providing them with safe reproductive choices. These bills are yet to become an Act and they are hoped to work in conjunction with each other providing greater accountability and transparency in such procedures. <https://www.prsindia.org/billtrack/surrogacy-regulation-bill-2019> (last accessed on 19.10.2021) <https://www.prsindia.org/billtrack/medical-termination-pregnancy-amendment-bill-2020> (last accessed on 19.10.2021)

standardised, and irreversible and determines the possibility and desirability to have children by regulating reproduction, gender, and the female life course (Diaz, 2021).

From the 1960s, with the feminist movement and the introduction of contraception and abortions rights, women gained control over their own bodies which allowed them to participate in the public domain, the workforce, or the masculine world. This disrupted the ideal understanding of gendered roles where women were restricted to the private sphere and only men had access to the public sphere. The feminist movement enabled this transformation, which unsettled the normative idea of the family. As Diaz (2021) points out, the narrative of the biological clock emerged in the late 1970s and early 1980s with the emergence of ART. It came to be used to address the challenges which emerged due to the women's participation in the labour force, and the demographic shifts towards delayed child bearing. This created a tension between the social and biological dimension of reproductive time.

Since historically, infertility is associated with women, the biological clock links the decreased ability of older couples to conceive with the age of the female partner. Although reproductive specialists have known that age also significantly decreases the reproductive ability of men, the term biological clock constructs a crude gendered female body, to which it is applicable, and male bodies do not come under its purview.

ART and the idea of 'biological clock' share a symbiotic relationship where both feed on each other. As Majumdar (2018) points out *"infertility medicine thrives on the perpetuation of the fear of the biological clock, which is coming to mark women and their productive years at increasingly lower ages"* (Majumdar, 2018, p. 120) The worry about late marriages of women, late pregnancy, women postponing childbearing due to professional and personal career growth, created a concern about the biological clock, where time is assumed to be running out to start a family, have one's own child and settle down, while pursuing individual growth and progress. This supposedly created the need for ART services so that women specifically can get a control over their own bodies and participate in the public sphere without worrying about pregnancy and childlessness. However, this led to the emergence of a contradicting narrative, where ART turned women's age into an issue in need of scientific examination (Amir, 2006).

Amir (2006) argues there are two different narratives portraying the relationship between ART and the female body or the female biological clock. On the one side,

there is medical optimism and technological progress which is directed at younger women and couples, promotes reliance on ART industry and the services it offers, *“assuring them that they should not worry about postponing their childbearing years since technology will be there to aid them conceive when the time comes.”* (Amir, 2006, p. 62). On the other side, there is caution and warning about time running out. This is directed towards older potential clients, warning them not to be caught in complacency and postpone resorting to medical interventions until it is too late. It creates a sense of panic and urgency, alerting them about the *“limits to what technology may have to offer them if they do not rush to the nearest infertility clinic immediately.”* (Amir, 2006).

Many scholars believe the deployment of the term biological clock is not only indicative of a market push but also an indirect form of social control, which can be understood in light of Foucault’s concept of ‘biopolitics’ and ‘biopower’. Foucault (2003) outlines biopolitics as a new technology of power that emerges to control human beings, which involves controlling and regularising *“process such as the ratio of births to death, the rate of reproduction, the fertility of a population, and so on.”* (Foucault, 2003, p. 243) According to Foucault, *“It is these processes – the birth rate, the mortality rate, longevity, and so on – together with a whole series of related economic and political problems, which in the second half of the eighteenth century, become biopolitics’ first objects of knowledge and the targets it seeks to control.”* (Foucault, 2003, p. 246-7 as quoted in Diaz, 2021, p. 767).

Diaz (2021) connects Foucault’s idea of biopolitics and the idea of clock time to understand how the narrative of biological clock shapes women’s views and experiences of reproductive time in Chile. She outlines how the idea of time enables regulation of the population by prescribing social calendars and strict boundaries to the timing of life course events, especially marriage, and motherhood. Moreover, according to her the narrative of biological clock *“shapes a sense of agency in which women are expected to keep track of time, rationally assess the risks of ageing, and enact responsibility in timing childbearing”* (Diaz, 2021, p. 769-770).

As Foucault situates the institution of medicine as a form of instrument of biopolitics, one can understand it better in the context of infertility, reproductive loss, the panic over biological clock, and the identified solution of ART, where the notion of “deadline” gets played out very strongly. Martin (2010) argues, the narrative of the

biological clock produces and reproduces panic; *“cultural anxieties about aging, illness, reproduction and risk”* where only women are made to feel that they are ‘running out of time’, and men’s capacity to become fathers is free from these constraints (Martin, 2010, p. 527). As a form of bio – political tool and gender subversion, it is argued that the concept of biological clock re-inscribed gender differences, nothing but a regulatory mechanism form for the female body. Amir argues *“the biological clock of the female reproductive system gives meaning to time by managing life-courses while examining the gender performance of the individual and reinscribing gender difference”* (Amir, 2006). Therefore, this narrative of the biological clock creates a particular expectation of women, where they are *“expected to keep track of time, rationally assess the risks of ageing, and take action to allocate childbearing at the “right time.”*” (Diaz, 2021, p. 773). In this framework, fertility and infertility are placed as a matter of choice and individual responsibility, and it is the woman’s decision making which presents them with difficulty in pregnancy.

Now that the larger theoretical framework of biological clock is located in the Foucauldian understanding of bio politics and neoliberal social idea to control population, one can make attempts to identify such patterns in our everyday lives. The panic created by decreasing fertility rate; population reaching below replacement level; increase in infertility - created a sense of urgency among young and old population, putting them under the guilt of anticipatory risk (see: Appendix A, Fig.1). It also paved the way for marketing of such commercialised medical interventions, which is a billion dollar industry in itself. It created a market, a pool of potential consumers for its services. The advertisements of the fertility clinics across different media, including social media; fertility awareness camps, virtual seminars all indicate the same pattern and a panic about ‘running out of time’ (see: Fig. 2, 3)¹². This idea of biological clock came across in the interviews conducted with the respondents, where they were either guilty of delaying pregnancy, or were confused about their biological clock not cooperating with their treatment.

¹² For more images refer Appendix A, Fig. 2, 3

Fig. 2: Flyer for Free Fertility Camp, Hyderabad 2021



Source: Instagram

Fig. 3: Interview of Fertility Doctors Urging People Not to Delay Pregnancy



Source: Eenadu, 26 July, 2021

2.5. Family, Kinship and Parenthood

Human reproduction has long been an area of interest for anthropologists, feminists and other social scientists. It is the basic means to expand the social. With the reproduction of human beings, there is also the reproduction of social relationships. However, it has always been a subject of control in some form or the other. For feminists, it has specifically been a matter of interest due to the varied ways in which it has been controlled and managed in patriarchal culture, which has been instrumental in the subordination of women across societies. Therefore, the redefinition of reproduction occurring in the context of ARTs needs to be addressed in its specific social, economic, political, and cultural dimensions. With the advent of ARTs, and modern scientific knowledge, the reproductive processes (in the case of humans) are now technologically modified, monitored, managed and marketed in an unprecedented manner (Franklin,

1995). Scientific “assistance” has given new meanings to reproduction, and consequently to family, kinship, motherhood, fatherhood and other social relationships. The legitimization of this assistance or interference reinforces the idea of cooption between nature and technology in the realm of reproduction. This language of ‘assisting nature’ is also strongly visible in the advertisements and other marketing strategies of these clinics and service providers (see Fig. 4).

Fig. 4: Advertisement of a Fertility Clinic in India



Source: Facebook

Since procreation is one of the fundamentals of a society, the intervention and modification of this process by technology has led to a domino effect, changing meanings of parenthood, kinship, gender and sexual difference, inheritance and descent. In general, kinship is understood as blood ties, which is seen to result from the natural circumstances of birth, and where relationships are defined in terms of biogenetic and affinal suppositions. As Strathern (1995) opines, technology has not only led to genetic displacement but also to kin displacement. With these modern technologies of reproduction there is a redefinition of these categories and social relationships, with the changes in the process of reproduction. ARTs have separated procreation from sexuality, from inside the body where fertilisation can be achieved to outside the body. As Franklin (1997) writes – *“what was once a private act of love, intimacy, and secrecy is now a public act, a commercial transaction, and a professionally managed procedure. In the context of assisted reproduction, successful conception and*

procreation have become achievements, realized through teamwork and the helping hand of technology.” (Franklin, 1995, p. 336) Here, the clinic becomes the site of procreative acts, and the clinicians become the actors in the achievement of conception; destabilising the notions of family, marriage and kinship.

In the Indian context, the idea of marriage, family and kinship are enmeshed in the patriarchal, heteronormative understanding of society. Marriage is considered as one of the primary, sacred institutions which help in the functioning of the society and maintains social order. The prescriptions for marriage (dos and don'ts) are direct ways of social control helping in maintaining the social order. The birth of a child is considered to be an important and necessary shift in a woman/ a man's life to transcend from one social status to motherhood or fatherhood, which is desirable. This stands true across different religions and caste. Bharadwaj while analysing Hindu classical texts and storytelling (2003) points out the cultural importance of children (especially sons) in the Hindu tradition. He states that they are considered as a *“very important contributions towards the Hindu patriarchal notions of self-worth, fruitfulness and salvation which infertility disrupts”* (Bharadwaj, 2003, p. 1870). With the diagnosis of infertility, the transition from a man to father, woman to a mother is delayed / disrupted, and becomes publicly visible with the absence of a progeny born as expected in a marriage.

The advent of ARTs created a possibility to restore that transition by by-passing infertility and producing a biological child. However, the birth of a child with third party assistance threatened the sacred institution of marriage, and the prescriptive ways of procreation. It not only violated the traditional understanding of marriage, family and parentage, but it also redefined and enabled the birth of new forms of these institutions. It paved the way for third party assistance in the institution of marriage and kinship. This reassertion and upholding of the traditional meaning of family, reproduction and kinship is reflected in the surrogacy ban implemented by the Government of India in 2019. The surrogacy ban by the Indian government was upheld and sanctioned by reasoning that these new ways of family formations are against the ‘Indian culture and ethos’, and it disrupts the social order and the cultural matrix of the nation (Das Gupta, 2016). As Pande (2016) points out the reason behind the moral anxiety and hesitation towards accepting ARTs and specifically surrogacy is, because *“it allows for the*

extension of the market into the 'private' sphere of reproduction and motherhood" (Pande, 2016, p. 250)

The importance of kinship and the availability of these ARTs have prevented individuals from opting for adoption. Earlier, adoption was the only way to overcome childlessness caused by infertility, reproductive loss or any other reason. However, the availability of ARTs created a possibility of maintaining that scared kinship line. This displacement of adoption as an option for alternate ways of family formation in India is linked to larger legal aspects and cultural sanctions¹³, and is not the focus of the study and hence is not discussed in detail in this review. Field interviews also highlighted the resistance towards accepting donor sperm. There were instances where respondents were categorical about using husband's sperm for IVF and were indifferent whether wife's ovum is used for the procedures or not, highlighting the obsession of continuing the patriarchal bloodline (further discussed in chapter 4).

Moving away from cultural and legal sanctions of family formations, this section tries to draw larger themes and frameworks which inform the understanding of living with infertility. Therefore, while there is a reinvention of the 'family', it is still rooted in the pro-natalist, patriarchal understanding of kinship. Since ARTs provide the possibility of maintaining the kinship and bloodline (unlike adoption), it leads to the aggressive consumption of these technologies. While ARTs have redefined concepts like motherhood, fatherhood, parenthood, that redefinition also perpetuates the traditional normative family structure where the biological connection becomes an important defining marker.

2.6. The Feminist Discourse on Infertility and Reproductive Loss

Owing to the feminist movement across time and space, questions of gender, understanding women's experience and their perspective, questioning patriarchal understanding of our everyday lives, are a common phenomenon in today's research. Drawing from Ann Oakley to Sandra Harding (1987) and so many others, the question of multiplicity of experience is a basic ground work in contemporary research. With regard to medicine, feminists have questioned the narrow androcentric understanding of

¹³ Refer Bharadwaj, 2003.

the human body, where the male body is considered the ideal type and the female body as a deviant from this ideal type. Across generations, feminist questioning of the normative, and advocacy for multiplicity of experiences which are contextual, heterogeneous, cultural and political, has enabled a considerable change in understanding any phenomenon. The feminist lens enables one to identify the intersectionalities in one's lived experiences and prevents from slipping into a uni-linear, homogeneous narrative.

The initial feminist movement dealt with issues related to the methods of controlling population and the fertility of women. The contraceptive and abortion rights struggles enabled women to take control of their bodies. Later, with the emerging concern of decreasing fertility rates, and increase of infertility among women across the world, the feminist movement engaged with raising questions related to the treatment of infertility with the help of modern technological innovations. Both the issues of controlling fertility and encouraging infertility treatments invariably see it as dealing with women's health, her body and her reproductive capacity.

In case of infertility studies, feminist research highlighted the earlier androcentric bias where studies were focused only on women, highlighting the psychological effects of infertility and its connection to the innate sense of mothering among women. The earlier studies not only accepted that infertility and reproductive loss only affects women, but it also normalised this gendered understanding of a medical condition where only women were held responsible. It was male biased research like this which prompted feminists to develop new ways of thinking about and doing research. As Reinharz (1992) pointed out, feminist research does not deploy any different methods of research, rather it adopts a different feminist perspective to the same research methods (Reinharz, 1992). Recent studies have highlighted the absence of men in respect to fertility, infertility, reproductive health studies, and call for a conscious inclusion of men in discussions related to the same. Feminist perspective in this research not only helps to interrogate the earlier gender bias present in infertility studies, but alerts one to be consciously aware of the gendered experience, the multiplicity of context and also towards the gender bias towards men.

Dorothy Smith (1987) called for a sociology 'for' women, starting with women's experiences of their everyday lives. Extending this argument, Crenshaw (1991) is

critical of the Eurocentric understanding of women's experiences and advocates for intersectionality in feminist research, to consider ways experiences are shaped by multitude factors like race, sexuality, ethnicity, age, social location, social class, gender, religion, caste and dis/ability. In the context of ART, gender identities play a very important role. ARTs are themselves considered as gendered technologies, which has highly specific and differentiated applications on men's and women's bodies. Radical feminists, Corea (1985), Stanworth (1987) and others, describe ARTs as a conspiracy of male "techno-patriarchs" and the pharmaceutical industry against women, aiming to control the female body. These technologies are applied aggressively and more invasively to women's bodies than men (Inhorn, 2008). Women are considered the 'site for correction' irrespective of the nature of infertility. Consequently, reinforcing cultural "motherhood mandates" for women, which have been challenged by feminist for decades (Thompson, 2005). These technologies are criticised for glorifying traditional motherhood, emphasising the 'right time' to be mothers. Therefore, women who chose to use these ARTs were criticised for undergoing fertility treatment, leading many women to hide their treatment seeking from others in the fear of judgment and public criticism (Balén & Inhorn, 2002, p. 15).

Feminist scholarship also engaged in questioning these technologies for being structurally stratified. They pointed out the global differences in the nature and accessibility of these technologies, where conceptive techniques were available for the 'infertile' Global North or the Western societies, and contraceptive technologies were made available for the 'fertile' Global South, or the non-Western countries (Thompson, 2005). The class dimensions of these ARTs remained a major concern for social scientists. The location of these services in the private medical domain, preventing it from being subsidised, automatically excludes a large section of society who cannot afford such expensive medical treatments. This disparity in access is not only based on the lines of class but also race, region, sexuality, religion and caste in the case of India, which leads to what Shellee Colen calls 'stratified reproduction' (Colen, 1995).

Feminists like Marilyn Strathern (1992), Sarah Franklin (1997) moved away from essentialising these technologies and focused on the nature and consequences of these treatments, focusing on kinship and family patterns. Studies by Ginsburg and Rapp (1991, 1995) Rothman (1988, 1989), Inhorn (2004, 2008; Inhorn & Balén, 2002), challenged the uni-linear understanding of these technologies and highlighted the

multiplicities of women's experiences of these technologies, based on different intersections which cannot be homogenised as a single, standard, universal experience. They highlighted the socio-cultural meaning of infertility, and how local meanings not only defined the statement of problem, but also through rich ethnographies documented the experiences of these technologies, to show they are local and context specific. They also drew attention towards studying male infertility and their experience of NRTs and ARTs, and problematised the practise of 'hegemonic masculinity' and how it affects men (Inhorn, 2012). Drawing from the literature in different disciplines like anthropology, sociology, cultural geography, science and technology, this thesis locates itself in standpoint theory and intersectionality, and argues for a nuanced understanding of the everyday lives of the fertility treatment seeking women and men.

2.7. The Framework of Hope

'Hope' as a concept or an idea has been dealt with by different scholars across disciplines. This study acknowledges the different vantage points of understanding 'hope'¹⁴ but restricts and anchors itself to the basic commonsensical meaning of hope. The dictionary meaning of hope is – *'a feeling of expectation and desire for something to happen.'* (Oxford Dictionary, 2013). It denotes a 'desire' and it involves a 'probability' of achieving the desire. Enlightenment thinkers broadly define hope as that which *"consists of a desire and a belief in the possibility, but not the certainty, of the desired outcome"* (Blöser, 2020, p. 61). It is linked to time, and expectation in the near future. Although, it is not necessary that the realm of hope has to be tied to future, it can also talk about present and the past. Hope stands for a promise, a possibility of new experience, and an expectation of positive outcomes beyond the present, without ignoring the past. In everyday parlance, the idea of hope is associated with something positive; desirable or something better than the current situation.

The realm of science and technology is entrenched in the idea of 'hope' which signifies progress, improvement for the better, which is essentially forward-looking and hopeful. The domination of science and faith in scientific knowledge has been associated with

¹⁴ See Ernst Bloch's 'The Principle of Hope' - III volumes (1954,1955,1959); Raymond Williams (1989) 'The Practice of Possibility' in Robin Gable (ed.) *Resources of Hope: Culture, Democracy, Socialism* London & New York: Verso. Henri Desroche (1979) 'The Sociology of Hope', London: Routledge and Kegan Paul.

optimism, progress in a reductionist, linear sense of the term. It becomes important to understand the nature of the general faith in science and scientific research, in order to locate ARTs through the framework of hope. The valorisation of scientific knowledge and scientific advances enables the scientists to make predictions about future scientific developments and its benefits by assuring “*that their knowledge will help to create a future with less suffering and more human happiness.*” (Mulkay, 1993, p. 728). This is because it is assumed that science is good, scientists are to be trusted, their knowledge is reliable, and that this knowledge will work for the common benefit – which allows people hope. Therefore, at the core of the rhetoric of hope there is an idealised vision, where science enables the production of a technical solution to a practical or a social problem, which is almost like elimination of that problem. In this discourse, the relationship between science and society is reduced to a simple equation, where science provides an indefinite range of science based technologies enabling control over disease, disability, death, thus generating substantial improvements in the standard of living. This point to the fact that, hope is seen as a natural corollary in the dominant discourse of science in our society.

However, there is another view which Mulkay calls ‘rhetoric of fear’ which claims that the rhetoric of hope which is projected by science, scientists, and scientific knowledge is nothing but “*a collection of misleading exaggerations*” (Mulkay, 1993, p. 730). The claims regarding ART and embryo research are treated as a series of intentional misrepresentations designed to gain public support, which should be addressed with a certain degree of caution. This view further asserts that there are limits to scientific development which can sometimes be harmful for the social and moral order of society. Mulkay (1993) in his article on discussing the preceding of the legislation on embryo research in Britain in 1990s, talks about the rhetoric of hope and fear. While rhetoric of hope is used to gain support for the scientific research and its valuable contribution to the society, rhetoric of fear is used to counter such arguments when scientific advancement is considered to be violating basic cultural categories and moral values.

In the context of health, medicine, health related innovations and technological advancements, the framework of hope has played a decisive role. It is not only understood as a category of experience but also as one for analysis. A growing scholarship in the field of health and healthcare including biomedicine, has contributed to understanding the value of ‘hope’ for patients’ wellbeing, if not for their recovery. It

is argued that hope enables them to cope with their suffering and the apparent hopelessness of their present circumstances (Petersen, 2015). ART is better understood as 'hope technology', because more than a successful outcome it promises 'hope', which makes it a more desirable option, even when it is expected to fail (Franklin, 1997, p. 192). The marketing strategies of the clinics revolve around this principle and inflate the idea of 'hope', eventually selling the belief in the treatment that 'it does work'.

Hope is generated by publicising stories of positive outcomes and happy endings of infertility and reproductive loss. It promises a hopeful future without acknowledging the fact that ARTs fail for majority. By offering solutions or 'cure' they offer hope. ARTs invoke hope as part of the solutions package which they offer to the infertility treatment seeking individual (SAMA, 2012). As Peter Drahos (2004) mentions, *"hope is a psychological event or process that is distinct from the services and products to which it may be linked. Companies charge for their services and products. They do not charge for hope....Even if the supply of hope is free, the many services and products that promise to fulfill it are not."* (Drahos, 2004, p. 19). It is not only the doctors, clinics and pharmaceutical companies who use the notion of hope as a tool to operate in a very rapidly growing competitive market, but it is also picked up and circulated by patients and their family members. This array of multiple meanings associated with these modern breakthrough medical interventions justifies the term 'hope technologies'. Here, the hoped-for future is a take-home baby, and each patient hopes to be cured, i. e to deliver their own biological child.

With the 'privatization of hope', *"hope is strongly linked to the consumption of technologies, specifically therapies that promise to offer cures, alleviate suffering and facilitate the construction of new selves"* (Petersen & Wilkinson, 2015, p. 115). The hoping individual is associated with a sense of agency, where actions are taken to change their present circumstances. Consequently, with 'privatization of hope' has come the 'trading of hope', where Drahos (2004) mentions, *"Commercial actors understand that if they can link their products to the private hopes of individuals, they will sell more of those products and gain customer loyalty. They strive, therefore, to find ways to link consumption to the private hopes of their customers."* (Drahos, 2004, p. 20).

In the context of infertility and/or reproductive loss, the shift in the discourse of a social model (social problem) to a medical model (individual problem) with the medicalisation of infertility, has brought the focus on privatisation and commercialisation of hope. Although, discussions related to infertility have shifted from being a personal/individual account to a collective account resonating with other infertility treatment-seeking individuals/couples across nations, cultures, gender, religion, age, caste, class, and ethnicity, the trauma of childlessness is projected as an individual loss. The relationship between ARTs and the shift in the public discourse related to infertility is symbiotic in nature. ARTs has not only changed the script from 'individual/private hope' to 'collective hope', but has also let the shift change the technology itself so that it can identify and cater to a larger target audience. Individual/private hope simply refers to the hopes that an individual holds. But when this hope is held in common with others, they become a collective hope cohort. The group identifies itself with one particular hope - the hope of a biological child.

Extending this argument, one can also make an attempt to understand the concept of the 'biological clock' through the lens of hope. The concept of biological clock reinforces the precarious nature of time, time already lost by delaying childbirth, the 'running out of time' in trying less invasive medical interventions at the onset of fertility treatment – creating a panic about being left out, and providing hope to combat or overcome the present condition of childlessness through ART. Therefore, ARTs act as a pathway of fulfilling hope for treatment seeking individuals.

Alongside hope, there is also the concept of despair and fear. While the act of hoping enables one to look at the positive side (in general), there are negative consequences of hoping - the risk of hopelessness, despair and fear with failed attempts. Since hoping is the desire of a possibility which is likely to happen, it automatically denotes there is the possibility of it not happening and an acknowledgment of it. The probability of the situation signifies the likeliness and not certainty, making the individual "*vulnerable to being disappointed*" (Brown, de Graaf, & Hillen, 2015, p. 210). Therefore, in health and healthcare studies, hope and hoping is also understood in terms of hopelessness, despair and fear. There are dangers of hoping too, which limits the realistic evaluation of a situation by the hope struck individual. Optimism and hopefulness might prevent them from assessing the possibility of an unexpected outcome.

This thesis largely locates itself in this framework of hope and tries to explore the fertility treatment industry and the lived experience of hoping by the treatment seeking individuals. It is acknowledged that in order to understand the value of hope, it is important to recognise that there are diverse ways in which one can hope, and how those different ways of hoping can impact one's lives. The following chapters not only highlights the individual act of hoping but also the larger socio-cultural- economic and political processes they are located in which enables this process. The tensions, multiple interpretations, strategies of generating and instilling hope are few of the major concerns.

2.8. Summary

After introducing and situating the research topic and research design in the previous chapter, this chapter shifts the focus to theoretical perspectives and conceptual frameworks which guided the research. Major debates pertaining to reproductive loss, infertility and the framework of hope are reviewed to provide a background for setting up the key frames of analysis for the study. As elaborated, the interest in reproduction has largely been associated in understanding demography, population behaviour, and fertility patterns. Recent scholarship that is inter-disciplinary, has identified human reproduction not only as a biological phenomenon but one that is socially constituted and that varies across cultures. The earlier linear narrative of conception, birth, and the progress of next generation is now questioned and critically researched. 'Reproductive disruptions' (Nash, 2014) have become part of the larger narrative where pregnancy loss, infertility, reproductive pathology, abortion and childlessness have gained attention. An institutional recognition of infertility as a pressing problem across cultures, irrespective of Western or non-Western settings, has taken place after critical scholarship emerged in different disciplines from scholars across the globe.

This shift in the discourse of fertility and infertility studies is now understood through key themes like – biomedicine model and ART, commodification of the body, the concept of biological clock and how it is used by these technologies to create a demand for their services. The chapter critically reviews the changing notions of family, kinship and parenthood in the light of ARTs. Finally, this chapter elucidates two frameworks of understanding – the feminist discourse in understanding this shift brought by, along with the framework of hope. Both the frameworks complement each other in

understanding the secondary resources and provide a critical lens in reading the field data which is discussed in the following chapters.

CHAPTER 3

Mapping Infertility: Place making of ‘Spaces of Hope’

Situating infertility and reproductive loss in the larger domain of social science research, sociology and sociology of health, this chapter moves forward to understand the trends and spatial pattern of infertility and its implications. The lens of region, space, and place are the main tropes of understanding the fertility industry and the journeys of fertility treatment seeking individuals in this chapter. While examining reproductive loss and infertility in different contexts and regions, it becomes important to focus on the ways in which understandings of space, place and the body shape our engagements with advances in reproductive technologies. The exercise of mapping is undertaken to get a sense of the larger picture and understand the prevalence of infertility and its consequences across different socio-cultural context. This chapter articulates the global, national and regional mapping of infertility based on secondary resources.

The chapter has two sections. The first section which is more analytical aims to provide a brief overview of infertility across global regions - Sub-Saharan Africa, and South Asia. The chapter moves on to map infertility in India, followed by a regional analysis of infertility in two selected states – (undivided) Andhra Pradesh and West Bengal. The final part includes a micro level study of reproductive loss and/ or infertility in an urban context, in the two cities of Hyderabad and Kolkata.

The second section of the chapter seeks to navigate the place making process of the fertility clinic spaces, with the help of three broad spatial frames – ‘therapeutic landscape’, ‘waiting room aesthetics’, and ‘spaces of hope’. In depth interviews, situational conversation, and observation notes from the field diary are used to discuss and situate the arguments of this chapter. The clinic space becomes an important site of analysis as a considerable amount of time is spent there by all stakeholders. Moreover,

since all the interviews were conducted in the clinic space, it becomes invariably a critical register in understanding its influence on the responses by the respondents.

3.1. Mapping Infertility: The African ‘Infertility Belt’

Infertility, most often than not, has been studied in the context of Western settings which is identified with low fertility, technological advancement, and global supremacy. Along with medicalisation of involuntary childlessness/infertility, changing notions of parenthood (where childlessness can be a lifestyle option), and the advancement of reproductive technologies, the larger narrative of infertility mostly revolved around few Western societies – particularly United Kingdom, Australia and United States of America. Therefore, the literature on infertility is largely Euro-American, neglecting non-western settings, making it invisible in the larger discourse because these countries are labeled as hyper fertile, over-populated and identified as the reason for global population explosion. As Marcia Inhorn and Frank Balen write (2002) *“helping infertile subpopulations in high-fertility non-Western settings – where infertile individuals may suffer more because of their “barrenness amid plenty” – has never been treated as a high priority in international population discourse and may even be viewed as contrary to the western interest in global population control”* (Greenhalgh, 1995; Lane, 1994) (as quoted in Inhorn and Balen 2002, p. 7).

Mascarenhas et al in their study (2012) claim that worldwide 48.5 million couples are unable to have a child. Of which 19.2 million couples are primary infertile (unable to have a first child) and 29.3 million couple (excluding China) are secondary infertile (unable to have an additional child). 14.4 million of these couples live in South Asia, and 10.0 million couples are from Sub Saharan Africa region. Their study shows that between 1990 and 2010, level of primary and secondary infertility changed little in most world regions¹⁵ except Sub Saharan Africa and South Asia. In these two regions the primary infertility prevalence decreased during the 20 year period, showing reduced

¹⁵ The study estimated prevalence of primary and secondary infertility, their trends between 1990 and 2010, and their uncertainties, in 190 countries and territories, which were grouped into the seven regions and 21 nested sub regions of the Institute for Health Metrics and Evaluation Global Burden of Disease 2010 study. The seven regions include – High Income, Central/Eastern Europe and Central Asia, East Asia/Pacific, Latin America/Caribbean, North Africa/Middle East, Sub-Saharan Africa, and South Asia. (for details refer Appendix B).

child-seeking behaviour, i.e., reduced exposure to pregnancy due to changing fertility preferences, wherein people are opting towards having lesser number of children. Here, the infertility prevalence among those exposed to the risk of pregnancy did not change, but the proportion of couples affected by infertility decreased because fewer attempted to have a child. However, the absolute number of infertile couples increased due to population growth (Mascarenhas et al, 2012, pp. 7-9).

Discussions related to reproductive loss and/or infertility are incomplete if one does not understand the African scenario in regard to infertility, reproductive health and hygiene. Based on the available comparable infertile surveys, especially World Fertility Surveys and Demographic Health Survey (both conducted by WHO), some regions in the developing world have been identified as an “infertility belt”. A band of countries across Central Africa has been termed Africa’s “infertility belt” by these surveys. They are characterised by women bearing fewer children than expected because of infection, poor hygiene, nutritional deficiencies, endemic disease, unsafe abortions and widespread sexually transmitted diseases (STDs). The regions included in this infertility belt are – Democratic Republic of Congo, Central African Republic, Sudan, Gabon, Cameroon, Niger and Chad (Leonard, 2002, p. 194).

After a long focus on fertility, infertility in sub-Saharan Africa has now gained a lot of attention from demographers and anthropologists. There is a greater awareness about the infertility problem in Africa and its serious social and public health implications. Scholarship on infertility in Africa calls for a nuanced context specific understanding of fertility issues, where the Western definitions of infertility and the demographic approaches to enumerate such cases may not be applicable in non-Western settings. Studies argue that, local meanings and interpretations of infertility and their consequences will yield a better understanding of the global, regional and local patterns of fertility/infertility issues (Inhorn & Balen, 2002).

A growing body of literature on Africa (Boerma & Mgalla, 2001; Salvesberg, 1999, 2002; Inhorn & van Balen, 2002; Hollos et al 2009) highlights infertility’s devastating effects, especially on women. Women are subject to personal grief, frustration, ostracism, abandonment, blame for reproductive mishaps – irrespective of the medical reason of infertility. Among the Ekiti Yoruba of Nigeria (Ademola, 1982) and among the Aowin of Ghana (Ebin, 1982), infertile women are treated as outcasts and their

bodies are buried on the outskirts of the town. Similarly in Cameroon (Salvesberg, 1999, 2002), infertility is grounds for divorce among the Bangangte, whereas among the Ewe and the Ashanti (Fortes, 1978), infertile women are not considered as fully adult and therefore cannot be buried with full adult funeral rituals. Based on the 1999 Nigeria DHS, 9.4% of sexually experienced women aged 25-49 years, had no living children and 5.2% never had a fertile pregnancy (Ruthstein & Shah, 2004). Male and female disorders equally account for infertility and the male factor is associated with a greater percentage of primary infertility (Okonofua, et al, 1997, p. 207). High incidence of polygyny (without any formal limit on the number of wives a man can take) and divorce is among the most prominent consequences of infertility. From a local therapist to herbal remedies and sacrifices to a local deity – infertile women in most tribes in Africa exhaust all options before they consult any medical practitioner at the local hospitals (Okonofua et al, 1997). This stands true not only for Africa but also for other developing societies across the world.

3.2. Mapping Infertility in South Asia – ‘Barrenness amid Plenty’

In the Western gaze, South Asia is seen as a region that is ‘overpopulated’, ‘teeming with millions’ and where fertility rates need to be controlled. The burden of reducing fertility rates falls on women and so does the societal demands of proving her fertility and producing sons. Women in South Asia, particularly in India, Pakistan and Bangladesh, are caught in this conflict of demands between the State and society. The idea of ‘barrenness amid plenty’ refers to the fact that infertility is often most prevalent where fertility rates are high, and therefore contraceptive targeting campaigns are excessive. Mahmoud Fathalla, one of the directors of HRP, rightly states:

“In a world that needs vigorous control of population growth, concerns about infertility may seem odd, but the adoption of a small family norm makes the issue of involuntary infertility more pressing. If couples are urged to postpone or widely space pregnancies, it is imperative that they should be helped to achieve pregnancy when they so decide, in the more limited time they will have available.” (World Health Organization, 2010).

Bangladesh – Like other South Asian countries, infertility has remained a neglected issue in Bangladesh’s reproductive health policy. Instead the emphasis has always been

on over-population, controlling fertility and the implementation of Family Planning programmes. Therefore, there is a lack of national level data on the prevalence rate of infertility in Bangladesh. The World Fertility Survey and others estimated infertility rates in South Asian countries stated 4% infertility in Bangladesh (Nahar, 2012, p. 149). Another estimate of overall primary and secondary infertility among women between 45-49yrs of age, suggests an infertility rate of 15% in Bangladesh, which is the highest among all South Asian countries (Vaessen, 1984; Farely, 1988, cited in Nahar, 2012). High prevalence of sexually transmitted diseases (STD), urinary tract infections (UTI), reproductive tract infections (RTI), unsafe obstetric and abortion procedures, infections are among the common causes of infertility here.

Since Bangladesh is seen as a poor, underdeveloped, overpopulated country, a lot of national and international funds are poured in for population control measures. Infertility, reproductive loss or involuntary childlessness does not figure in their larger narrative. Although at the policy level, Bangladesh focuses on controlling population growth - emphasising on contraception, small family policies - the society is pro-natalist – making children extremely valuable and necessary for various economic, cultural and religious reasons. Therefore, childlessness is associated with consequences ranging from social stigma, familial violence, psychological or economic disadvantages – making the life of an infertile woman marginalised and risky (Nahar, 2012).

Pakistan – Based on the WHO-DHS Comparative Report (2004) the prevalence of infertility in Pakistan is 21.9% where, primary infertility is 3.9% and secondary infertility is 18.0%. The report concluded that in Karachi among the secondary infertile women more than two thirds (67.7%) of women, who were unable to give live births or give birth to sons had marital conflicts. These women had been threatened with divorce (20%), husband's remarrying (38%) or were being forced to return to their parent's home (26%) by their in-laws or husbands. They also reported that they were being physically and verbally abused by their husbands and in-laws leading to severe mental stress (Hakim et al, 2001).

3.3. Mapping Infertility in India

In India, infertility and reproductive loss has been largely neglected or made invisible from the public imagination and also at the policy level. Government policies and surveys dealing with reproductive health, majorly focuses on fertility, family planning procedures and contraception. The government initiatives are directed towards population control, sterilisation and contraception as India is considered to be highly fertile, over-populated, and on the verge of a population explosion.

3.3.1. Infertility in India: Trends and Spatial Patterns

Amidst all the programmes and policies adopted by the government aimed at pregnant women and their newborn babies, there is an erasure of infertile men and women who struggle to become pregnant or have had reproductive loss. Involuntary childlessness is not recognised as seriously as pregnancy and contraception. Government policies and surveys dealing with reproductive health, majorly focuses on family planning procedures and contraception. Therefore infertility treatment was completely unacknowledged by government policies, pushing it completely into the private domain. With the expansion of the private fertility market and its growing presence there is a sudden acknowledgement of infertility and reproductive loss in the public imagination. In the recent times there have been reports of declining fertility rates (Down To Earth, 2018), population rate reaching replacement levels (Rukmini, 2014), rising infertility among Indian population (Anupama, 2019; Times News Network, 2015; Tyagi, 2019).

The first national level data dealing with infertility appeared with the District Level Household Survey (DLHS) Report 3 (2007-2008). The DLHS-3, 2007 report shows current status of childlessness and infertility of currently married women with at least five years marital duration by selected background characteristics (District Level Household and Facility Survey (DLHS-3), 2007-2008: India, 2010, p. 171).

Since childlessness can be both voluntary and involuntary, a comparison of childlessness and infertility estimate can provide an idea about voluntary childlessness. Unisa's (2010) analysis of the DLHS – 3 report pointed out that the national level data shows voluntary childlessness is negligible in India (Unisa, 2010). Most of the analysis that follows in this section is based on the data from the DLHS 3, 2007, report. In that report questions were asked to women about infertility and treatment seeking behavior,

but neglecting infertility of men and their reproductive health. The sample was analysed through different variables, indicating the socio-cultural characteristics of the sample population. Background characteristics included age, type of residence; marital duration, education, husband's education, religion; caste/tribe; wealth index and age at consummation of marriage. However, the DLHS Report 4 (2012-2013) does not probe this further to meaningfully address the issue of infertility. Although there is a lack of acknowledgement of rising infertility in the government policies and programmes, there is a growing pool of news and other reports from private organisations, highlighting the rise in infertility and also the fast growing fertility industry in India (Chakraborty, 2021; Ernst & Young, 2015). The Ernst & Young report (2015) on infertility and IVF in India states –

“India is witnessing a high burden of infertility, with an estimated 22 to 33 million couples in the reproductive age suffering from lifetime infertility in 2015....shifting demographic trend coupled with increasing contraceptive use and risk factor exposure is likely to drive further rise in the burden of infertility in India...IVF cycles are estimated to increase from an estimated 1,00,000 cycles currently to 2,60,000 cycles by 2020 driven by an increase in number of infertile couples seeking treatment” (Ernst & Young, 2015, p. 3-8).

The Ernst & Young report associates increase in infertility rates with factors like increase in poly-cystic ovarian syndrome (PCOS) among adolescent girls and women, poor ovarian reserve among South Asian Women, endometrial tuberculosis, lifestyle factors of men like alcohol consumption, prevalence of STD & RTI, tobacco use, and obesity (Ernst & Young, 2015, p. 14-20). The DLHS-3 report is the only available national level data which shows ever married women (15-49 years of age) who ever had infertility problem by states and Union Territories except the state of Nagaland (refer: Table 8).

Table 8: Percentage of ever married women aged 15-49 years who ever had infertility problem and sought treatment for infertility, by States, India, 2007-08

State	Infertility rate (%)
Andaman & Nicobar Islands	3.3
Andhra Pradesh	10.9
Arunachal Pradesh	2.9
Assam	4.7
Bihar	12.4
Chandigarh	6
Chhattisgarh	11.3
Dadra & Nagar Haveli	5.6
Daman & Diu	7.6
Delhi	8.6
Goa	13
Gujarat	6.3
Haryana	11.1
Himachal Pradesh	4.9
Jammu & Kashmir	8.7
Jharkhand	9.4
Karnataka	7.6
Kerala	10.5
Lakshadweep	12.2
Madhya Pradesh	6.9
Maharashtra	8
Manipur	7.1
Meghalaya	2.3
Mizoram	4.8
Orissa	7.6
Puducherry	6.3
Punjab	8.8
Rajasthan	4.9
Sikkim	7.5
Tamil Nadu	6.7
Tripura	6.4
Uttar Pradesh	10.1
Uttarakhand	5.2

Source: DLHS-3 report, 2007, p. 174.

According to the DLHS-3 report, in India, 8% women ever had infertility problem, out of which 6% had primary infertility and 2% had secondary infertility. On the basis of age, the percentage of infertility increases with the increase in age – women in age group 15-19 years have 5.3%, 20-24 years have 7.7%, 25-29 years have 8.3%, and age group 30-49 years has the highest percentage of infertility at 8.6%. In the report, the infertility problems are further divided into – infertility problem in the first conception, after live birth/ still birth, after induced/ spontaneous abortion, and other incidents (which include problems after pelvic surgery and other incidents). The problem of infertility in the first conception is highest in the age group 15-19 years (80.4%) and lowest in age group 30-34 years (73.6%). Conversely, in the age group 30-34 years, the problem of infertility after live birth/still birth is highest with 3.8% and lowest in age group 15-19 years (3.2%). The problem of infertility after induced/spontaneous abortion is highest in age group 15-19 years (10.9%) and lowest in age group 45-49 years (5.3%). For other incidents, the percentage of women with infertility issues is highest in the age group 15-19 years (4.6%) and lowest in age group 40-44 years (3.0%) (District Level Household and Facility Survey (DLHS-3), 2007-2008: India, 2010).

Based on the report, percentage of women facing infertility problems is slightly higher for rural than urban women, with infertility percentage for rural women is 8.4% compared to urban women 8.0%. In rural areas, primary infertility amounts to 6.4% and secondary infertility is 2.0%. Similarly, in urban areas, primary infertility rate is 5.9% and secondary infertility is 2.1%. However percentage of women who ever had infertility problems in the first conception is high for both rural (77.0%) and urban (74.3%).

Infertility levels on the basis of age at consummation of marriage show mild variation. Women who consummated marriage below 18 years, report infertility of about 9.1 %, in which primary infertility is 7.2% and secondary infertility accounts for 1.9%. Similarly, women who consummated marriage at 18 years or above report infertility of about 7.4%, wherein primary infertility accounts for 5.5% and secondary infertility is 1.9%. Duration of marriage is an important indicator in understanding the infertility

profile of the population. Women who are married for 0-4 years, have 5.9 % infertility issues, which is comparatively lower than women who are married for 5-9 years (8.9%), 10-14yrs (8.8%) and above 15 years (8.6 %). Primary infertility is highest for women who are married for more than 15years (6.7%) and lowest for women who are married for 0-4 years (4.6%). Secondary infertility is comparatively low across the different categories based on the duration of marriage ranging from 1.3% - 2.4%. Women who ever had infertility problem in the first conception is generally high across all the age groups. It ranges from, 78.5% (for 0-4 years of marriage); 74.3% (5-9yrs of marriage); 72.3% (10-14 years of marriage) and 77.8% (for above 15 years of marriage) (District Level Household and Facility Survey (DLHS-3), 2007-2008: India, 2010).

There is a considerable difference between women facing infertility problem on the basis of education. On the one hand, women who are non-literate have the highest percentage of infertility (9.0%), and women with 10 or more years of education have the lowest percentage (6.8%). Here it can be assumed that with higher education, the age of marriage increases and awareness about health, hygiene and family planning increases which might play a role in preventing early childbirth, abortions, STI, RTI and therefore decreasing the rate of infertility.

The religious profile of ever married women aged 15-49 years having infertility issues is insightful, as observed in the DLHS 3 report (refer: Table 9). The sample population is divided into different religious groups which include – Hindu (8.5%), Muslim (8.3%), Christian (5.7%), Sikh (8.9%), Buddhist/Neo-Buddhist (6.3%), Jain (6.8%), no religion (4.5%) and others (6.3%). Among the Hindus 6.5% women have primary infertility and 2.0% have secondary infertility issues. Percentage of women who ever had infertility problem in the first conception is 11.1%. Data on the basis of the caste profile of the Hindus is also presented in the report. Infertility among Schedule Castes is (8.9%), Schedule Tribes (6.6%), Other Backward Classes (8.7%), and Others (8.2%) (refer: Table 10). Among the Muslims 6.4% of women have primary infertility and 1.9% have secondary infertility issues. Among the Christians 3.6% of women have primary infertility and 2.1% have secondary infertility. The highest percentage of women who ever had infertility issue after live birth/still birth is among the Christians with 19.3%. Sikhs (8.9%) have the highest percentage of infertility among all the religious groups (wherein primary infertility accounts for 7.0% and secondary infertility

is 1.9%) (District Level Household and Facility Survey (DLHS-3), 2007-2008: India, 2010).

Table 9: Religious profile of currently married women aged 15-49 years having infertility in India

Religion	Total Infertility (%)	Primary Infertility (%)	Secondary Infertility (%)
Hindu	8.5	6.5	2.0
Muslim	8.3	6.4	1.9
Christian	5.7	3.6	2.1
Sikh	8.9	7.0	1.9
Buddhist/Neo-Buddhist	6.3	4.3	2.0
Jain	6.8	5.2	1.6
No religion	4.5	3.9	0.6
Others	6.3	4.3	2.0

Source: DLHS 3 report, 2007, p. 170.

Table 10: Caste profile of currently married women aged 15-49 years having infertility in India

Caste	Total Infertility (%)	Primary Infertility (%)	Secondary Infertility (%)
Scheduled Caste	8.9	6.9	2.0
Scheduled Tribes	6.6	4.6	2.0
Other Backward Classes	8.7	6.8	1.9
Others	8.2	6.2	2.0

Source: DLHS 3 report, 2007, p. 170.

Religion plays an important role in defining the desire for a child and acceptance of infertility treatment like IVF, surrogacy, and donor IUI, (as they are prohibited by some religious groups), the role of religion is an important register in understanding infertility. Although the DLHS-3 report 2007 provides data on the prevalence percentage of infertility issues among married women aged 15-49 years against the variables of religion and caste, there are no explanations available on how religious profile might influence infertility rate in the national level report. However, this study could not bring out the intersectionality of religion and caste in understanding reproductive loss, infertility and its treatment.

The DLHS 3 report also shows data on infertility on the basis of wealth Index¹⁶. The wealth index is constructed by combining easy-to-use information on 33 household assets and housing characteristics such as ownership of consumer items, type of dwelling, types of water access, sanitation facilities, and availability of electricity, into a single wealth index. Women from the lowest wealth index account for highest rate of infertility with 9.2%, followed by women from second wealth index 8.8%, Middle wealth index 8.1%, fourth wealth index 8.0% and lowest rate of infertility 7.6% is seen in the women from the highest wealth index. This pattern can be probably associated with low standards of living, which includes lack of sanitation facilities, poor hygiene directly related to higher cases of RTI among women thereby increasing the risk of infertility. The inability to access proper health care facilities from basic requirements to advanced ART are also reflective of the skewed infertility rates based on wealth index.

It is important to understand that there is a lack of a clear understanding of infertility in government policies in India. Most often it is either understood synonymous to childlessness, or merged together with childlessness data which invariably hides the nuances between infertility and childlessness. The intrinsic difference between infertility and childlessness is that infertility is largely a medical condition which prevents regular conception, and childlessness is the outcome of infertility or any

¹⁶ Combining household amenities, assets and durables, a wealth index is computed at the national level and divided into quintiles. The principle of factor loading to amenities, assets and durables derived by factor analysis is used for the computation of the wealth index. Households are categorized from the poorest to the richest groups corresponding to the lowest to the highest quintiles at the national level. (DLHS 3 - 2007, 23).

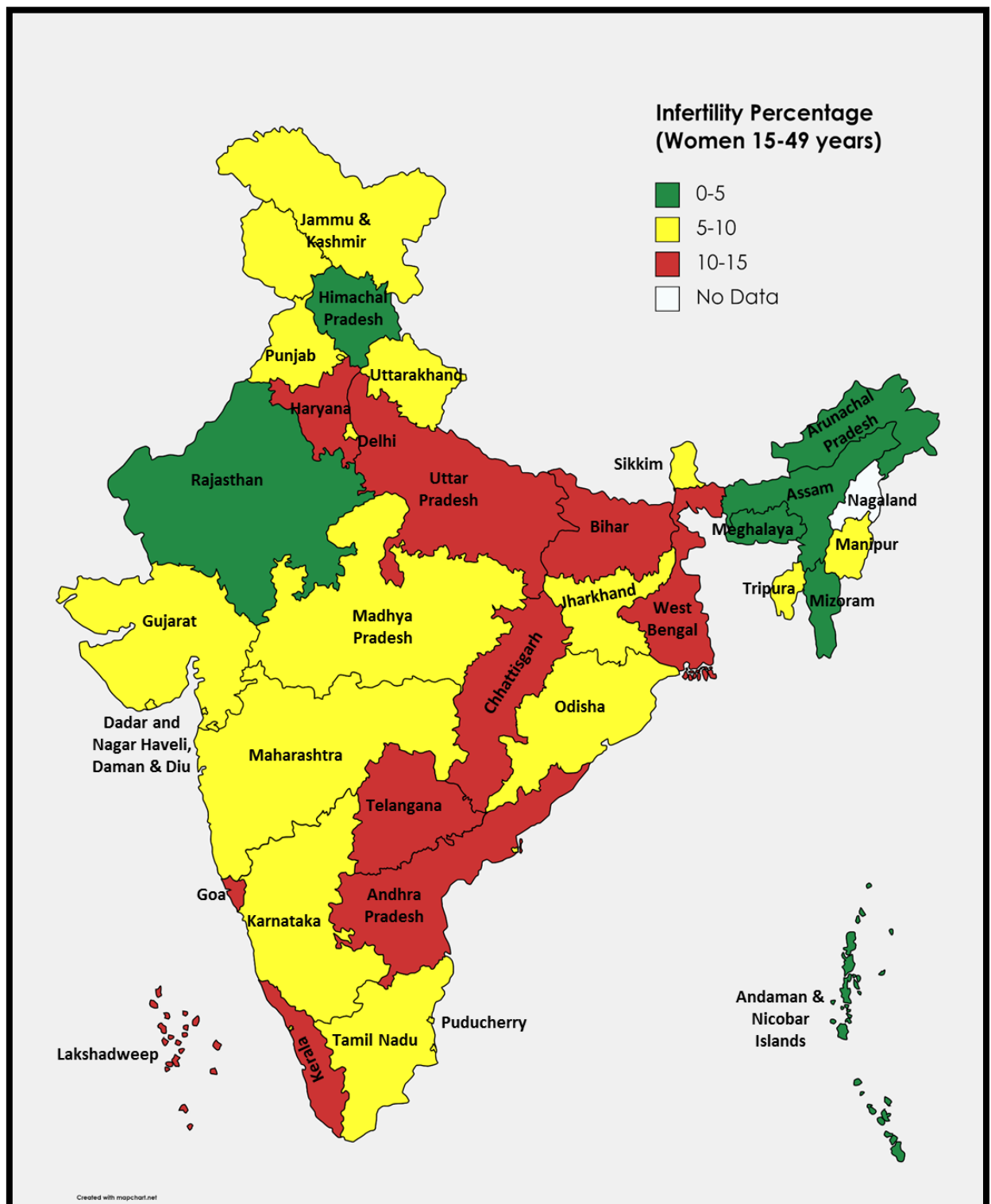
informed reproductive decision. While the definition and local understanding of infertility varies along socio-cultural lines, childlessness can be both voluntary and involuntary. In that sense, childlessness is a broader category which might include data of infertility. However, this distinction is largely missing in data related to infertility in India. While the DLHS-3 report makes a vague distinction between childlessness and self-reported infertility, it does not take secondary infertility into account (District Level Household and Facility Survey (DLHS-3), 2007-2008: India, 2010, p. 171). Based on the DLHS-3 data the States and Union Territories of India have been divided into three categories - regions of high infertility, regions of medium infertility and regions of low infertility to understand the spatial patterns and trends (refer: Table 11 & Map 1). As Ernst & Young (2015) report mentions there is a *“significant geographical skew in the distribution of infertility centers with ~55% of IVF cycles being performed in the top eight metro cities coupled with a highly fragmented market is affecting access to quality treatment”* (Ernst & Young, 2015, p. 4).

Table 11: Regions of India categorised on the basis of level of infertility

Regions of Low Infertility (0-5%)	Himachal Pradesh, Rajasthan, Arunachal Pradesh, Assam, Meghalaya, Mizoram, Andaman and Nicobar Islands.
Regions of Medium Infertility (5-10%)	Jammu and Kashmir, Punjab, Uttarakhand, Sikkim, Manipur, Tripura, Jharkhand, Odisha, Madhya Pradesh, Gujarat, Maharashtra, Karnataka, Tamil Nadu, Puducherry, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Delhi.
Regions of High Infertility (10-15%)	Haryana, Uttar Pradesh, Bihar, West Bengal, Chattisgarh, Andhra Pradesh, Telangana, Goa, Kerala, Lakshwadeep.

Source: DLHS 3 – 2007 report, p. 174.

Map 1: Infertility Regions in India



Source: Based on DLHS 3 Report -2007, p. 174.

More detailed data and further research is needed to fully understand these regional patterns of infertility. However, one can make a few tentative inferences and identify common factors which might have played role in affecting the infertility rates. These include – population size, role of education, status of women, migration, employment opportunities, age at marriage, and overall development index. Although increase in women's education, women's employment opportunities, age at marriage are associated with delayed pregnancy and the possibility of high risk factor of infertility, the data is insufficient to make any causal relationship between all such factors. With increase in migration, mobility of individuals there is a trend to postpone pregnancy among middle class couples with long distance marriages, and this is also assumed to affect the fertility planning of couples.

Based on DLHS-3 report, these three regions of infertility have particular markers which might explain their respective infertility rates. Regions of low infertility have lowest value of percentage of girls marrying below the age of 18 years, have highest percentage for mean age at marriage for women, lowest percentage of pregnancies that ended in still born and spontaneous abortions. They also have highest percentage of households having access to toilet facility and improved sanitation. It can therefore be inferred that these factors play a role in reducing the number of women diagnosed with infertility, as better access to toilet and sanitation reduces the chances of RTI, pelvic infections, tubal infections which are the major causes of female infertility. Similarly, since lesser number of women are married below the age of 18 years, it reduces the chances of early pregnancy, and pregnancy related complications which might lead to infertility.

Regions of medium infertility have highest average of contraceptive prevalence; medium levels of household having toilet facilities, mean age at marriage for men and women is around 18 years. These regions have low levels of pregnancies ending in induced abortions, lowest percentage of girls marrying below 18 years.

Regions of high infertility have the lowest rates of contraceptive prevalence, lowest rates of households having access to toilet and lowest age at marriage for women, all of

which may indicate higher level of infections, reproductive tract infection (RTI), and pelvic infections among women. These regions also have highest average of girls marrying below 18 years of age, highest average of pregnancies ending in still born, induced abortions, and spontaneous abortions. Since the markers for reproductive health and outcomes are negative in these regions, with high early marriages it may possibly explain the higher rates of infertility in these regions. However, it is important to remember that these inferences and assumptions are tentative and preliminary. It needs further research, larger detailed data base and better analysis for a more definitive picture to emerge.

3.3.2. Infertility Treatment Seeking Behaviour in India

At the all India level, about eighty percent of ever married women aged 15-49 years had sought treatment for infertility related problems. All the states had above sixty percent women who were infertile, who sought treatment for infertility (District Level Household and Facility Survey (DLHS-3), 2007-2008: India, 2010, p. 172). The States with highest rate of infertility treatment seeking includes Punjab (95.1%); Delhi (93.0%); Puducherry (90.2%); Haryana (88.6%); Daman & Diu (88.5%); and West Bengal (87.7%). The States with lowest rate of infertility treatment seeking behaviour includes Chattisgarh (63.0%); Orissa (64.9%); Sikkim (67.4%); Uttarakhand (68.0%); Andhra Pradesh (68.7%) and Manipur (69.2%) (refer: Table 12, and Map 2).

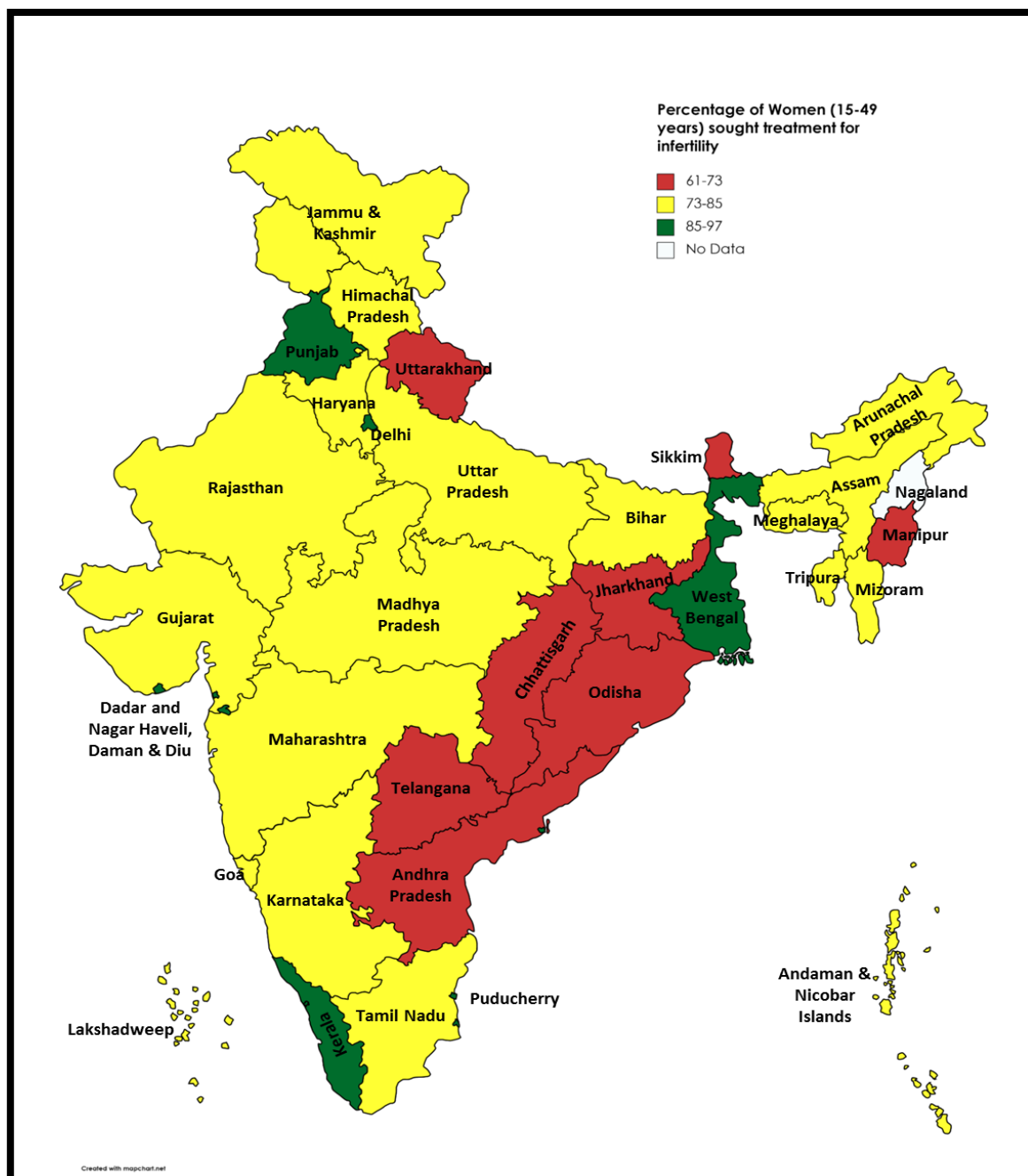
Table 12: Regions of India categorised on the basis of women who sought treatment for infertility.

High Treatment Seeking Behaviour (85-97%)	Daman & Diu, Delhi, Punjab, Haryana, West Bengal, Kerala, Puducherry.
Medium Treatment Seeking Behaviour (73-85%)	Himachal Pradesh, Rajasthan, Gujarat, Madhya Pradesh, Uttar Pradesh, Bihar, Maharashtra, Karnataka, Tamil Nadu, Lakshwadeep, Andaman and Nicobar Islands, Assam, Arunachal Pradesh, Meghalaya, Mizoram, Tripura, Chandigarh, Dadra & Nagar Haveli, Goa, Jammu and Kashmir.

Low Treatment Seeking Behaviour (61-73%)	Uttarakhand, Sikkim, Manipur, Jharkhand, Chattisgarh, Odisha, Andhra Pradesh.
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Source: DLHS 3 – 2007 report, p. 174

Map 2: Infertility Treatment seeking behaviour of women



Source: DLHS 3- 2007 report, p. 174.

The figures include married women aged 15-49 years with varying background characteristics, who sought treatment for primary/secondary infertility problem. Data also includes a section on percentage of women who sought allopathic treatment for infertility. The sample population was divided into different categories based on selected background characteristics. On the basis of age group, women in the age group 25-29 years had the highest rate of infertility (85.8%) and who sought treatment for primary infertility. Out of which 71.2% of women took allopathic treatment. In case of secondary infertility, the highest percentage of women who sought treatment falls into the age category of 30-34years (77.1%), out of which 65.4% of women sought allopathic treatment (District Level Household and Facility Survey (DLHS-3), 2007-2008: India, 2010).

On the basis of type of residence, the difference between primary and secondary infertility treatment is negligible. 79.7% of women in rural areas sought treatment for primary infertility, out of which 60.3% sought allopathic treatment. For secondary infertility, 71.9% of rural women sought treatment, out of which 58.3% took allopathic treatment. In case of urban, 86.5% of women sought treatment for primary infertility, out of which 76.2% of women took allopathic treatment. Similarly, for secondary infertility 81.9% of women from urban areas sought treatment, out of which 74.9% took allopathic treatment.

The treatment seeking behaviour for infertility is directly proportional to the level of education. With increase in level of education, there is an increase in percentage of women seeking infertility treatment. Women with ten or more years of education are the highest percentage seeking treatment for primary infertility (89.8%), out of which 83.8% of women took allopathic treatment. Similarly, for secondary infertility, women with ten or more years of education had the highest rate of treatment seeking (85.7%), out of which 81.4% of women sought allopathic treatment. The report suggests that a certain percentage of women either sought treatment from alternate medicines other than allopathic (like Ayurveda, homeopathy, Unani, herbal and home remedies), or did not seek treatment at all. Therefore, the treatment seeking behaviour is only indicative of allopathic treatment undertaken.

The DLHS-3, 2007 report shows a strong positive correlation between the rate of treatment for infertility and the wealth index. There is an increase in percentage of

women seeking infertility treatment as one goes higher in the wealth index. Women from the highest wealth index had the highest percentage of primary infertility treatment seeking (90.7%), out of which 83.2% sought allopathic treatment. As one goes down the wealth ladder, the rate of primary infertility treatment seeking decreases -- fourth wealth index (84.0%); middle wealth index (79.6%); second wealth index (77.3%) and poorest (73.3%). Similarly, the rate of allopathic treatment for primary infertility also decreases with the decrease in wealth index - fourth wealth index (70.8%); middle wealth index (61.5%); second wealth index (55.6%) and poorest wealth index (46.5%). This may be due to the high cost of infertility treatment and its concentration in the private health sector. Since there is a lack of public hospitals providing fertility treatments at subsidised rate, it becomes difficult for the lower and middle class population to afford the costly long drawn treatment.

The DLHS-3, 2007 report presents data on infertility and religious profile of women (refer: Table 13). Sikh women had the highest rate of primary infertility treatment seeking (95.8%), out of which 83% of women sought allopathic treatment. This is followed by Jains (89.8%); Muslims (85.5%); Christians (81.1%); Hindus (80.8%).

Table 13: Religious profile of currently married women aged 15-49 years who sought treatment for primary/secondary infertility

Religion	Sought treatment for Primary Infertility (%)	Sought treatment for Secondary Infertility (%)
Hindu	80.8	74.6
Muslim	85.5	82.0
Christian	81.1	67.0
Sikh	95.8	92.0
Buddhist/Neo-Buddhist	72.4	67.0
Jain	89.8	90.0
No religion	69.3	-
Others	73.5	60.1

Source: DLHS -3 report, 2007, p. 173.

Table 14: Caste profile of currently married women aged 15-49 years who sought treatment for primary/secondary infertility

Caste	Sought treatment for Primary Infertility (%)	Sought treatment for Secondary Infertility (%)
Scheduled Caste	79.3	71.2
Scheduled Tribes	71.0	63.1
Other Backward Classes	83.0	76.9
Others	86.3	83.3

Source: DLHS -3 report, 2007, p. 173.

The DLHS-3 data is further categorised on the basis of caste profile of the population (refer: Table 14). The infertility treatment seeking behaviour is contingent on multiple factors like social-cultural-regional acknowledgment of infertility as a major health problem, and the awareness and acceptance of infertility treatment. Along with these two primary reasons, the treatment behaviour is also dependent on the accessibility and affordability of treatment. As Ernst & Young (2015) reports states “*India faces a serious challenge of high infertility rate, coupled with significantly low treatment rates*” (Ernst & Young, 2015, p. 23). There is an uneven concentration of fertility clinics in the top eight metros which includes – Delhi, Mumbai, Ahmedabad, Chennai, Kolkata, Hyderabad, Bangalore and Pune. It is paradoxical how the state of undivided Andhra Pradesh came under the regions of low treatment seeking category, in spite of the city of Hyderabad accounting for one of the highest numbers of fertility clinics and IVF cycles completed (Ernst & Young, 2015).

The data on infertility treatment seeking behaviour based on religion and caste at the national level does suggest some major trends or broad patterns that one must pay attention to. However, while one cannot discount any nuances which might be reflected/hidden in the data; it calls for more rigorous and in-depth research before any definitive conclusions can be drawn. As Unisa (2010) points out, irrespective of low

infertility rates and treatment seeking in India “*there is a huge demand of fertility services in actual number in India.*” (Unisa, 2010, p. 59).

3.3. Mapping Infertility in Andhra Pradesh and West Bengal

Andhra Pradesh and West Bengal are the two states that this study specifically focuses on. Based on the findings of the DHLS 3 report (2007), undivided state of Andhra Pradesh (10.9%) and West Bengal (14.1%) have high infertility rates in India above 10% (District Level Household and Facility Survey (DLHS-3), 2007-2008: India, 2010). Prime urban centres of these two states i.e., Hyderabad and Kolkata respectively were chosen as two research sites to conduct the study.

3.3.1. Andhra Pradesh

Andhra Pradesh after bifurcation in 2014 was divided into two states of Andhra Pradesh¹⁷ and Telangana¹⁸. However, the DLHS-3 Andhra Pradesh State report of 2007 consists of data on the undivided state. Women who had primary and secondary infertility constitute 8.20 and 2.70 percent respectively of ever married women between 15-49 years. Among those who had primary and secondary infertility a sizeable 75.0 percent of ever married women reported to have experienced problems in conceiving for the first time, 11.30 percent had problems in conceiving after still/live birth and 10.0 percent after undergoing induced abortion. Among ever married women who have infertility problem, 68.70 percent of them have taken treatment, 69.7 percent for primary sterility and 65.6 percent for secondary infertility (District Level Household and Facility Survey (DLHS-3), 2007-08: India. Andhra Pradesh, 2010).

The districts of Andhra Pradesh which are now part of the state of Telangana are discussed in more detail (refer: Table 15).

¹⁷ The erstwhile state of Andhra Pradesh was split into two different states of Andhra Pradesh and Telangana in 2014. The current state of Andhra Pradesh is divided into 13 administrative districts spread across two unofficial regions - Coastal Andhra and Rayalseema.

¹⁸ The current state of Telangana consists of 33 districts.

Table 15: Percentage of ever married women aged 15-49 years who had infertility problem and sought treatment for infertility, by districts

Districts of undivided Andhra Pradesh	Present Districts of Telangana	Infertility (%)	Women seeking infertility treatment (%)
Adilabad	Adilabad, Nirmal, Komaram Bheem, Mancherial	11.40	54.20
Nizamabad	Nizamabad, Kamareddy	10.80	72.0
Karimnagar	Sircilla, Jagtial, Pedapally,	11.20	90.30
Medak	Kamareddy, Medak, Sangareddy, Siddipet.	12.90	59.60
Warangal	Warangal (rural), Warangal (urban), Jangaon, Mahbubabad, Bhupalpalle	13.0	67.40
Hyderabad	Hyderabad	6.20	81.30
Ranga Reddy	Rangareddy, Medchal, Vikarabad	11.0	81.0
Mahbubnagar	Mahbubnagar, Nagarkurnool, Wanaparthy, Gadwal	8.90	64.70
Nalgonda	Nalgonda, Suryapet, Yadadiri,	15.90	63.90
Khammam	Khammam, Kothagudem	7.70	72.90

Source: DLHS-3 Andhra Pradesh report, 2007-2008, p. 140.

Among the districts which now come under the jurisdiction of Telangana state, Nalgonda registered the highest infertility percentage with 15.90%, while Hyderabad registered the lowest infertility percentage with 6.20%. Though Hyderabad registered the lowest infertility percentage, it had one of the highest treatment seeking percentage with 81.30%. The district of Karimnagar registered the highest percentage for women seeking infertility treatment with 90.30% and Adilabad had the lowest percentage for

women seeking infertility treatment with 54.20%. Hyderabad having high treatment seeking behaviour can be explained by the concentration of fertility clinics in Hyderabad, as the fallout of the evolution of Hyderabad as a hub for the private health care sector. Since Hyderabad was the capital for Andhra Pradesh and is now also the capital of Telangana, it received a lot of investment not only from the respective governments but also from private players, making Hyderabad an important node for health care industry in southern India. Similarly, the district of Karimnagar has historically been an important hub for healthcare facilities for the northern part of Andhra Pradesh, as it was easier to access Karimnagar than Hyderabad. It has been a hub for Orthopedic and ENT services. Lately, it is also emerging as a hub for fertility industry with increasing investment by the private sector, making Karimnagar an important hub after Hyderabad. The low treatment seeking percentage in Adilabad district may be due to its poor development, and less presence of private fertility clinics. Recent news reports draw attention to the increase in infertility in Telangana (Times News Network, 2018; Express News Service, 2021), raising concern from demographers, doctors and affected couples.

4.3.2. West Bengal

The DLHS 3 reports that West Bengal registered 14.1% of infertility in 2007, among ever married women within the age bracket of 15-49 years. Women who have primary and secondary infertility constitute 11.7 and 2.4 percent respectively of ever married women aged 15-49 years. Among those who have primary and secondary infertility a majority 83.1 percent of ever married women reported to have experienced problems in conceiving for the first time, 9.3 percent had problems in conceiving after still/live birth and 5 percent after undergoing induced abortion. Two percent of women aged 20-49 years, who are married for at least five years, are childless. Among the ever married women between 40-49 years, 2.3 percent of them are childless. Some women have problems in conceiving in the absence of contraception and such women constitute 2.1 and 2 percent women and are aged 20-49 years and 40-49 years respectively (District Level Household and Facility Survey (DLHS-3), 2007-08: India. West Bengal, 2010, p. 25).

In DLHS 3 West Bengal report, district wise data on infertility and women who sought treatment for infertility gives a detailed profile of the state of West Bengal (refer: Table 16).

Table 16: Percentage of ever married women aged 15-49 years who ever had infertility problem and sought treatment for infertility, by districts, West Bengal, 2007-08

District	Infertility (%)	Women who have sought treatment for infertility (%)
Kolkata	9.90	91.30
Darjeeling	10.10	78.00
Haora	11.0	96.30
Hugli	11.20	91.60
Jalpaiguri	12.00	78.90
Murshidabad	13.10	85.90
North 24Paraganas	13.20	93.30
Kooch Bihar	13.40	89.40
Uttar Dinajpur	13.70	90.00
Bankura	13.90	85.30
Purulia	14.10	82.10
South 24Paraganas	14.10	88.70
Bardhaman	14.30	82.00
Nadia	15.00	89.20
Birbhum	15.30	90.30
Paschim Medinipur	16.10	87.30
Purba Medinipur	17.00	90.70
Maldah	18.20	84.70
Dakshin Dinajpur	19.40	89.70

Source: DLHS-3 West Bengal report, 2007, p. 140.

The district of Kolkata ranks lowest with 9.9% infertility, but has one of the highest percentages (91.3%) of women who seek treatment for infertility. Dakshin Dinajpur ranks highest with 19.4% of infertility, but has one of the lowest percentages (89.7%) of women who have sought treatment for infertility. These trends can to some extent be explained as the metro city has a concentration of clinics and doctors. Since Kolkata is the capital of West Bengal, it acts as an important magnet for infrastructural development for health, education, employment. In the past one decade, Kolkata has witnessed a considerable growth of private fertility clinics across the city, expanding to districts adjacent to the capital. Poorer districts like Dakshin Dinajpur have fewer infertility clinics and hence report low treatment seeking behaviour, despite having the highest infertility.

3.4. Mapping Infertility Clinics in Hyderabad and Kolkata

The selection of the two cities of Hyderabad and Kolkata for this study is based on the findings of the DHLS 3 report (2007), which reported that West Bengal (14.1%) and the erstwhile state of Andhra Pradesh (10.9%) has high infertility rates in India above 10%. For researching infertility, it helped to choose States with high rates of infertility. The study also chose to focus on infertility in an urban context as accessing respondents would be easier, as most clinics are located in the large cities. Kolkata and Hyderabad being the capital of the respective states were chosen as the research sites. While Hyderabad has a history of a well-established pharmaceutical industry, early privatization of health care facilities and medical tourism and a large number of fertility clinics since 1990s, Kolkata is emerging as one of the important hubs of infertility treatment in eastern India. Both the cities of Hyderabad and Kolkata are quite different in their geography; political history. They have varying social and cultural construction of masculinity and femininity; other cultural practices and the nature and functioning of the health sector.

3.4.1. Hyderabad

Hyderabad is a city of about 6,993,262 people in the southern state of Telangana (as per Census 2011). Hyderabad as the capital of the state saw a concentration of investments in health from the 1990s, largely in the private sector. The city being the pharmaceutical hub of the country became important for initiating the growing trend in private medical advancement and medicalization of the body. Since the 1990s, the country witnessed a trend of privatization of health care facilities, and Hyderabad became one of the forerunners. In the undivided state of Andhra Pradesh, a high proportion of healthcare services is provided by the private sector, a trend which started much earlier than other states. Reports estimate that by the mid-1990s, the private sector provided about 70 percent of in-patient care in the rural areas and 62 percent in the urban areas, which was the highest proportion in the country (Narayana 2003, p. 342, quoted in Kennedy et al, 2009, p. 166). Although various factors have contributed to this situation, one being the government policy that directly supported the development of private facilities by providing subsidies and tax breaks. In the second half of the 1990s, the Telugu Desam Party (TDP) led government in Andhra Pradesh, implemented significant policy changes, including reforms in the health sector that encouraged privatisation of health care services.

This contributed in giving the private health care industry a boost and established the city as an important node in the availability of private health care facilities. The rise of corporate health care also facilitated the emergence of Hyderabad as a major centre for surrogacy and medical tourism, including fertility treatments. (Gupta & Prasad, 2019). For the last two decades, there has been a steady rise in fertility clinics in Hyderabad. The phenomenon of mushrooming of fertility clinics is not only restricted to large cities, but has also expanded to tier-II towns in the State.

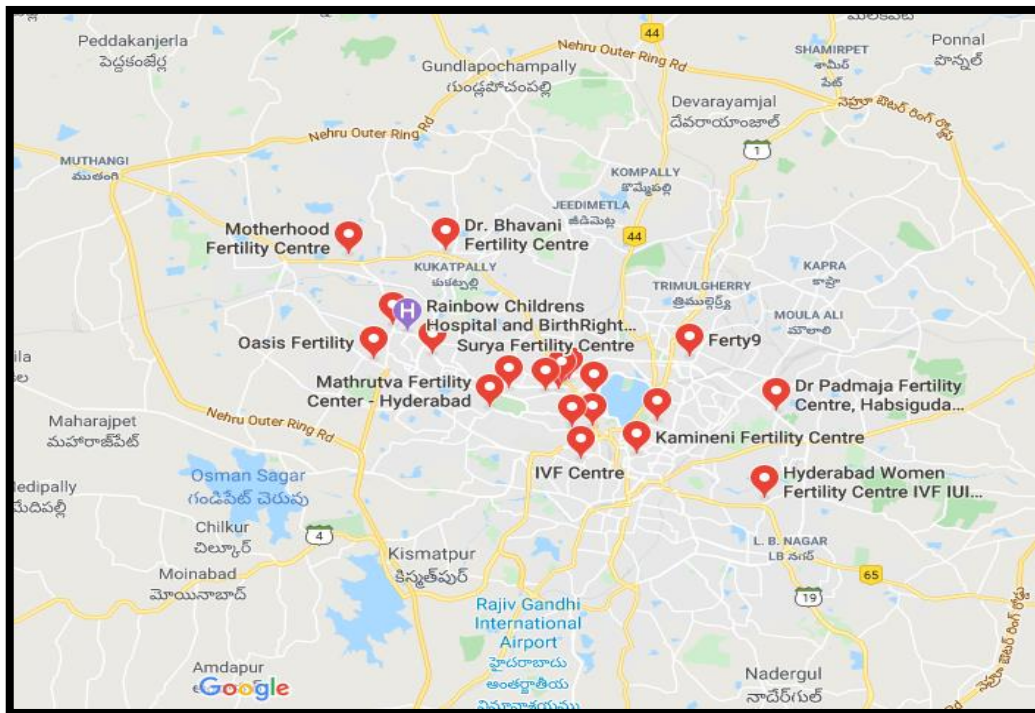
In Hyderabad, treatment for infertility has traditionally been part of traditional/alternative medicine, especially Unani medicine. Hyderabad has a strong prevalence and practice of Unani medicine among its population. Ayurveda, Unani have often been the first line of treatment for patients suffering from any disease, problems related to pregnancy or any gynecological issues, including infertility. Though there is a strong presence of alternative medicine, the city also witnessed the rapid growth of allopathic/ western medicine, particularly in the private sector. The city

became one of the sought after medical destinations for patients, both nationally and internationally. Hyderabad is currently one of the top destinations for fertility treatment and accounts for the highest number of clinics in India (Ernst & Young, 2015).

When one tries to map the fertility industry in this city, one notes the spatial expansion of fertility industry across Hyderabad. A simple Google search of the number of fertility clinics in Hyderabad provided a long list of clinics spread across the city. Some of the well-known local/ home grown fertility hospitals which have grown in recent years and acquired international repute include – Dr. Rama’s Fertility Clinic, Kiran Infertility Centre, Dr. Padmaja Fertility Centre, Kamineni Fertility Centre, Hegde Hospitals and others. The mushrooming of fertility clinics across the city from the Old city to the new Cyberabad points to the rapid growth of fertility industry in Hyderabad. The entry of corporate hospitals like - Yashoda Hospital, Apollo hospital, Star Hospital, KIMS hospital, Continental Hospital and many others - in also establishing fertility clinics suggests the growing commodification and the high demand for fertility treatment. It is ironic that while the state has an aggressive population control policy limiting number of children of the poor, it is witnessing a booming of fertility treatment clinics, largely for the rich, in Hyderabad and other large urban centres.

An attempt has been made to map as many fertility clinics as possible in Hyderabad, and try to explain the reasons behind this spatial pattern (see: Map. 3). If one looks at the map below, one can clearly identify a few localities which have a cluster of fertility clinics and others where fertility clinics are sparsely distributed.

Map 3: Major Fertility Clinics in Hyderabad



Source: Online Google maps

The areas where the expansion of these fertility clinics and hospitals are taking place, which are emerging as important centres are: the Cyberabad region which mainly covers the areas of Gachibowli, Kondapur and Serilingampally; the Secunderabad region that includes Tarnaka and other adjacent areas that have a cluster of fertility clinics and hospitals which are older, bigger and more well-known (like Padmaja Fertility Clinic, Dr. Rama Devi's fertility clinic, Kiran Fertility Centre). The expansion of these clinics is seen around the posh localities of Jubilee Hills and Banjara Hills. Fertility clinics like Oasis, Medicovert, NOVA IVI fertility centre (that are part of a national chain) are located in these upmarket areas. The locality of these clinics reflects the socio-economic profile of the clients and patients. Most of the recent franchise clinics belonging to big national and international chains show a preference for the more up market parts of the city. Areas like the Old city have fewer clinics, as the general perception is that it is crowded and poorer. Fertility clinics do tend to show a spatial bias in favour of the more upwardly mobile newer parts of the city.

There is a fundamental difference between the older private homegrown clinics and the newer corporate franchise clinics. The older private clinics grew out of health reforms

and privatisation of health facilities which the state of Andhra Pradesh witnessed at the onset. They were established by local doctors, and are majorly single family owned clinics catering to the local population, the middle classes and the nearby regions. Most of these clinics were the forerunner of the thriving surrogacy market in Hyderabad since 2000 (Gupta & Prasad, 2019). These local clinics have a history with the local patients who are from middle and lower middle class and are perceived with a certain sense of belongingness to the neighbourhood. On the other hand, the new corporate clinics are part of the chains spread across national and international borders, largely catering to the upper middle class and richer women. It appears, class/income determines the rationale for the spatial location of these clinics.

3.4.2. Kolkata

Kolkata with a population of 4,496,694 (as per Census 2011), is the capital city of the eastern state of West Bengal. It caters to a large population including eastern India, and the neighbouring countries of Bhutan, Nepal and Bangladesh. More than thirty years of communist rule in the State kept privatisation of healthcare at a distance, unlike Andhra Pradesh and some other states. Provision of quality and affordable, accessible health care was largely the responsibility of the State, with more than 80 per cent of patients seeking public health services and remaining 20 percent of all inpatient cases are treated in private hospitals (Chakraborty, 2005). The Government of West Bengal adopted the public-private partnership (PPP) framework in 2002, wherein State Health Systems Development Project introduced wide-ranging reforms in the state's public health sector, bringing about significant changes in the provisioning pattern of services (clinical and non-clinical) and their financing mechanism (Chakraborty, 2005). The recent growth of the private health sector has had its problems. As Chakraborty and Mukherjee (2003) point out –

“Supply side limitations in the private inpatient care sector and the resulting very high cost of inpatient care in private facilities (and that of dubious quality) have made private hospitals an imperfect alternative available to most people” (Chakraborty and Mukherjee, 2003, p. 5022).

By privatising diagnostic services, stipulating user charges and rationing access, the state pushed the responsibility of financing health care services on the shoulders of the users themselves (Roy & Gupta, 2011), leading to a high out-of-pocket expenditure. Most of the out-patient cases (almost 86 percent) are treated in private hospitals in comparison to the public hospitals (Chakraborty & Mukherjee, 2003, p. 5021).

Privatisation of health care industry in West Bengal began late (since the last decade), but grew rapidly, which is witnessed in the sudden rise in fertility care and treatment availability in West Bengal in general, and Kolkata in particular. Most services for fertility treatment in Kolkata are provided by the private sector. While there are reports of availability of infertility treatment in identified public hospitals¹⁹, the department is hardly functional as it is under the gynecology department that is already overburdened, as it looks after contraception, pregnancy and neo-natal care services.

In West Bengal practice of infertility treatment has been available with the help of traditional/alternative medicines, especially homeopathy medicines. Kolkata has a history and strong prevalence of homeopathy medicine among its population. Ayurveda, homeopathy has often been the first line of treatment for patients suffering from most diseases, problems related to pregnancy or any gynaecological issues.

Mapping the spatial coverage of infertility treatment in Kolkata shows a concentration of clinics and hospitals in select parts of Kolkata. A simple online (Google) search of the number of infertility clinics in Kolkata provided a list of clinics spread across the city. Some of the big private fertility hospitals which have grown in recent years include – Femelife, Indira IVF, IVF Infertility Hospital (IIH), Care IVF, Institute of Human Reproduction (IHR), Calcutta Fertility Mission, Universal Srushti Fertility and Research Centre, Ghosh Dastidar Institute for Fertility Research (P) Ltd, and others. The expansion of fertility clinics across the city from the older, northern part of the city to south Kolkata and extending to new areas like Rajarhat, points to the rapid growth of infertility industry in Kolkata. The entry of corporate chains like – Genome – the fertility centre, Birth Fertility Clinic, Nova IVI, Apollo Gleneagles, Fortis, Columbia Asia, AMRI Hospitals and many others, in the race of fertility industry suggests the

¹⁹ <https://www.telegraphindia.com/states/west-bengal/infertility-treatment-at-sskm-for-free/cid/1484560> accessed on 07.12.2019.

The older parts of Kolkata have more stand-alone polyclinic model fertility clinics, which are older and are gynecology/maternity hospitals which have recently started an infertility wing to cater to the new demand for infertility services in the city. Posh urbane localities are witnessing the growth of fertility clinics that are part of the country wide corporate chains, catering to the upper middle and upper class. This stark difference between the location and the type of fertility clinic is very evident as one travels across the Eastern Metropolitan (EM) Bypass which connects the eastern part with South and central Kolkata. The northern and southern parts of the city are connected by Circular Road and Central Avenue, which is also witnessing the mushrooming of fertility clinics. The gradual change in the neighbourhood, its iconography, housing types, facilities like school, hospital, shopping centres is very apparent. From this mapping exercise one would like to suggest that the spatiality of localities within a city influences the type and density of fertility clinics, in the cities of Kolkata and Hyderabad. While Hyderabad has a head start on Kolkata, the last decade has seen a sharp growth in the number of fertility clinics in the latter, making it an important destination for fertility tourism in Eastern India and neighbouring countries.

3.5. The Research Sites: Observations of a Researcher

The clinics were identified from an internet research on the lists of clinics providing fertility treatments in the city of Hyderabad and Kolkata. After identifying the clinics, they were approached and informed about the research and permission was requested to interview patients and doctors attached to the clinic. The initial communication and introduction were either done through mails and telephone calls or they were approached directly in person. While one clinic in each city agreed to participate and allow the research to be conducted, there were quite a few clinics which refused access to their patient clientele, confidential information - therefore limiting the representativeness of the respondents. The clinic which agreed to participate first for the research was selected for the research.

The **clinic in Hyderabad (C1)** selected was, small, non-corporate (model 3)²⁰, well known for its ART services. It is registered with the Indian Council of Medical Research under the National Registry of ART Clinics and Banks in India. The clinic is

²⁰ Explained in Chapter 4

located near a girl's college in the city of Hyderabad. It is a small house converted into a clinic, with its three floors catering to different services. It is located in the heart of the city (near Somajiguda), and due to its strategic location and reputation of its high success rate, the clinic was always crowded with patients from different age groups. Recently, the clinic shifted to a busier location (Begumpet), where it functions in a four-storey building. The first floor is dedicated towards basic sample collection and pharmacy services. The second and third floor has doctor consultations and basic scanning services. The fourth floor is entirely dedicated for in-patient services and operation theatre.

The crowd at the clinic comprised of young to middle aged infertile couples, along with their family members. The women generally were called a number of times for different diagnosis, like scanning of the uterus, checking of the quality of their eggs, urine culture and other medical procedures. While the women spent their time either looking at others, talking to other female patients, the men or their husbands spent that time taking calls from the office, waiting outside the clinic or reading some sports magazines available in the clinic lobby.

The familiarity of few couples with the clinic staff, can lead to the assumption that they have been undergoing treatment or were visiting the clinic for a long time. The clinic lacked any official brochures or information booklets, but had a master price chart on a wall facing as one entered the clinic²¹. Price chart included the cost of different treatment and procedures like – pregnancy scan, semen analysis, IUI, Cyst Aspiration, IVF (excluding medicines), embryo freezing, semen sample freezing and many others. However, there was no mention of surrogacy and its cost in the master price chart. The décor of the clinic was typical of any fertility clinic with pictures of kids with their mothers, a pregnant woman showing pregnant belly or slogans like *“you come with a hope and we help you to make your own family”*. The clinic staff included young women well aware of the services provided by the clinic and the procedures to be followed.

The **clinic in Kolkata (C2)** selected is run by a team of doctors who work as a collective or a polyclinic (model 2)²². It is well known for its ART services and at the

²¹ Refer Appendix C

²² Explained in Chapter 4

time of research, has applied for registration with the Indian Council of Medical Research under the National Registry of ART Clinics and Banks in India, and was waiting for the certificate. The clinic is located at a major junction between the city and nearby towns (VIP road, Teghoria). Being well connected to the local railway station, it also attracts clientele from nearby districts. Its infertility unit is part of a medical research unit, and operates from a separate building altogether. The building consists of three floors, where the first floor is the Out-patient department (OPD) – which is divided into two sections – the first section is dedicated for doctor consultations and the second section comprises of two rooms – Andrology lab, USG room - which are used for IUI procedures. The second and third floor is used for different diagnosis and operations which includes scanning, blood tests, ultra-sonography (USG), cyst aspiration, child delivery.

The crowd in the waiting room consisted of both, new and also couples who have been visiting the clinic for quite some time. Their familiarity with the clinic staff and with fellow patients suggested their long relationship with the clinic. This clinic has a brochure and information booklet at the waiting area for people to look at. Unlike the clinic in Hyderabad, this clinic did not have any price chart displayed in the waiting area. Though general procedures seem to have standard pricing, the overall cost is dynamic depending on each patient's requirements. They have different packages and its pricing is informed only to the concerned patient. Similar to the clinic in Hyderabad, the décor of the clinic was typical of any fertility clinic with pictures of kids and their happy mothers, a glowing pregnant woman showing her tummy or slogans like – “*The ultimate destination test tube baby centre.*” It also had a separate worshipping place, where an idol of lord Ganesha was placed. Every day puja was conducted as a ritual, and almost everyone entering the OPD folded their hands and sought blessings. The strategic location of the idol (just beside the entrance) makes it difficult to ignore and probably suggests the importance of divine blessings for patients with infertility.

3.6. Place Making of Fertility Clinic Spaces

This section attempts a deeper reading of the clinic space, by focusing on the fertility clinics as the site of analysis. Medicalisation of reproduction has led to the growing commodification of infertility treatments. These processes have turned patients or/and treatment seeking individuals into consumers and the clinics as the ‘site of consumption’, leading to a global industry of reproductive labour and distribution of biomedical ‘products’ (Spar, 2006). As Meredith Nash writes, *“today, women and men are invited to become self-sufficient ‘consumers’ of goods and services in a global reproductive industry that encompasses both reproductive healthcare and technologies like in-vitro fertilization (IVF).”* (Nash, 2014, p. 10). Therefore it is important to look at how the clinics project themselves and how the patients understand these ‘sites of consumption’ and make sense of it. The clinic space becomes an interesting site of analysis as a lot of time is spent by the doctors, clinic staff and the treatment seeking individuals in that space. The relationship between the doctor-treatment seeking individual; illness-treatment; hope-hopelessness; success-failure; joy-despair takes place at this particular spatial location. In infertility studies, the clinic space has been less researched and has not been given its due importance. It has largely been anonymous and unremarked, or taken for granted. Making it invisible and the process of treatment has gained more importance than the spatial characteristics of the clinic.

Any setting is not intrinsically good/bad, healthy/unhealthy, hence the place making process becomes important to understand the experience of the infertile individuals through their course of treatment. It is here that they are reduced to a particular medical condition and a clinic file. They believe their entire dream of parenthood rests in those hospital files which have become a part of their identity. Place making process is implicit, embodied, affective and relational; therefore, every individual relates to or makes sense of the same place differently. In order to understand the clinic space, three conceptual categories from medical geography, medical anthropology and new cultural geography have been borrowed, which includes – ‘therapeutic landscape’, ‘waiting room aesthetics’, and ‘spaces of hope’.

3.6.1. Fertility Clinics as Therapeutic Landscapes

Disciplines like medical geography and cultural geography have been engaging with treatment spaces in terms of long term treatments related to terminal illness like cancer, rehabilitation centres, and mental health facilities. Here, this section makes an attempt to borrow the lens of place making in illness narratives in understanding fertility clinics in both Hyderabad and Kolkata. Borrowing the idea of ‘therapeutic landscape’ from Wilbert Gesler (1996), it can be extended to understand the place making process of the fertility clinics.

Broadly, therapeutic landscape means any landscape which is associated with treatment or healing, emphasising how environments contribute in achieving and maintaining health and well-being (Gesler, 1992). Health geographers, medical anthropologists and new cultural geographers along with a wide range of associated disciplines have used the idea of therapeutic landscape in a wide variety of areas of inquiry. Allison Williams (2017) categorises the use of therapeutic landscape concept in three different broad contexts. Firstly, traditional therapeutic landscapes deal with natural and built environments that reflect healing qualities like wilderness environments and retreat houses. Second, distinct populations focus on unique place-based interventions like substance abuse centres for addicts, special homes for special need children. Lastly, health care sites emphasise on how these sites, like - hospitals, community care homes and others, can be improved to address the needs of care recipients more holistically (Williams, 2017).

While focusing on understanding fertility clinics as therapeutic landscapes, it is important to remember that the idea of ‘therapeutic landscape’ is context dependent, and varies between individuals, type of illness and region. Any setting is not intrinsically therapeutic; rather they are experienced in different ways by different people (Gesler, 2005). As Bates (2018) writes “*hospitals are distinct types of built spaces, with specific sensory features, and they become ‘places’ when patients give meaning to these environments*” (Bates, 2018, p. 1). The experience and the place making of hospital are aligned with the course of an illness. There is a visual and symbolic coherence to its vision which is granted through urban design and image creation. Gesler emphasises, “*therapeutic landscape becomes a geographic metaphor*

for aiding in the understanding of how the healing process works itself out in places (or in situations, locales, settings, milieus).” (Gesler, 1992, p. 743).

Extending this thread of understanding, an attempt to understand the fertility clinic spaces, will not only enable one to spatially and culturally locate the experiences of these treatment seeking individuals but also to see how treatment influences their everyday lives. As an observer, it was important to feel and experience the place itself. The spatial location of the clinics has been discussed earlier in this chapter; the focus is now on the structure of the building, the décor and the emotional space of the building. The idea of therapeutic landscape although not new, has hardly been used to understand illness narratives in an OPD (Out Patient Department) set up where the treatment seeking individuals do not stay for long, but spend a considerable amount of time over multiple visits, in waiting for the doctor, consultations with doctors and the necessary diagnosis, formalities and procedure.

In both Hyderabad and Kolkata, the clinics selected for research were stand-alone hospital set ups, with no corporate banner or multiple branches, thus reflecting a uniform structure. The similarities between the clinics (which includes all the clinics approached to participate in the research and the clinics finally selected) across Hyderabad and Kolkata were interesting and indicated some pattern which needs further research. This pattern indicated how every clinic was considerably big in terms of physical area as it included a reception area, waiting lounge, multiple rooms for doctor’s consultation, andrology lab where minor procedures and regular scans were conducted, sample collection room (generally used for semen collection and blood tests), washrooms and an attached pharmacy.

While all the clinics had light colour paints like white, beige, off-white and cream, the layout and the décor varied from one clinic to other. Presence of religious symbols/deities/shrines like an idol of lord Ganesha, lord Krishna, statuettes/ pictures of Jesus and mother Mary, and pictures of Kaaba of Mecca were common sightings. Each clinic also had a particular wall, or notice board which had pinned photographs of couples who have completed their treatment successfully along with their new born babies (refer Fig. 5), clippings from newspaper articles where the particular clinic or any associated doctor was mentioned or interviewed (refer Fig.6). Reception desks had brochures, information booklets, pamphlets on display. Few clinics had magazines as

well, in English and/or vernaculars that were related to pregnancy, mother's health, parenting, lifestyle and entertainment, women's issues, family. Some clinics had compiled albums of success stories, gratitude letters written by the patients, thank you notes (refer Fig. 7), and photographs of couples with their babies with the doctors of the clinic, posters indicating the milestones achieved by the clinic. These albums and magazines were generally kept in the waiting lounge for the treatment seeking individuals to browse through, as they waited for their turn. The walls were adorned with paintings, posters of happy smiling babies, monochrome photographs of procedures like egg harvesting, IUI, embryo transfer, multiplication of cells of the embryo. Qualification and achievements of senior doctors of the clinic, and a notice stating Pre Natal Diagnostics Techniques (PNDT) for sex selection of fetus is prohibited by law at the clinic were also sighted.

Fig. 5: Notice board with success stories, Hyderabad



Source: Researcher

Fig. 6: Notice board with newspaper clippings, Hyderabad



Source: Google images

Fig. 7: Thank you note found adorned on the walls of the research site, Hyderabad



Source: Researcher.

The visual aesthetics of every clinic not only reflected its purpose of dealing with pregnancy, reproduction, infertility and birth of a child but also optimism, hope and

well-being for the treatment seeking individuals. On few occasions some of the clinics also had soft instrumental music playing in their waiting lounge along with electric diffusers emitting refreshing fragrance to diffuse the strong smell of phenyl. While many respondents acknowledged that stepping into the clinic increases their anxiety and stress, the clinic staff confessed they had to follow strict rules to maintain the clinic 'environment'. The effort made by the clinic administration to maintain a certain kind of clinic environment is indicative of the importance the 'sense of place' makes to the treatment seeking individuals and others visiting the clinic. There is a vision and a tacit agreement of how they want to project their clinic space to the visitors.

When asked about the clinic space in the research site in Hyderabad, D2H (a doctor in Hyderabad) elaborated:

"See earlier we were in a different location. We turned a house into a clinic and there the structure was not good and everything was congested. As and when our pool of patients increased it was becoming difficult for us to operate from there and it was not on the main road. In 2018 we shifted to this new building which is very well located and we have lot of space to move around. We planned every detail and have taken expert opinion in laying out this place. Blue and white is our colour and we have tried to maintain that theme across the clinic. We want people to come here and relax. The patients are already worried about their treatment and we do not want to add on to that. That is why we have magazines, background music, and television also." D2H, Hyderabad

D2H's comment on organising the clinic space according to the principle of 'a place to relax' is indicative of the role the clinic space plays on the people, especially the treatment seeking individuals. A sense of optimism, relaxation, and hope are the key themes guiding the presentation and decor of the fertility clinic space. The vision or the rationale between choosing specific colour schemes, themed paintings, adverts, and the overall ambience might not be realised by every member of the clinic staff and doctors, but it does not remain unnoticed or unacknowledged. On a rainy day when there was not much crowd at the clinic, a casual conversation with a member of clinic staff in Hyderabad, when asked about the constant mopping of the floor she was engaged in, she answered:

“Akka (referring as sister,) my work is to keep the floor clean and the shoe space organized. X madam (the head of the clinic) has strictly instructed us to keep everything clean and organized all the time. Everyone will notice if we do not do our work. She told us in the beginning itself, that this is a clinic where people come for treatment so it needs to be clean and hygienic. There should not be a speck of dirt or water spilled anywhere. We also have to monitor that the water filter has enough water and disposable cups all the time. People should know that we are putting effort in taking care of them, and then only they will trust us.” Clinic staff in Hyderabad.

The vision of making a clinic space as a therapeutic landscape is top down in approach, where it is envisioned and enforced by higher authorities on the cleaning staff and other clinic staff, and it resonates with the commonsensical understanding of a hospital or a clinic which needs to be in a particular sanitised manner. While the clinic staff tries to project the clinic space in a certain way, it was important to understand how these efforts were received by the patients and/or the treatment seeking individuals. Albeit the efforts put into keeping the clinic space clean and organised by the designated staff is acknowledged by many respondents still it remains mostly underappreciated or even overlooked. The appreciation and recognition came only when they were directly questioned about the clinic space environment. It was interesting to note when Tanushree (a treatment seeking patient) from Kolkata mentioned how the effort made was not visible (as it was taken for granted) but when there was a lack in maintaining the ideal clinic environment it became visible and was noticed. When asked how she feels about the clinic space and whether she likes or dislikes anything in particular, Tanushree commented:

“The clinic is as it should be. I did not notice anything very particular. All the clinics are like this only. The clinic staff keeps it considerably clean, but one day I had to request them to clean the washroom because when I went to use it after my scan it was very smelly. It was one such incident, but in general everything is clean and organised.” Tanushree, Kolkata.

Since the cleanliness of a hospital or a clinic space is taken for granted, the efforts made by the clinic staff to keep it clean, becomes automatically invisible and it only becomes visible when there is an absence of effort. Therefore, it can be assumed that the idea of

therapeutic landscape is not only about what makes a particular space and what meanings it is invested in, but also what a particular space lacks or is short of from its commonsensical meaning and understanding.

Although, interview with doctors did not directly elucidate aspects of ‘therapeutic landscape’ in the décor of the clinic, but passing references to a particular vision of positive environment, optimism, soothing ambience which is shared by the managing directors have been found. D3K while narrating the history of the clinic, states:

“My father founded this clinic in 2001 with the vision to help childless couple to achieve their dreams of parenthood. One of our goals is to maintain excellence and serve better. I joined his team and it is our priority that people should be happy after visiting us. Science does not have answers to everything, but they should relax, be optimistic, and should trust that we are trying the best to our abilities. We do not want them to stress here, because you know stress will hamper their fertility reports.” D3K, Kolkata.

3.6.2. Understanding Fertility Clinics through ‘Waiting Room Aesthetics’

Health geographers have studied medical spaces as sites in understanding the role of visual aesthetics not only in respect to architecture and design but have also examined the incorporation of therapeutic elements in the clinic spaces. As suggested by Gesler (2005), nature plays an important role in the visual aesthetics of hospitals and clinics. There is a growing scholarship on the therapeutic landscape in hospital waiting rooms, dealing with ‘waiting room aesthetics’. In this framework, waiting rooms are ‘clinical spaces where patients’ bodies await physician’s ‘gaze’ (Evans, Crooks, & Kingsbury, 2009). Evan et al. 2009 in their work deploy a Foucauldian and Lacanian framework to understand waiting room aesthetics in medical spaces. They conclude that, a Foucauldian perspective will enable one to understand the power relationship (the doctor as the gazer or the healer) which is at play in that particular hospital setting. On the contrary, their Lacanian reading “*suggest that environmental artwork diverts attention away from the Real of what is happening in or to a patient’s body and evokes notions of pleasure through escape from the anxiety brought on by spending time in the hospital waiting room space*” (Evans, Crooks, & Kingsbury, 2009, p. 719).

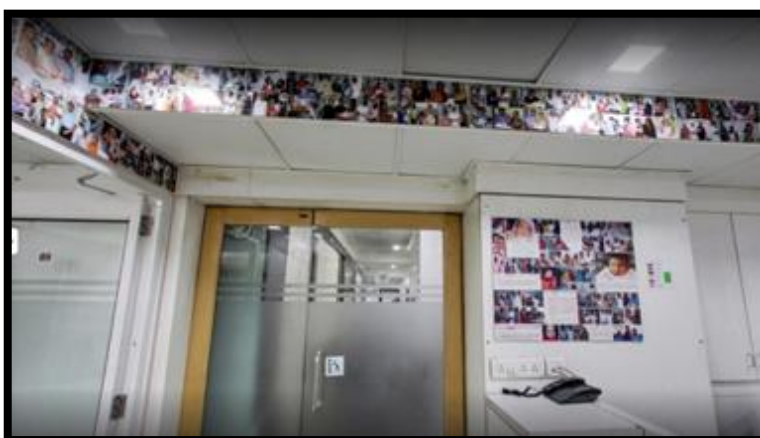
Following this thread, studies on waiting room areas of the fertility clinics also reflect some pattern. The imagery, which was observed in the lounge areas, followed a particular pattern. Pictures of babies born at the clinic, certificates of the doctors describing their expertise in the field, pictures of international conferences and clientele attended by the doctors of the clinic, happy pictures of parents with their children, and pictures of a young Lord Krishna and/or young Jesus were also spotted in many of the clinics across Hyderabad and Kolkata (refer: Fig. 8, 9)²³

Fig. 8: Waiting area of a fertility clinic



Source: Google photos

Fig. 9: Waiting area of a fertility clinic, walls adorned with pictures of couples with success stories



Source: Google photos

²³ For more images Refer Appendix A, Fig. 8

Therefore, the clinic somehow symbolises a collective hope, where the desire of each treatment seeking individual will be fulfilled through treatment with ARTs. Anindita Majumdar (2015) rightly articulates, *“In the waiting room, the display on the wall comes to echo this agenda (commercialization of hope) in two primary ways: by selling the dream of the child to the childless, and by positioning the IVF specialist as the person responsible for the fulfillment of this dream”* (Majumdar, 2015, p. 90).

A close observation of these spaces revealed how the space is owned and meaning drawn by different individuals. For some, this room/lobby is a place where they prepare themselves for the doctor’s appointment, and for others this is a space where they anxiously wait for a diagnosis or a test report. It is in the waiting room, where they rehearse the questions they would like to ask the doctor, or contemplate or surmise what the doctor might possibly inform them about their treatment or they await the results of their procedures. The anxiety and nervousness among the treatment seeking individuals was visible during the field visits and interviews. After the consultation with the doctor, one could easily determine the progress and outcome of the treatment from their facial expressions and body language. The happiness of a positive outcome, the sense of loss and agony of a failed attempt, the anxiety of uncertainty was seen and felt in the waiting room. In a sense, to an observer, the waiting room of the fertility clinics in both Hyderabad and Kolkata can be understood as a site of emotional overload, where peoples’ expressions were transparent and reflected the stress and dilemmas they were going through.

As Victoria Bates points out, waiting *“occurs at a number of levels in illness narratives, during which patients often inhabit a form of limbo between illness and health.”* (Bates, 2018). For the fertility ‘patients’ whose treatment regimen is long drawn, waiting is an important part of their treatment journey -- they either are waiting to consult the doctor, waiting for tests, waiting for results, or waiting to recover or be cured. Since all these converge and happen in the waiting room or lounge, this particular space becomes an important register to understand their experience of infertility and/or reproductive loss and treatment seeking behaviour.

Observations and Interviews with the respondents (patients and clinic staff) in the study clinics, point to the fact that while this clinic space might be projected as a ‘space of hope’ to reinforce optimism, it is not limited to just that. The waiting room space

has different meanings for the different stakeholders of the clinic. For doctors it is a critical part of their work place where ‘patients’ wait to meet them. A crowded waiting room suggests a busy doctor /popular clinic, while a thinly peopled waiting room probably gives a signal that maybe the patients should try another clinic. For the staff of the clinic, the waiting room is the main hub of activity and is the space in the clinic where ‘patients’ spend maximum time and where staff ‘patient’ interaction is highest and requires both empathy and patience. As the waiting room is where people converge it is the most visible face of the clinic and the staff having the responsibility to keep it clean and orderly.

A survey of the waiting room of the two clinics in Hyderabad and Kolkata offers some interesting insights. Both the clinics were crowded in the mornings as all scans, consultations are scheduled before lunch. Since the research site in Hyderabad was comparatively bigger, with a spacious waiting area and multiple consultation room with more number of doctors – the crowd moved faster. In Kolkata, the research site was smaller, with 2 - 4 doctors available for consultation, two consultation rooms – making the waiting room cramped and crowded during the peak hours. In few instances, patients had to wait outside the waiting room near the staircase to get a seat. At both the research sites the patient clientele consisted of an almost homogeneous class group ranging from monthly income of Rs. 3000 – 2 lakhs, wherein people explicitly admitted about their financial struggle with fertility treatment.

The crowd found in both the research site consisted of couples, women alone (who mostly came to collect any reports), women accompanied by their mother, and in one case a woman was accompanied by her brother in Hyderabad. Each patient sat either with their partners or the accompanying member, and was involved in casual conversations during the waiting period. Restrooms, drinking water, vernacular dailies, lifestyle magazines, television were found in both the locations. All the emotions were visible in the waiting room, with the pre-dominance of anxiety, stress and uncertainty lingering over the entire clinic space. There were days when respondents were seen celebrating their positive reports with the clinic staff, doctors, and fellow couple. There were also days when respondents were found crying, shattered, hopeless and uncertain about their reproductive future. Many couples were exhausted with the routine process of the treatment which they are following for years. There were days where they were

found to be restless, annoyed, and agitated with the delay in the doctor's arrival. On one such day Sunanda in Kolkata complained:

“This is the problem with this clinic. They will give you an appointment at 9 am and the doctor will come at 12 o'clock. For a 9 am appointment we start from our place at 6 am, change two local trains and then we make it here on time. But there is no value of our time. Everything is good about this clinic, except this! We are already worried about our results, and on top of that, this delay!”
Sunanda, Kolkata.

Sunanda (35 years) was married to Anindya (38 years) for the past six years. They suffer from primary, female factor infertility wherein Sunanda is diagnosed with hypothyroidism. They are undergoing treatment for the past 3 years at this particular clinic. On the day of the interview, they were waiting with their hCG report²⁴ to clarify with the doctor. While she missed her periods for that month after IUI, her hCG reports do not show any signs of pregnancy. The anxiety, tension and stress about the probable medical explanation for her reports were not only visible in her body language but she was explicitly vocal about it with other couples present.

On a different day at the research site in Hyderabad, Jhanvi came alone to collect her scan reports and consult the doctor for the same. Upon asking her about her fertility issue and her treatment journey, she exclaimed:

“My husband generally accompanies me for all the consultations, scans, tests but today he had an urgent meeting so he could not come along. Moreover, he was not needed. I just have to collect my scan reports and meet the doctor. But sitting alone and waiting, thousand things are going inside my head. Based on the scan report the doctor will decide whether embryo implantation will be done or not. I'm trying to distract myself by pointlessly browsing my phone, looking at the television (which is playing some music video on low volume) or read this magazine in front of me. The receptionist informed the doctor will arrive any minute, and I have become more restless. I just hope everything will be good. Fingers crossed!” Jhanvi, Hyderabad.

²⁴ Beta-hCG (β -hCG) is a test that measures the amount of human chorionic gonadotropin (hCG) in the blood. This hormone is produced as soon as 10 days post-conception and an above-normal level can confirm pregnancy. (Source <https://www.verywellfamily.com/the-pregnancy-hormone-hcg-1960127>) last accessed on 01.04.2021

Jhanvi (31 years) is married to Sai Krishna (31 years) for the past two years at the time of the interview. Jhanvi suffered a miscarriage in 2016 and have been under treatment since then. They are planning to undergo IVF and are excited, worried, nervous and hopeful about their first IVF cycle. Narratives of Sunanda and Jhanvi are representative of what the couples and individuals feel and undergo in the waiting room. There reasons for anxiety, restlessness might be different but the larger overarching feeling in the waiting room echoes a sense of anxiety, tension, hope, restlessness and uncertainty. This emotional map of the waiting room is understood through these three concepts.

3.6.3. Infertility clinics as ‘Spaces of Hope’

In our everyday lives every experience is situated in a particular place and moment. Place plays an important role in framing one’s lived experience. Very often the people and the experience become more important than the place in which they are situated. However, this section of the chapter makes an attempt to understand the place making of the clinic space through the lens of “hope”. Most literature in infertility studies, across different countries, deals with the rationale behind the consumption of these aggressive technologies by infertile individuals in their quest for conception. The common drive identified is – ‘hope’ – hope to be pregnant, hope to overcome infertility, hope to have their own biological child, hope to be a parent and hope to complete their own family.

Growing scholarship in the field of health and healthcare including biomedicine, has contributed to understanding the value of ‘hope’ for patients’ wellbeing, if not for their recovery. This enables them to cope with their suffering and the apparent hopelessness of their present circumstances (Petersen, 2015). With the ‘privatization of hope’, hope is strongly linked to the consumption of technologies. (Petersen & Wilkinson, 2015, p. 115). It is through this axis of ‘selling’ and ‘buying’ of ‘hope’, that the health care industry sees its growth and increase in profits.

In the case of infertility and/or reproductive loss, it is interesting to understand how this ‘hope’ which is promised by the treatment is translated in the clinic space. It is in the clinic space that one can locate the doctors and the treatment seeking individuals in their fertility journey and study their emotions and coping strategies. This was done not

only by experiencing the place itself, but also by critically scrutinising the built structure of the clinic, its functioning, critical reading of advertisements, pamphlets, brochures, décor and also the relationship shared by the different users within the clinic space.

The language of ‘hope’ plays a key role in the functioning of the fertility industry and different stakeholders use them differently. By offering solutions or ‘cure’ the doctors/ medical establishments offer hope. ARTs invoke ‘hope’ as part of the solutions package which they offer to the fertility treatment seeking individual. As Peter Drahos (2004) mentions, *“hope is a psychological event or process that is distinct from the services and products to which it may be linked. Companies charge for their services and products. They do not charge for hope.”* (Drahos, 2004). Commodification, management, marketing and reproduction of hope are an important identity marker of the current fertility industry. These aspects of the market inform the following chapters, whereas this current section only deals with the place making of the clinic space and how it is constructed as ‘spaces of hope’, or rather sites of ‘consumption of hope’, because men/women who visit these clinics/hospitals continue to ‘live in hope’ for a successful pregnancy. As Sarah Franklin writes (1997):

“The clinic is the site of this technological promise and potential, and it is this ‘hope’ which is the most important value signified by the image of the desperate infertile woman. In this sense, the image is metaphoric: it stands for a belief in scientific progress and faith in technological enablement. It is a symbolic image of hope for an improved future, and of faith in the ability of medicine to alleviate human suffering” (Franklin, 1997, pp. 202 - 203).

The fertility clinics, for the treatment seeking individuals, are not just a building or a concrete structure but for them it signifies a symbolic place infused with meanings and life, a space where their dreams, their hopes will get fulfilled. The clinic embodies medical progress and processes, exchange of hopes, unfulfilled hopes, and transaction of knowledge and money. This idea of a fertility clinic or a hospital as ‘spaces of hope’ is constructed and manufactured by the fertility clinics themselves. A critical reading of brochures/ leaflets/ pictures/advertisements points to the place making process of a clinic space. An attempt has been made below to understand how these clinics are projected and marketed as ‘spaces of hope’ for the treatment seeking individuals, by

going through their brochures, pamphlets and websites. Some of the excerpts that construct these images of ‘hope’ are shared below.

- Nova IVI: *“We provide care at every step. Who knows, where others have failed, our science could help you. Chances are that the Nova IVI System will work for you, just as it has for thousands of happy couples all over the country.”*
- Padmaja fertility, Hyderabad: *“Hope we’ll be of some help in seeing your dreams realized.”*
- Shrushti fertility: *“Our expert team can solve any of your fertility needs, we offer efficient and evidence based fertility treatments.”*
- Jahar infertility research institute: *“The ultimate destination test tube baby centre.”*
- Medicovert fertility: *“We are a one-stop solution for all fertility treatments... With You, For You.”*
- Narayani Women Centre: *“Turn Hope into Happiness through IVF Treatment.”*
- Ferticity Fertility Clinics: *“Restoring Hope in Childless Couples.”*
- Unique Fertility Centre: *“Come as Couple, Leave as Family.”*
- KJ IVF Test Tube Babies & Laparoscopy Centre, Delhi: *“Have you Own Baby with the Help of Our IVF Experts.”*
- Indira IVF: *“We understand, incompleteness of family. Don’t waste your time, get your queries resolved.”*

After browsing through multiple leaflets, websites and pamphlets one can identify a pattern on how the clinics sell themselves. They project themselves as most advanced, efficient, and equipped with state-of-art technology, with a dedicated team. They claim they have already achieved multiple milestones and are ready to help couples who desperately want their biological child. These claims and achievements are difficult to validate and therefore the selection of clinics lies on the discretion of the patients. As SAMA (2006) has rightly pointed out in their study, *“couples using these procedures for reproduction are promised the happiness and ‘hope’ of parenthood, a happiness that they are told is missing from their lives and ART is described as ‘the science of happiness’”*. In a desperate pursuit for one’s own child, couples go doctor-shopping from one clinic to another or website searching for the best doctor, until a doctor or clinic fulfills their expectations in every respect (SAMA, 2006).

Consequently, these clinics become the place where their incomplete family dreams hope to get fulfilled. As elaborated earlier, they not only manufacture and sell hope but the clinic space provides a site for the embodiment of hope, where hope is placed on the promise of the technology and the medical expert and for some this hope is realised and advertised. It is not only for the consumers of these technologies that the infertility clinic becomes a symbolic representation of hope, but also empathetic clinic staff and doctors expressed similar emotions, which reinforces the ‘delivery of hope’ directly or indirectly. Therefore, one finds a performance of ‘hope and hoping’, playing out in the clinic space by doctors, ART industry, staff and the ‘patients’.

A doctor in Kolkata, D2K shared:

“See, I agree there are low success rate with these expensive infertility treatments which many people cannot afford. But we have to acknowledge that this is the only way out of their infertile situation. As of today, other than adoption and ART is there any other solution for infertility? Most of the patients do not want to opt for adoption. So ART is the only hope for that, and we try to fulfill their hopes in this clinic.” D2K, Kolkata.

Similarly, a clinic staff in Kolkata confessed:

“I am working at this clinic for more than a decade now. I have seen patients pleading and crying in front of the doctors to help them become pregnant. Their family members also come and beg for a child. And when they get pregnant and have a healthy baby, nothing can compare with their happiness. They treat the entire clinic staff. But for me this Ganesha in the clinic is everything. I keep telling patients not to be disheartened, God is here and he is seeing their struggle. He will definitely bless them with a child at the right time. This clinic is nothing but a temple. It has completed so many families, which no one else could.” Clinic staff, Kolkata.

The notion of identifying the clinic space as a site which is the only ray of hope for the infertile couples, and which has divine interventions was evident in both the narratives of the doctor in Hyderabad and the clinic staff in Kolkata. For couples with infertility issues, the clinic is seen as a space invested with hope and fulfillment of their dream of parenthood. Since, ART is associated with the birth of a new human being, the doctors

are equated as Gods (life givers) and the clinic space is seen as a divine site where miracles happen. The popular marketing message that ‘many people have been successful and you can be the next successful couple’ is what is internalised and believed by every stakeholder in the process of fertility treatment. With every successful advancement in the treatment process, this hope gets reinforced, becomes stronger, and feels more realistic and reachable.

As Pratibha from Hyderabad recalls:

“I underwent 16 IUI and 2 IVF cycles before my son was born. Now when I think back, I do not know why I underwent so many IUIs. But yes, every IUI result used to be better than the previous one. And the doctor used to say there are no significant problems in our reports, so we were hopeful that the next cycle will be a success. I think that small progress made us keep trying and then we shifted to IVF. My second IVF was successful.” Pratibha, Hyderabad

This act of clinging on to hope however miniscule it is, and the assurances by the doctors that they will eventually be successful, is a narrative shared by almost all the respondents across Hyderabad and Kolkata.

However, it is important to remember that clinic spaces are not only spaces of hope but also spaces of loss. Since infertility treatments have very low success rates, loss has been part of the daily/monthly/yearly experience of almost every treatment undergoing couple at some stage or the other. This sense of loss is not acknowledged or projected in the design of the therapeutic landscape of the clinic in its artifacts, paintings, pictures, quotes/ messages. The making of the therapeutic landscape ‘allows’ only success stories and marketing of ‘hope’, any reference to loss is both avoided and erased. But it is both loss and hopes that is felt and experienced by treatment seeking individuals and shared with other fellow treatment seeking individuals. This sense of loss can only be noticed through observation in the clinic, and through ‘patients’ sharing their stories of tryst with infertility and/or reproductive loss. The clinic space has been witness to few successful stories, but there are more far more stories of dreams of parenthood getting shattered. Captured within the walls of the clinic space are tears, dejection, anguish, loss, anxiety, joy and hope. Many ‘patients’ are left with more questions than answers about their infertile condition, and many have lost hope to overcome infertility and reproductive loss.

Finally for many, the clinic space became a site where they had to readjust their life goals and identity, where they not only have to live with the stigma of being infertile but also the stigma of failed fertility treatment and huge financial debts. Although most of the respondents were aware that the idea of hope and loss are the two sides of the same coin, they preferred to focus on hope and keep the emotions and memories of loss aside.

As Alka from Kolkata narrates:

“My second IVF failed and the doctors do not know why it is not working for us. During the Corona virus pandemic we had a break from treatment, and we are still contemplating whether we should resume or not. I am not interested to resume treatment as we are already in lot of debts, I lost my job also and I have come to terms with the fact that everyone does not get the joy of motherhood. And that is completely okay. I cannot take the torture of treatment, the pain and the uncertainty. I want to start my life anew. This loss will be there life long, but we are helpless. We tried, but it did not work out for us.” Alka, Kolkata.

3.7. Summary

This chapter attempts to map infertility at different spatial levels based on secondary sources – global, Sub-Saharan Africa and South Asia. An important focus is on the Sub-Saharan African region which is identified as an “infertility belt”. The African literature on fertility highlights the necessity to problematise Western definitions of infertility. It asserts that in non-western parts of the world, local contexts and cultural understanding of infertility offers a more nuanced definition than the Euro-American understanding. The following section briefly provides a snapshot of infertility in South Asian context, focusing on Bangladesh and Pakistan.

After mapping the trends and patterns at global level in the preceding sections, the chapter moves forward by providing an overview of infertility in India based on a secondary national level report. It highlights the problems in defining infertility and compiling comparable infertility data at the national level. Since, the DLHS-3 (2007) report is the only government data which provides information on infertility at a national scale; the data provides the template for analysing and mapping the infertility

scenario in India on two broad parameters – state-wise infertility rate and state wise fertility treatment seeking behaviour. Based on DLHS-3 data, three regions of infertility in India were identified – low, medium and high. A similar exercise was undertaken to categorise regions into low, medium and high based on infertility treatment seeking behaviour of women. This exercise provided a pictorial representation of the infertility data providing insights into the varying spatial trends and patterns in relation to other demographic variables.

Furthermore, the states of undivided Andhra Pradesh and West Bengal are discussed in the context of health care reforms, private health sector, trends in infertility and decreasing fertility rates. A profile of the two study areas of Hyderabad and Kolkata is followed by a brief discussion on the nature and functioning of the selected fertility clinics. The spatial distribution of clinics in the city of Hyderabad and Kolkata is mapped to identify the spatial patterns. The concentration of fertility clinics in specific localities indicate the demographic pattern, the demand for the treatment and other issues related to connectivity and the class profile of the particular location. Therefore, after completing the mapping exercise from the global level, to the national level; followed by the state and finally the city level, the chapter shifts focus to a study of the ‘space’ of the two chosen fertility clinics.

The clinic space becomes an important site of analysis, as a lot of time is spent by all the stakeholders in that particular space, and moreover, the interviews were also conducted in the clinic space. The chapter draws on the concept of place-making to understand the spatial dynamics of the fertility clinics. This analysis is informed by three broad conceptual frames– ‘therapeutic landscapes’, ‘waiting room aesthetics’, and ‘spaces of hope’. These three conceptual frames are used to navigate the clinic space in both Hyderabad and Kolkata, with the help of interviews, observation notes from the field and narratives from situational conversations with clinic staff and other respondents. A key learning from this section is about how an understanding of the same place varies across different respondent groups. The clinic space is understood differently by different treatment seeking individuals based on their stage in the treatment seeking journey and their final outcome of treatment. The making of a particular space, as a ‘therapeutic landscape’, ‘space of hope’ and ‘waiting room aesthetics’ is invested with meaning, power, hierarchy and marketing agenda strategies.

While the therapeutic landscape of the fertility clinic is one of hope and healing, for many it is also a space of loss, anxiety, stress and added health problems. This section highlights the role of décor, the colour scheme, paintings, newspaper clippings and overall rationale to project the clinic space as a particular space for healing and cure. This presentation and representation of the clinic space to the targeted audience are strategies which help in the manufacturing and marketing of 'hope'.

As identified in the preceding chapters and the ones following, the idea of hope plays an important role in the functioning of the fertility industry. In conclusion, the research identifies the clinic space as a tool and a means in driving this 'hope' driven fertility industry through varied strategies. The liminality of the clinic space and the waiting room becomes an important location point to navigate the different emotions and processes which are associated with fertility treatment. The convergence of different stakeholders – doctors, treatment seeking individuals, market, patriarchy, domination of biomedical model – makes this a site of utmost importance and value. However, the chapter would like to suggest that a more engaging reading of the fertility clinic space has to inform the infertility discourse in the Indian context.

CHAPTER 4

Commodification of Infertility: Economics of Reproductive Loss and Hope

This chapter attempts a critical review of the commodification of infertility through navigating the rapid growth of the fertility clinics and industry in two metropolitan cities of Hyderabad and Kolkata. There is a shift from the global and national frame as seen in the preceding chapter to the local, and from secondary to primary data. The core of this chapter is structured on field data gathered from 2017 to early 2020, across select fertility clinics in Hyderabad and Kolkata.

Respondents interviewed for this research were undergoing fertility treatments which included IUI, IVF, ICSI, TESA, GIFT, and others. Since the ban on commercial surrogacy was introduced by the Government of India in 2016 with the introduction of The Surrogacy (Regulation) Bill, 2016²⁵, none of the respondents interviewed, except one in Hyderabad, had opted for surrogacy as part of their fertility treatment. The couple who opted for surrogacy had failed attempts with multiple cycles of IUI and IVF, and the implantation of the embryo was done before the blanket ban on surrogacy. The thesis aims to focus on fertility treatment irrespective of its type and engages with it as a broad category. Respondents undergoing treatment at the time of the interview are the participants for this analysis. These are individuals and couples who were at different stages of their fertility treatment journey. At the time of the interview, while some had just started the treatment cycle after their reproductive loss or after the diagnosis of being infertile, others were continuing the treatment for the past 3 to 4 years, and few were undergoing treatment for over 5-15 years.

²⁵ [https://www.prsindia.org/uploads/media/Surrogacy/Surrogacy%20\(Regulation\)%20Bill,%202016.pdf](https://www.prsindia.org/uploads/media/Surrogacy/Surrogacy%20(Regulation)%20Bill,%202016.pdf) accessed on 11.07.2021.

4.1. Fertility Clinics in Hyderabad and Kolkata: Three Broad Models of Organisational Structure

Though there are reports of more than 20,000 clinics operating in the country²⁶, only 562 (as on 13.06.2021) ART clinics are enrolled²⁷ under the National Registry of ART Clinics and Banks in India with the Indian Council of Medical Research (ICMR). Of the 562 clinics²⁸, there are 6 registered clinics in Kolkata and 20 registered clinics in Hyderabad. The fertility clinics in both Hyderabad and Kolkata, like other clinics in the country are merely 'guided' by the Guidelines for 'Accreditation, Supervision and Regulation of Assisted Reproductive Technology (ART) clinics in India' issued by the Indian Council for Medical Research (ICMR) in 2008.

Based on the fieldwork in Hyderabad and Kolkata and relying on other secondary sources, three broad models have been identified to understand how fertility clinics are organised and function. However, at the outset it needs to be said that these models are tentative, as they are based only on the preliminary fieldwork done in clinics in the private health sector. There is a lack of representation of public hospitals or government-sponsored clinics providing fertility services among the respondents due to – (i) lack of public hospitals providing fertility services in Hyderabad and Kolkata, and (ii) in case the public hospital is officially listed as providing fertility services, there is an absence of a separate wing catering to these services and hence use is low. It is either a part of the gynecology department or the neo-natal unit (where contraception and family planning services are more sought after than fertility treatment). Interviews with respondents reveal that, even if few of them initiated their fertility treatment in a public hospital because of low pricing, eventually they shifted to private hospitals for better treatment and availability of advanced procedures. The cost difference between the three models is negligible, corporate clinics do have slightly higher-priced packages compared to the other two models of the clinic.

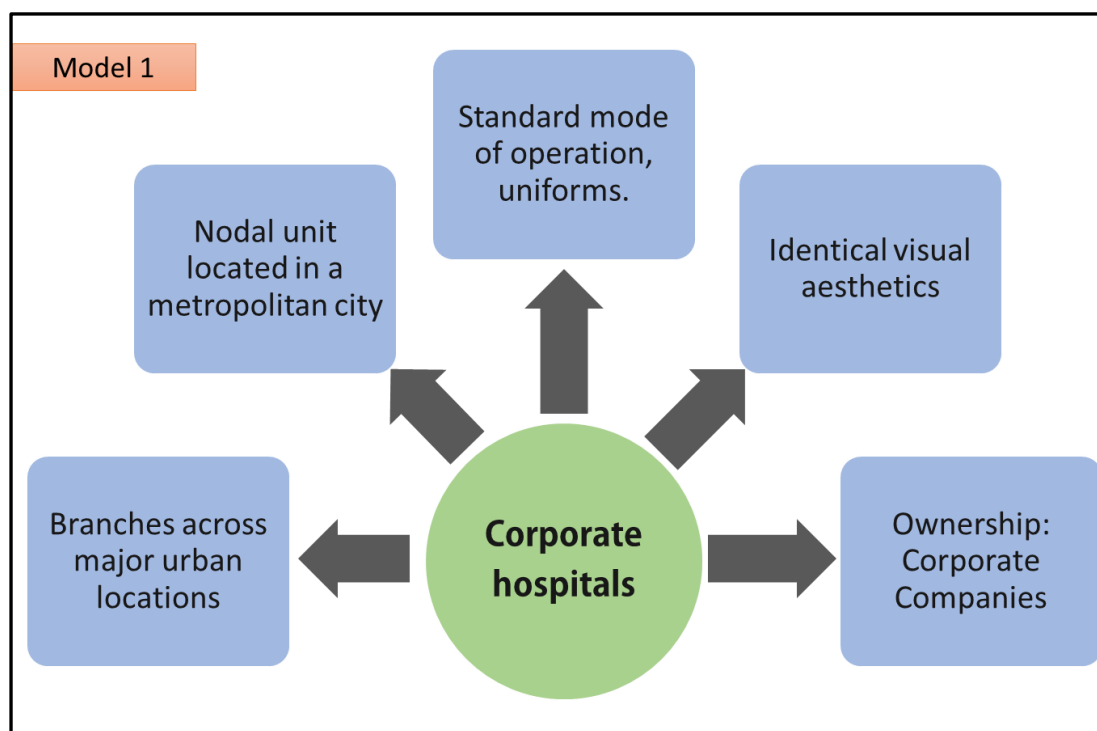
²⁶ <https://economictimes.indiatimes.com/industry/healthcare/biotech/healthcare/only-20-ivf-clinics-2-art-units-registered-with-icmr/articleshow/60153794.cms>

²⁷ The National Registry of ART Clinics and Banks in India (NRACBI) of ICMR on their website declared that they have not accredited or issued registration to any ART clinic or ART bank, but have only issued an enrollment number which is neither a sign of registration nor a sign of accreditation. <https://main.icmr.nic.in/national-registry-of-art> last accessed on 13.06.2021.

²⁸ https://main.icmr.nic.in/sites/default/files/art/Updated_list_of_approved_ART_Clinics_07_06_2021.pdf last accessed on 13.06.21.

The first model (Model 1) includes the corporate hospitals or hospital chains that provide fertility treatment services. These hospitals or clinics have branches across major urban locations in the country and are affiliated or function under an umbrella unit that has its nodal office either in Mumbai, Delhi or in any metropolitan city. The ownership of these fertility clinics or specialty centres lies with the respective corporate groups and not with doctors. These branches have a standard architecture, similar interior designing, colour combination, uniforms for the clinic staff, and other procedures like – doctor's appointment, an appointment for diagnosis, and tests. The centres are identical in their visual aesthetics, making it difficult to differentiate one from the other (refer Fig: 10).

Fig. 10: Clinic Model 1

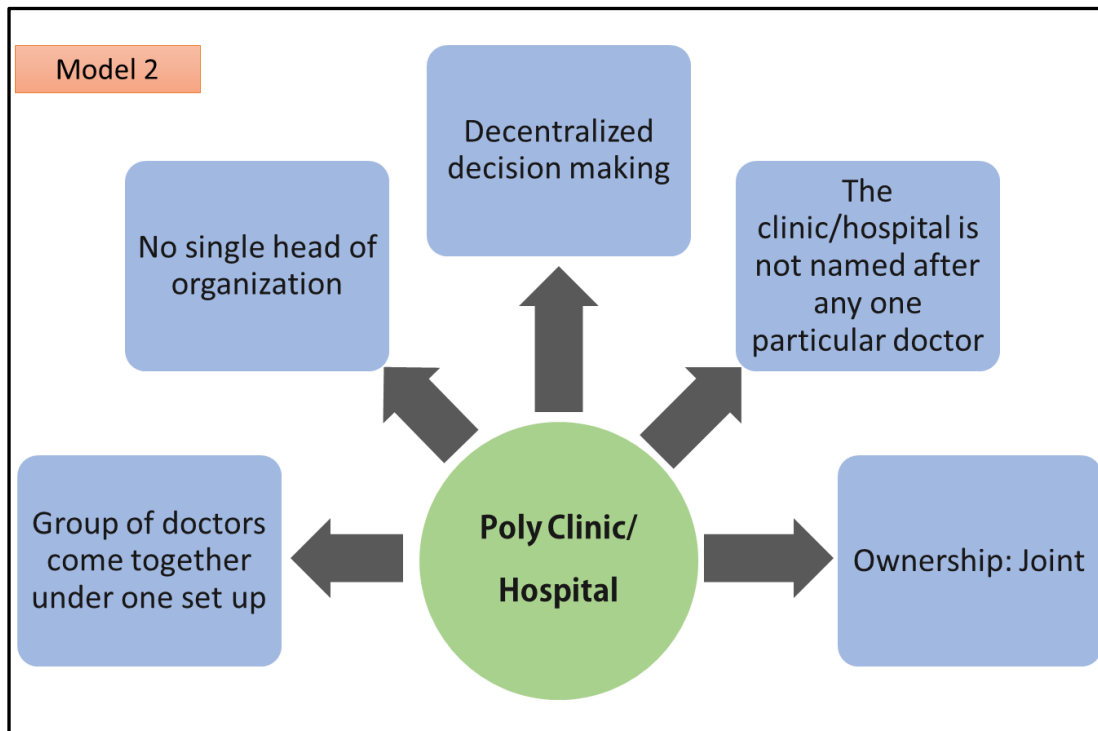


Source: Researcher, based on fieldwork in Hyderabad and Kolkata

The second model (Model 2) comprises a group of doctors who have expertise in their respective fields, who come together in a hospital or polyclinics set up and operate as a collective that aims at also providing fertility treatment services. The ownership of the fertility centre or branch lies with the umbrella nursing home. The fertility unit works as

a stand-alone branch and is generally registered as a private limited company. In this setup, the clinic/hospital is not named after any particular doctor, and neither any single doctor is identified as the head of the organisation. The doctors' function as a single unit (polyclinic/hospital) and decision making, especially regarding the course of treatment, is a joint decision where all the concerned doctors are involved. The visual aesthetics are unique to the clinics as they are standalone units without any branches. They have their standard mode of operation without any uniform for the staff. In most cases, the staff wears a white coat with their names embroidered on it. (refer Fig: 11).

Fig. 11: Clinic Model 2

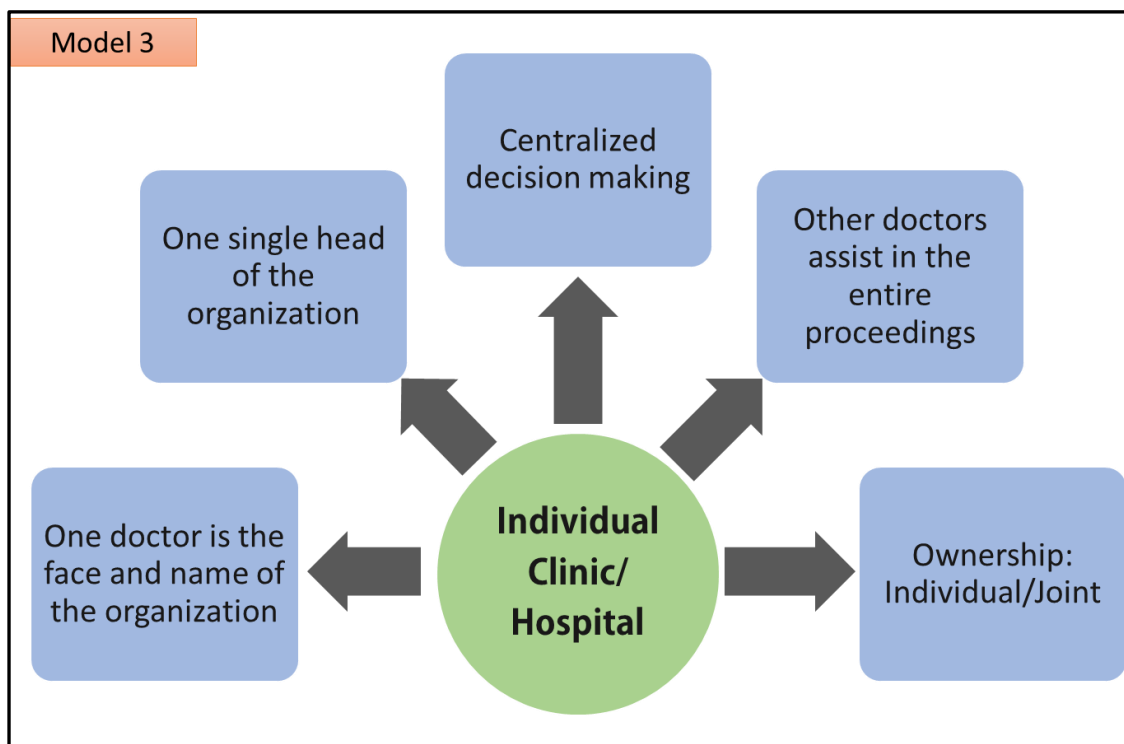


Source: Researcher, based on fieldwork in Hyderabad and Kolkata

In the third model (Model 3), a single doctor (usually a Gynecologist) is the face and name of a particular clinic. Other doctors in the team specialise in related areas but the clinic is identified with one particular doctor. Although a single doctor is the face and name of the clinic, it has joint ownership, and is generally registered as private limited companies. The decision-making is centralised with the founding doctor enjoying greater powers in decision making. These clinics also have their specific visual

aesthetics and do not resemble other clinics as they are standalone units. The staff may or may not wear a white coat which is left to the discretion of the owner management. They have their mode of operation (laid down by the owner doctor), related to rules regarding doctor appointments and everyday procedures which are subject to changes in regular intervals (refer Fig: 12).

Fig. 12: Clinic Model 3



Source: Researcher, based on fieldwork in Hyderabad and Kolkata

This categorisation of clinics based on its organisational structure is based on observations of the selected clinics where interviews were undertaken or which were approached to participate in the research. Broadly speaking, every city has a combination of all three models – models 2 and 3 are older while model 1 is more recent but growing rapidly with more and more corporate hospitals entering the fertility market. In some regions of the country particularly the poorer states, non-metros, and in medium towns, the second and third models are more prevalent.

Although there is a co-existence of all the three broad models identified in some form or the other in both Hyderabad and Kolkata, there is a distinct pattern in each city.

While model 1 and model 3 are dominant in Hyderabad, there is a dominance of model 2 in Kolkata, with model 1 now trying to expand its market in the city. This pattern is related to the specific history of private health care in the respective states. Since the 1990s, Hyderabad witnessed expanding medical industry headed by corporate companies, thus, becoming one of the leading cities in India with corporate medical giants providing world-class medical facilities. This dominance of individual clinics and corporate chains is present not only with regard to fertility services, but also for other medical care and treatment. On the other hand, Kolkata with its late start in embracing globalisation shows a prevalence of the polyclinic model. But with corporate health care trying to make its way in West Bengal in recent decades, Kolkata is also seeing a rise in corporate chains in the health sector.

Irrespective of the three broad clinic models identified above, there are certain universal standard procedures of treatment followed across regional, local and global scales. With more awareness and acceptance of infertility, the initial protocol followed is largely similar across the country - the couple comes together (both husband and wife) for a basic preliminary diagnosis. Though this is not the universal norm in India, considering the gendering of infertility issues and social stigma, there has been a change in the attitude towards infertility problems and their diagnosis, with both husband and wife now coming for consultations, while previously it was the woman who would first visit the doctor with her mother or elder sister. Depending on the diagnosis, the next line of treatment is identified and suggested by the doctors. Drawing on the fieldwork it is found, that although the treatment option is largely selected by the doctors, the cost and success rate of the clinic plays an important role in decision making for the treatment-seeking individuals. From a survey of the clinics in both cities, it is observed that there is a class dimension to the three models of clinics. The individual smaller clinics charge comparatively less and are more frequented by the lower middle class, while the corporate hospital clinics cater to the richer sections who want latest facilities and comfort, and here the different treatment packages are more expensive.

Based on the primary data collected through interviews in Hyderabad and Kolkata with the different categories of respondents, and after a select reading of the literature review, a few themes have been identified for focus and analysis. These themes are not exhaustive but are indicative of the complexity and the context in which the ideas and

experiences related to reproductive loss, infertility, fertility treatment, and hope have germinated. These themes are discussed below.

4.2. Commodification of Infertility

Simply defined, medicalisation is a *“process by which nonmedical problems become defined and treated as medical problems, usually in terms of illness and disorders”* (Conrad, 2007, p. 4). For Conrad, the key to the process of medicalisation is the definition, which includes, how a *“problem is defined in medical terms, described using medical language, understood through the adoption of a medical framework, or ‘treated’ with a medical intervention”* (Conrad, 2007, p. 5). Lately, more and more human experience and conditions are coming under the 'medical gaze' resulting in what Ivan Illich (1975) rightly called "the medicalization of life". With respect to medicalisation and gender, both feminists and sociologists have long argued that women are more susceptible to medicalisation than men. More issues related to women have been medicalised, which includes – childbirth, menstruation, birth control, fertility, premenstrual syndrome (PMS), pregnancy, menopause (Riessman 1983; Riska 2003).

However, Peter Conrad in his book *The Medicalization of Society* (2007) points out that, in the last decade, an increasing number of male life problems are being medicalised and treated. These life problems include erectile dysfunction, baldness, and andropause. In the context of infertility, this obsessive medicalisation is driven by the doctors and the medical industry, where every condition demands a technological solution, till one gets a positive outcome (the birth of a healthy biological child). Interviews of doctors and treatment-seeking individuals in Hyderabad and Kolkata reinforce this ‘medicalised’ mindset. A doctor in Hyderabad (D1H) observed:

“All of us know there is no other way out other than trying different available medical options till we get a positive result. We have many options for the patients here. After the preliminary diagnosis, we put them on first line of treatment. If that works for them then well and good, otherwise after a gap of a month or so we shift them to the second-best option. Medical science has advanced to such an extent, especially in the field of biotechnology that there are multiple options for everyone. We try to exhaust as many options as possible

till we get a positive outcome. There are so many clinics in and around us that the patients are spoilt for choices, but they should be careful in choosing the right option. We have a systematic approach in dealing with individual patients which other clinics lack.” D1H, Hyderabad.

This was his response when asked about his views on the mushrooming of fertility clinics and rising cases of infertility and its treatment. He is of the opinion that multiple factors come into play for the medicalisation or/and commodification of fertility treatments, especially in the context of India. These include, increasing late marriages, both partners working on different time schedules (and sometimes in long-distance marriages), reduction of sexual activity and bad lifestyle choices. According to him, it is not that infertility issues were not present earlier, but with more awareness and availability of treatment options, infertility cases are now being reported and people are willing to undergo treatment. D1H cautioned that we need to understand the fine difference between ‘medicalisation’ and ‘over-medicalisation’ of these easily available and accessible fertility treatment services. For him, one must be very observant towards one’s body and should understand and accept when the body refuses to undergo further medical interventions. He has a poor opinion of fellow doctors who have made fertility treatment services a ‘business’ and who pay no heed to the physical, mental, and financial stress they cause to their patients. For him, they are not doctors but ‘business’ people. He sarcastically comments:

“You know this famous saying- ‘The same people, who sell the panic sell the pill’ right?” D1H, Hyderabad.

D1H quoted the above line while talking about the growing medicalisation of infertility and the mushrooming of clinics (especially in Hyderabad). Although he is an infertility specialist, he is wary of the rampant opening up of fertility clinics across the city, that makes a business of the medicalisation of reproductive loss, specifically infertility. The growth of ART industry is directly related to this trend of defining all reproductive issues in medical terms. He believes this over-medicalisation has created and reinforced the idea of guilt, hope, and panic among the treatment-seeking individuals, which eventually creates the demand for ART treatment and feeds its market growth and expansion.

The danger which D1H spoke about was what Sinjini faced in a previous clinic in Kolkata. Sinjini (28 years) is married to Abhishek (32 years) for the past seven years. They have been undergoing treatment for four years, in which they have changed three doctors. She suffers from female factor infertility resulting from low egg count and small follicles. At the time of the interview, they were undergoing treatment for IUI. She agonises:

“I have just wasted my precious years on wrong treatment. If I would have come here earlier, it would have been better. I will never recommend anyone to go to X clinic. Here with TI (timed intercourse) and all, I have got positive results, but there after one year I did not hear anything positive, and it was all about money. That clinic gets lots and lots of patients... I know of people who have thyroid, and without treating that, the clinic asked them to undergo IUI, and it failed.” Sinjini, Kolkata.

Doctor 1 of Kolkata (D1K) when asked about the state of fertility industry in West Bengal in general and Kolkata in specific, elaborated –

“The (fertility) clinics were always there, but they were not that visible. Infertility treatment was always at the sub-clinical level because there is a stigma attached to it. But now with more awareness, people are coming forward for treatment, and with increasing demand more and more clinics are opening and their credibility lies with their team. If they are not true to their work then nothing can be done. So patients need to be cautious about which clinic they are choosing otherwise they will be losing precious years of their lives and money. There is a ‘Cafeteria of choices’ for the patients to get lost in, so they need to be very careful.” D1K, Kolkata.

In the context of infertility, medicalisation and commodification of fertility treatment services have long been a topic of study in social science and medical literature. Different scholars have identified different reasons and processes behind the phenomenon of medicalisation of infertility. Medicalisation of infertility has become so rampant and normalised that it is understood differently by different scholars. While Greil et al (2010) considers this as “hegemonic”, Sandelowski (1993) claims “the treatment has become the illness”, and for Ann Bell (2014, 2016) the medicalisation of infertility reinforces the “stratified system of reproduction”.

According to Greil et al (2010), there are differences in the infertility discourse based on one's location. In developed societies, there is a virtual dominance of the biomedical model in understanding and treating infertility, but in developing societies where alternate care systems are still prevalent with local meanings and interpretation, there is a co-existence of the local alternate care system and the biomedical model. This hegemonic presence and dominance of the biomedical model in the case of infertility treatment, pushes one to undergo medical treatments without exploring any alternate options of treatment and family formation. The lack of availability of alternate care systems in the West and now also in India is due to the supremacy of the biomedical model in treating any health and illness issues.

On similar lines, Margaret Sandelowski (1991) is critical about the nature of ART, where she identifies the 'never enough' quality of conceptive technology as the new evil. She believes this characteristic of ART is dangerous, as it pushes couples to keep trying treatment procedures one after another, it eventually becoming a vicious cycle where the treatment-seeking individuals find it difficult to quit or opt-out of the treatment cycle. According to her, this now becomes the new illness where the treatment-seeking individuals are compelled to try different ART procedures which are sometimes even addictive (Sandelowski, 1991, p. 30). Ann V. Bell (2016) focuses on the contextual nature of infertility experience which varies along the lines of race, gender, class, and other dimensions, and concludes how it reinforces the 'stratified reproduction model' in terms of not only experience but accessibility and affordability.

The presence of the above three different understandings of infertility can be seen in the research sites in both Kolkata and Hyderabad. It is reflected in Sangeetha's story from Hyderabad. When asked about her infertility journey, she took some time to collect herself together to describe her harrowing everyday routine.

"I think, eat and sleep treatment now. I had to quit my job because otherwise I was not being able to keep pace with the schedule and now my everyday activities revolve around treatment. I wake up and till the time I am awake I keep taking multiple tablets, injections, and sprays. I plan my other activities based on my scan schedules and doctor's appointment. I try to keep myself busy; otherwise, I keep on thinking about treatment, what next, what will happen. I just keep stressing about the treatment and my anxiety levels have risen. I am always tense!" Sangeetha, Hyderabad.

Sangeetha (32 years) is married to Pratik (35 years) for four years and stays in Hyderabad. She completed her graduation and was working with an IT company before the treatment started taking a toll on her health. The couple has been diagnosed with primary couple infertility where Sangeetha suffers from less egg count with poor quality and Pratik is diagnosed with low sperm count and low motility. They had seven failed IUI attempts and were contemplating shifting to the IVF program. The couple was visibly stressed about the entire treatment process, and Sangeetha was much more affected and/or articulate about her anxiety and how the treatment has taken over her entire life.

Another story of fertility treatment taking a toll on health is shared by Razia's mother in Kolkata when asked about the problem Razia is facing in conceiving. She laments:

"I never had any such problem in conceiving. I have four daughters and three sons. She is my third child and she is the only one who is facing difficulty in getting pregnant. I do not know what is wrong with her. They are trying so many things, and with all this treatment my daughter has become so weak and looks sick. She cannot sit for long; she also has back pain and keeps fainting. So she can hardly do any household chores. I do not know whether this treatment is helping her or is making her sicker, but the doctors are saying this is the only way out. We do not want her to adopt, and her husband is also not at all supportive." Razia's mother, Kolkata.

Razia (28 years) is married to Arif (30 years) for six years. Arif works as a daily wage labourer at a marble shop and hails from an economically weak background. They are undergoing treatment for four years. She is supported by her mother financially and emotionally for the treatment, as her in-laws are abusive and torture her for not having a baby. While the husband is supportive of the treatment, he does not want his family to know that he also suffers from male fertility issues, and has therefore put the entire blame on his wife. Before opting for allopathic or western medicine, they tried homeopathy, ayurveda, 'jhaar-phoonk'²⁹, 'jari buti' from different hakims, dargahs and priests, contacted through neighbours and friends. They made it very clear to the doctors at the clinic that they cannot pursue this treatment for long, as it is beyond their

²⁹ Jhaar-phoonk is a practice conducted by local priests, saints, and local healers. They are said to use techniques of magic, black magic, and exorcism to evade evil.

financial capacity. However, they are also desperate to have a baby, because only then she will be accepted by her in-laws.

Both the above narratives reflect what Greil et al (2010) and Sandelowski (1993) mention about the nature of infertility treatment – one considers this as "hegemonic" nature of the biomedical model, where the treatment has taken over their lives as is the case with Sangeetha and Razia. The other claims "the treatment has become the illness" as is the case with Razia. In India, the near-total presence of fertility services in the private sector automatically makes it expensive and inaccessible to many. While the mushrooming of fertility clinics has increased the availability of fertility treatment, this availability and accessibility is restricted to a certain economic section of the population. For poor treatment-seeking individuals, fertility treatment places a tremendous burden on their meager economic resources. The constant conflict between affording treatment (both physically and financially) and the fear of quitting and giving up on the hope to have a biological child, is evident in both the above narratives. Razia and Sangeetha are representative of so many other respondents who share similar emotions of distress, and struggle, due to their infertility condition.

Here, Zola's (1972) analysis of medicalisation rightly fits in the context of infertility, as she argues that medicalisation is a tendency of society, which has a cultural climate where a social problem is reduced to an individual one and a technical or medical solution is sought at the individual level. This social construction of infertility as a disease, pushing it as an individual concern, and projecting ART as the only medical 'cure' for it is evident in the everyday struggle of fertility treatment-seeking individuals in the global south. In developing societies, the major barrier to accessibility and affordability of fertility treatment services comes from the lack of recognition of infertility as a major health and social concern by public authorities on the one hand and its concentration in the private sector on the other hand. The lack of government initiatives to deal with rising infertility rates, and the strong desire to have a biological child (mandated largely by patriarchy), leave couples with no option but to struggle (physically, mentally, and financially) at the individual level.

Added to this, the market plays a pivotal role by feeding into the idea of having a 'complete' family, the hope to have your own child, and aggressively selling ART as the saviour. It needs to be emphasised that ART targets a particular echelon of society or the paying 'patient' and excludes the poor as it is beyond their reach. The market

creating a desire and demand, to an extent that the high pricing of treatment procedures often leaves many infertile couples and couples with reproductive loss financially ruined.

With the advancement of high technology in the field of health care and medicine, there is now available high-tech medical intervention and treatment for every type of infertility issue, panning across male and female fertility types. In most cases, this treatment overwhelms and takes over the entire life of the individual being/couple. A few factors play an important role in this treatment-seeking behaviour: (i) the availability of increasing fertility treatment options, (ii) pressure from the market by aggressively projecting the idea of ‘hope’ and ART as the only cure, and (iii) desperation of having one’s own biological child, as it is valued as the most important link in completing a family in our patriarchal society. These factors work together to suppress the patient’s individual being and the treatment dictates the life-world of the individual. Their lived experience of reproductive loss and infertility overshadows their other social identities and relationships. For them, childlessness becomes the only focus in their lives, and resolving it becomes their life goal. This becomes a problem in itself. The patient and the doctor in search of a ‘cure’ pursue a long-drawn path of various tests and different interventions, till they get a positive result. Despite the health risk and medical expenses, in most cases, both the parties (i.e. the doctor and the patient) continue their treatment till they reach an extreme point where the patient is physically, emotionally, and financially exhausted and gives up.

We can see this tension and dilemma reflected in Nausheen’s story from Hyderabad. Nausheen (31 years) is married to Rafique (31 years) for the past six years. They have been diagnosed with primary couple infertility. While Nausheen suffers from tubal blockage, Rafique suffers from low sperm count and they had already consulted more than six doctors. At the time of the interview, her embryo transfer (ET) was scheduled after five days for her fourth IVF cycle. She complains -

“I have had five failed IUIs and three failed IVFs in the past few years. I have given up now and have accepted my fate. I do not know what God has planned for me but I feel very sick after all this. We are in a lot of debt and now I do not want to try anymore, my body has given up. This is the last attempt; we will wait and see what is waiting for us.” Nausheen, Hyderabad.

Nausheen is representative of most of the respondents who find themselves in a situation where they can neither quit treatment nor pursue it further – they are stuck in limbo. Doctors play an important role in motivating individuals to undergo and continue fertility treatment. Medical science and doctors are valued and given a quasi-god position, especially in the Indian context, where people feel their authority cannot be questioned. Hence the doctor's referral to continue to undergo fertility treatment remains unquestioned.

A doctor in Kolkata (D2K) when questioned about the commodification of infertility was of the view:

"Look, I will not say that fertility treatment is not useful. It is definitely good, so many people get successful results. The problem is people think you will get the result on the first attempt, you might get but there is no guarantee. Technology has advanced so much that there is nothing beyond our current fertility treatments which can help with infertility. You have to bear some pain to get that most valuable result. There is nothing more valuable than your own child"

D2K, Kolkata.

This liminal positioning of individuals or couples is driven by the aggressive marketing of fertility treatment services. With medicalisation and enhanced consumerism in the field of health care, the market becomes a dominant player. It forces one to enter the vicious cycle of treatment by evocating the idea of 'hope' and 'complete family'- the only possibility of having one's own biological child, because otherwise they would feel guilty of not trying enough. The fertility industry makes infertile individuals believe they are missing the joy of motherhood or rather parenthood, and how only fertility treatment can provide them this joy.

The idea of a complete family and parenthood, which include the husband, wife and a biological child (at least one), is sold as the ideal unit of a family. It is targeted at these individuals who have failed to achieve this norm. The marketing strategies include playing on both the ideas of 'guilt' and 'hope' together, in a way, such that the 'guilt' of not being able to have a biological child and therefore a complete family is reduced and overcome with the 'hope' which comes along with fertility treatments. The projection of a hopeful future by the profit-seeking fertility industry, along with the possibility of anticipatory guilt or regret (if one does not undergo medical intervention), pushes

individuals and/or couples to continue their treatment rather than opt-out. In the end, they bear the burden of waiting endlessly for a pregnancy, while trying persistently to remain hopeful.

4.3. Femtech: Technology and Marketing of the Female Body

Femtech is a new entrant in the commodification of women's bodies. Femtech (or female technology) involves the use of digital health to motivate women to access and use applications for managing their health issues. The term 'femtech' was first coined by Ida Tin, co-founder, and CEO of Clue – a menstruation tracking application (Zachariah, 2021). The term can be applied to mobile applications, tracking wearables, artificial intelligence, non-invasive hardware, sensors, portable/ connected devices. Most femtech applications revolve around key women's health issues, such as reproductive and maternal health, general health, and wellness, which include mental health, chronic diseases, and communicable diseases (e.g., period tracker, fertility tracker, ovulation monitoring, pregnancy tracker, and others). One can not only know about their average menstrual cycle but also ovulation period, fertility window and pre-menstrual syndrome (PMS). Along with details of the menstrual cycle, one can log into other symptoms like headache, how heavy the cycles are, food cravings, duration of sleep, tender breast, cramps, acne, sexual activity, vomiting, energy level, exercises done, moods, lifestyle and much more. Again this is targeted to the middle and upper income, educated women due to its cost. Both ARTs and Femtech are examples of the class bias of technology.

With healthcare progressively becoming more personal and patient-centric, the startups claim that the visual statistics helps women to understand their own bodies better. It gives a snapshot of one's state of being during the periods, and can be easily shown to the doctor if required. Some of the popular and free downloadable period tracking applications and devices include – Glow, Clue, Period Diary, Bellabeat, OvuSense, Daysy, Tempdrop, and Ava. By providing inputs regularly, these applications and wearables are able to predict periods and other related conditions more accurately. As Glow advertises: *“The more data you enter, the more accurate your predictions”* (McHugh, 2019). All these applications also have a premium membership; wherein by making a subscription payment one can get more detailed predictions and even online

consultation regarding any health-related concern, especially reproductive health issues (refer Table 17).

Table 17: Some Common Femtech Services in India and their Cost

Femtech services	Price (in Rs.)
Period tracking mobile applications subscription rate	
Clue	750/month & 3500/year
Glow	2550/ 3 months, 5300/year
Ovulation test kit	450-700
Pregnancy test kit	50-250
Egg freezing (for 10 years)	1,50,000 - 1,70,000
Sperm freezing (for 2 years)	10,000 – 40,000

Source: Online resources and field data.

The commercialisation of pregnancy is reinforced by the proliferation of these products available to identify – monitor – control one’s own reproductive cycle. The marketisation of ovulation test kit, period monitoring apps and mobile and computer applications, to guide one through the pregnancy period - are both sources and products of commercialisation of pregnancy (refer: Appendix A, Fig. 4, 5). Services like egg freezing, sperm freezing which are widely available in most of the hospitals and clinics, not only cater to the increasing demand of specific target customers, but also create pressure for others to avail these services. Just like ART did for infertility.

The market and business of reproductive health, especially the fertility market has diversified into different sectors. The hospitals, clinics, and pharmaceutical companies are big players, and lately they have been joined with the femtech applications. It is believed that femtech has helped in reducing fertility treatment expenses by a considerable margin for individual treatment seekers, by enabling to track fertility and ovulation easily without much complication before they start with their main treatment (Tahmassebi, 2019). Femtech industry also targets endometriosis, a disorder which affects nearly one in ten women worldwide, and is a main cause for infertility (Mullin,

2016), by making the diagnosis possible through innovative blood test instead of invasive tissue surgery. There are multiple other products and services in the pipeline, which include – “*spit based fertility tests, Uber-like birth control delivery, at home pap smears*” (Tahmassebi, 2019, p. 4). While these are yet to enter and expand in the Indian market, currently three female respondents in Hyderabad and two female respondents in Kolkata use the period tracking applications in their everyday lives. Glow, Clue, Period Diary, Flo and Maya are among the more popular applications used by the respondents interviewed.

Doctors in Kolkata and Hyderabad have differing views regarding the growing digitalization of health and the market of infertility industry. While a doctor in Kolkata (D2K) was dismissive about it, a doctor in Hyderabad (D1H) was encouraging about femtech. When asked about the use of femtech products among their patients, the doctor in Kolkata (D2K) on similar lines of D1K disapprovingly said:

“We have no say about these technologies. If patients are aware and want to use them, it is up to them. This is not a matter of concern for us to talk to the patients. The pool of patients which we get are not advanced, highly educated and tech savvy. So it is pointless to discuss this with them. They are very focused about what they want from this clinic – getting pregnant and a healthy baby.”
D2K, Kolkata.

On the other hand, the doctor in Hyderabad (D1H) recommended Femtech:

“Sometimes we advise patients to use period tracker and feed in data for 2-3 months every day. Some of them already do it themselves, but for some we request them to do it if possible. A digital application helps us to track the symptoms and get an overall snapshot of the patient easily. They are also comfortable in using these applications than writing it in a diary and to bring them every time they come for check-ups. They might forget to carry a diary, but they will not forget their mobile phones (laughs)” D1H, Hyderabad.

D1H insistence on using wearables and using mobile applications to understand one's own body, does not stem from any concern towards data privacy or making one empowered in understanding one's own body, but rather to track the menstrual cycle in most cases. With these applications one can easily find out the fertile window and the ovulation period. Although he was aware of how discriminatory these applications are

in respect to accessibility and affordability, he endorsed femtech applications as it helps and reduces the doctor's job in explaining about the fertility window, ovulation period, and menstrual cycle length to a certain group of clients who can access and understand those applications and information.

The major concern raised against these apps and wearables is the importance and confidentiality of the data that is generated everyday by every human. While these apps are marketed as technology that help people take better care of their bodies, the larger question remains unanswered – what happens to the data that is generated? Who has access to it? Every individual is considered as a data generator, who is eating, breathing, and sleeping data. On their app page Glow also writes “Get pregnant - with more information.”³⁰ And Maya promises to provide “insights about your health from your data.”³¹ The ‘datafication’ of human beings is a new concern, where the handling of this metadata is questioned. The startups claim that this anonymous database of women's health (which did not exist earlier) will help them to improve their existing products and innovate new ones specific to the needs of women (Charara, 2018).

These startups are considered to bring a change in how the market operates. By providing the illusion of control over one's own body, it not only has given birth to a new form of dependence and domination, but has also created a larger debate on data privacy, how data is generated and how data is used without the consent of the users. As Molly McHugh rightly points out, “*the trade-off for users are familiar: information for personal data*” (McHugh, 2019, p. 3). It is often argued that these fertility apps and menstruation trackers are a double edged sword for users; it is not only feeding a large health market but also the advertising economy, which try to slot users and their bodies into strict categories. Some apps like Flo³² and Maya³³ have been found to offer the collected data to third parties for marketing and advertising purposes.

While these apps have been found sharing information with Facebook (and other social media) for advertising purpose, the others have been found to rely on users data to fund their products. These user data are used to curate targeted advertisements (based on different algorithms) for users across social media platforms. Therefore, one can

³⁰ https://play.google.com/store/apps/details?id=com.glow.android&hl=en_IN&gl=US

³¹ https://play.google.com/store/apps/details?id=in.plackal.lovecyclesfree&hl=en_IN&gl=US

³² Flo was found to share information to Facebook for advertising purpose (McHugh, 2019).

³³ In 2019, Maya – a health tracking app came under scrutiny when it was accused of sharing confidential data with third parties. The claim was refuted later (Zachariah, 2021)

conclude that, these online platforms are largely reinforcing stereotypes about women and their bodies (which they thought of overcoming or breaking) through targeted advertisement – and in that they are aided by femtech. These technologies reinforce the idea that women's bodies need to be quantified and analysed – against 'the new normal' which is created by these technologies. The individual personal data which is collected is averaged and a standard of 'normal' is created. These technologies encourage users to compare their own health against this constructed 'normal', and when they do not find themselves there, they feel pressured to fit in (McHugh, 2019). In this process, they become victims of new forms of stereotypes and domination, losing control of their own bodies. One observes that as these femtech technologies are new, neither the doctors nor the treatment seeking individuals in Hyderabad and Kolkata raised any concern about this.

Rekha from Hyderabad (33 years) is married to Ankush (35 years) for more than 5 years and has been struggling to conceive for the past three years. She is an MBA graduate, has a high paying job with a busy schedule. She wears a fitness tracker which counts her daily activity, and also uses the app Clue in her phone to track her periods. She is suffering from PCOS and irregular periods, and is in her early stage of infertility treatment and is also considering egg freezing (fearing that later it might become too late for her to have a biological child). Upon noticing her fit-bit around her wrist on the day of the interview, she was asked whether she uses any femtech products in her everyday life. Her answer:

Rekha: I use Clue (a period tracking app) for quite some time now. My friends introduced me to this. I find it very convenient to use, instead of setting alarms in my calendar, Clue does that for me every month. Every month I am alerted when my ovulation, PMS, periods are about to start. It is very handy, and has been in the market for sometime. Earlier, every time I used to forget or misplace my diary where I used to write all this.

Researcher: Have you ever read the terms and conditions of the data privacy related to these apps? Did you ever consider what is happening to all the data that you are feeding every day?

Rekha: No, I never thought about that. Lately, I have been reading stuff on the internet about data privacy related to these apps, but I have never taken them

seriously. We download so many apps and use them, and we hardly read the terms and conditions. And what will they do with all our everyday data, it is only about my physical and mental well-being, about my mood and health. How will that be of any use to anyone?

Similarly, Priyanka from Hyderabad when asked whether she is familiar with any of the femtech applications and knows about their data policy, replied:

“Yes, I use Maya app to track my periods. Earlier I used to use Clue, but then my friends referred Maya and I am using that. It has made things easier for me. Now whenever I have sudden mood swings and abdomen pain I check the app to know whether I am ovulating, PMS-ing or not. With regard to data policy, I never paid attention. How does it matter really, I am getting benefit out of this app without paying any amount and that is more than enough” Priyanka, Hyderabad.

Priyanka (32 years) is married to Akshay (32 years) for the past 5 years. They have been diagnosed with primary female factor infertility where Priyanaka is suffering from endometriosis. They have been undergoing treatment for the last two years without any positive result. Two cycles of IVF failed and at the time of the interview they were preparing to start with their third cycle of IVF. Both, Priyanka and Akshay have completed Masters in Computer Applications (MCA) and were working with IT companies. Priyanka had to quit her job 2 years back when the fertility treatment started taking a toll on her health and she could not spend much time on her work.

The social profile of the respondent becomes very important in understanding the type of users these apps and services are targeted at. These are highly educated people who are affluent, well aware about the state of art technology, and have the capacity to use them for their everyday need. Therefore, these apps, like infertility treatment, automatically filter out a large section of the population who are not well educated, lack the knowledge of using such apps and maybe, also do not possess smartphones to install them. This exclusion of a section of the population from access to femtech speaks of the user bias of fertility treatment. The excluded population cannot use and rely on such ‘femtech’ applications and wearables to become pregnant. They will stick to their memory calendars and notebooks to keep a record of their menstrual cycle. Ayesha’s story from Hyderabad hints at this.

Ayesha (30 years) is married to Abdul (35 years) for the past 13 years. They have been diagnosed with primary-female factor infertility and are undergoing treatment for the past nine years. They have already undergone two cycles of failed IVF and were preparing for their third cycle of IVF at the time of the interview. They belong to a middle class family where Ayesha is a house-wife and Abdul is with the Indian Army. When asked whether she knows about period tracking apps and wearables, with a bewildered expression she said:

“I am not aware of such things. I have a smartphone but I use it only for calling, Whatsapp, Facebook and online shopping. For noting down the date of my periods and other dates like scan, date of intercourse – I write it in a small pocket notebook which I keep along with my medical file, so that I never forget to carry it. I do not know how we can put this information in a phone. Earlier I never even wrote all these dates and all. But later the doctor here asked me to keep a record, so now I do it.” Ayesha, Hyderabad

Similarly, Moumita’s story from Kolkata further reinforces the lack of awareness and accessibility of such technologies. Moumita (28 years) is married to Ajit (34 years) for the past 6 years. They have been diagnosed with primary couple infertility. Moumita is a housewife and Ajit is an auto-rickshaw driver. They are struggling to pay for their treatment and are facing financial difficulty in sustaining their treatment for the past 3 years. In response to the question whether she is familiar with any phone based apps or other femtech products, Moumita admits her ignorance:

“I have never heard of such apps. I have a smartphone but I use it for basic purpose – just calls and messages. This clinic provides with a date chart in which I fill up all my details related to periods date, intercourse date etc. If not in those charts, I remember other dates myself. I do not forget them.” Moumita, Kolkata

The concern therefore, with the proliferation of femtech is the question of availability, accessibility, and exclusion. Considering the Indian scenario, one can easily conclude that these technologies are targeted towards a particular section of the society who have the means and knowledge of accessing such expensive high-tech innovations. The attempt to popularise these technologies, or rather, to think that a large section of the patients will have access to these technologies, points to the socioeconomic background

of patients who avail fertility treatment services in the cities of Kolkata and Hyderabad. Some market research firms are expecting the femtech industry to reach a turnover of \$50bn by 2025 (Marks, 2019), thereby, disrupting the health care market in unprecedented ways. However, how far it will benefit the poor and middle class treatment seeking individuals is questionable. Since majority of the respondents were not aware of such applications and wearables, the opinion and concern is representative of only a very small section of the respondents (6.6%). While, no generalisations can be drawn based on this, it is suggestive of emerging trends whereby the market sees another economic opportunity in commodifying the bodies of women.

4.4. Marketing the Biological Child and Parenthood

Medical services are one of the latest additions to the list of services that are increasingly becoming commercialised. Deborah Spar believes, *“over the past thirty years, advances in reproductive medicine have indeed created a market for babies, a market in which parents choose traits, clinics woo clients, and specialized providers earn millions of dollars a year. In this market, moreover, commerce often runs without many rules. Because no one wants to define baby-making as a business.”* (Spar, 2006, p. xi). Here companies are making money, customers are making choices, and children –for better or worse- are being sold (Spar, 2006, p. xi). She also argues that, *“this market, however, remains largely unacknowledged. No one likes to admit to manufacturing babies or to earning profits in the process. No one wants to argue that the baby business should be seen as commerce, or that its practitioners should be held to some kind of regulatory standard. And thus the trade is marked by legal inconsistencies and continent-spanning loopholes”* (Spar, 2006, p. xi). The idea that science has a solution for everything is well circulated and internalised, and extended towards an extent, where people fail to identify boundaries. Spar (2006) further argues, if parents want children and nature does not comply - they are likely to pursue their quest for conception (especially of their own biological child) through whatever means possible. Extending the same argument Amit Sengupta (2010) argues that *“fertility clinics sit at the apex of the pyramid of the baby business”, they ‘provide the service of matching the technology with the need’* (Sengupta, 2010, p. 45).

In this context, strategies of fertility clinics to promote these techniques and services across different types of media platforms and their own websites becomes worth examining. The aggressive marketing of the biological child is better understood by a critical reading of the brochures and websites of these infertility clinics. The websites present a lot of content in understanding how these clinics function – from virtual tours of clinics, to virtual meeting with the doctors at the clinic for initial query, to success stories including both - written personalised letters (refer Fig. 13, 14)³⁴ to video clips – all of which are available to attract the consumers.

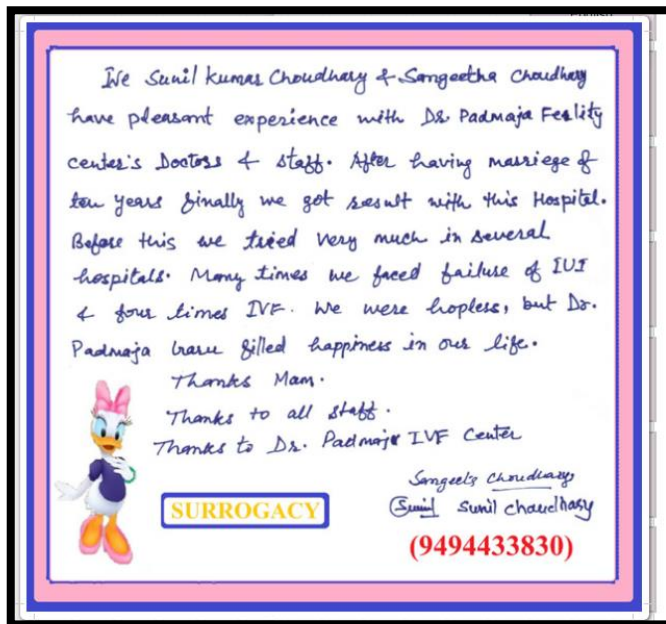
Fig. 13: Photos of babies born with the help of fertility treatment



Source: Website of Padmaja Fertility Clinic, Hyderabad

³⁴ For images refer Appendix A, Fig. 9 - 13

Fig. 14: Gratitude letter written by a couple



Source: Website of Padmaja Fertility Clinic, Hyderabad.

The language of the text or the taglines used in the brochures or websites of fertility clinic plays a very important role in attracting consumers (refer Fig. 15). It not only reinforces the message that ARTs are both a ‘choice’ and a reason for ‘hope’, but it also projects ARTs as the (only) solution to the problem of infertility and reproductive loss. As Nadimpally writes, *“The images, slogans, video advertisements, emphasize the ‘tragedy’ of childlessness and the importance of childbearing, particularly motherhood, while deliberately ignoring, omitting, or playing down the concerns and complications that come with medical intervention, such as side-effects, efficacy, and costs.”*(Nadimpally, 2014, p. 101)

Fig. 15: Homepage of the website of a fertility clinic, Hyderabad



Source: Website of Padmaja Fertility Clinic, Hyderabad.

Market strategies like offering packages, schemes, discounts (refer Fig. 16), in some cases easy monthly installment (EMI) schemes (refer Fig. 17) inflating success rates (refer Fig. 18), street hoardings, advertisement in regional local newspapers (refer Fig. 19) and television channels apply more to the ART industry³⁵. The taglines of clinics across Hyderabad and Kolkata, speak of the aggressive selling of the stereotypical ideas of family, motherhood and biological child.

“Have your own baby, complete your family.”

“Hold on your dream, your baby will hold your finger soon”

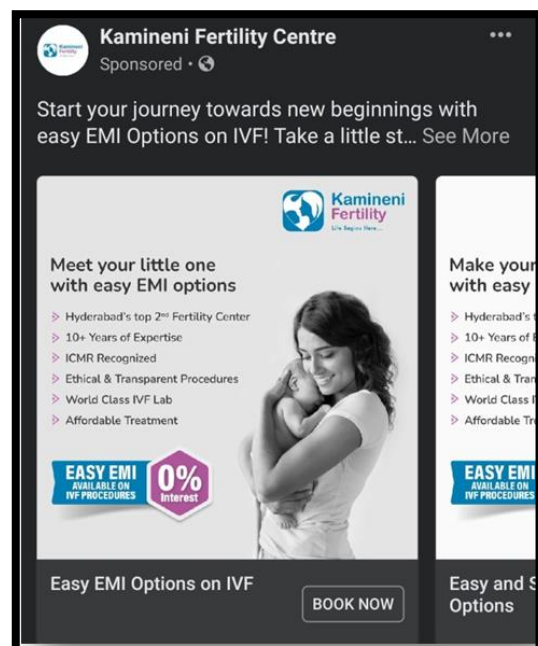
“Helping you to build your family”

Fig. 16: Advertisement of a fertility clinic providing discount on male fertility treatments



Source: Instagram

Fig. 17: Advertisement of a fertility clinic providing EMI schemes



Source: Facebook

³⁵ For more images refer Appendix A, Fig. 14 - 16

Fig. 18: Webpage of a fertility clinic in Kolkata claiming high success rate

Source: Website of Urvaraa Fertility Clinic, Kolkata.

Fig. 19: Advertisement of a fertility clinic in a regional newspaper in Kolkata

Source: Anadabazar Patrika

The official website of many fertility clinics carries slogans and pictures about the pleasures of motherhood and parenthood and how ART is the new hope for individuals/couples like them who are ‘infertile’ and how their ‘wait’ is finally over. As Sarojini (2014) points out, “infertility is first magnified as a serious, urgent and

traumatic impairment, and then ARTs are offered as the decidedly final solution for it.”(Nadimpally, 2014, p. 104). The same can be observed across the Facebook and Instagram pages of these clinics which glorify ART and present it as a miraculous hope and cure for infertility. Some of the advertisements include:

“Happiness is having a baby. Happiness is hearing the pitter-patter of little feet in your home. Team Nova IVF is there to support you in your journey to parenthood”

“Repeated IVF failures. Yet now a mother.”

“I can’t wait to meet the little bundle of joy who is half me and half the one I love”

“I’m hopeful it will be us one day.”

A few clinics even indulge in extreme marketing without any verified claims. A homepage of a fertility clinic website reads:

“Get your own biological child. We have a massive experience of 10,000+ Babies in last 20 years. We have - High success rate budget packages (for poor and middle class couple), Surrogacy (non-commercial) up to 99% success (last option)”

Another clinic in Hyderabad puts out an urgent alert about surrogacy on their official website for limited time offers. Highlighting the future dilemma regarding the ban on commercial surrogacy in India, it urges couples to see surrogacy as an option and act fast. It writes:

"Advised/Need to opt for ‘Surrogacy’ to have your own baby born:

So, any couple keen on going for a Surrogate Arrangement may plan it as expeditiously as possible to grab the opportunity lest you may miss the Bus... We got “three months” time to help you. As the Parliament referred it a Select Committee to review once again ...any couple in need of surrogacy....so hurry up & please inform your friends/relatives who need it.”

This constant reference to having one’s own biological child is embedded both in the cultural matrix of Indian society and its fertility market. While culture glorifies the continuity of the bloodline and family name, the market pressurises one to adhere to this normative definition and making of family, by providing an array of choices for fertility treatments. Personal observation during the field visits also corroborate how the idea of “own child”, “own blood” is circulated and internalised.

Ayesha's story from Hyderabad reflects this internalisation and obsession with the idea biological child. Ayesha (30 years) is married to Abdul (35 years) for the past 13 years. They have been diagnosed with female factor infertility and are undergoing fertility treatment for the past 9 years. While continuing with the treatment they have adopted Ayesha's sister's daughter 4 years back. That adoption was planned, wherein Ayesha's sister conceived with the intention to give that daughter to Ayesha, and Ayesha and Abdul paid for all the expenses related to pregnancy and delivery of the child. Ayesha, herself being an adopted daughter of her parents and facing issues in conception, considers herself incomplete and is undergoing treatment for a pregnancy. She says:

"I have adopted my sister's daughter 4 years back but I still feel incomplete. I want to experience pregnancy and have my own child. I am myself adopted but I want to have my own child. My sister's daughter is my daughter, still I feel the necessity to try for myself. My husband and mother-in-law are against the treatment and wants me to take care of my daughter. But I want my own child. I want to undergo treatment. We have undergone 2 IVFs but they were not successful. I want to try again and have my own kid" Ayesha, Hyderabad.

Ayesha's story highlights the complex understanding of the importance of the biological child and how deeply it is internalised among individuals. She herself being adopted is not happy and content with her adopted daughter. While she was probed about her discomfort with adoption and the stubbornness towards experiencing pregnancy despite the treatment taking a toll on her health, she refused to divulge her own experiences of her childhood.

The incessant attempts to continue one's treatment one procedure after another and to not give up, not only highlights the 'over' treatment practiced by the clinics but also points to the desperation of the couple who have been fed on the idea of 'hope' and 'biological child'. The need for a biological child becomes the sole purpose of their existence. Some respondents in the study echoed these ideas, where they considered having their own biological child as the major motive in their lives. When asked about considering adoption as an option, Shampa and Debjit from Kolkata unanimously reiterated:

"We are not considering adoption as an option now. We still have the time to undergo treatments. The doctors have assured us that there are no major

problems with both of us, so we are hopeful we will have our own child soon. We are not in the mental space to consider adoption now. We are totally focused on the treatment now, and have all the necessary changes in our lives for the same. She (Shampa) has left her job, and I am trying my best to support both of us, and moreover, I do not think that the need of adoption will arise.” Shampa and Debjit, Kolkata.

Shampa (35 years) and Debjit (29 years) are married for the past five years and undergoing fertility treatment for two years. They suffer from unexplained primary, couple infertility and are assured by the doctors of a successful pregnancy in the near future. Few respondents rejected the idea of adoption as they considered the availability of ART as a ‘hope’ to deliver a biological child, while some saw it as a last resort. With regard to adoption, there is an anxiety now that was not there before ART. Fieldwork in Hyderabad and Kolkata highlighted that anxiety about adoption works for them at two levels now: (i) the fear of making their own bloodline impure, and (ii) the regret of not completely trying the option of available medical interventions (ART) for a biological child. This combination of apprehension and guilt are reinforced and played upon by the fertility clinics. This is the basic trope through which the marketing of the biological child is done.

This idea is further magnified through the marketing of ‘manufactured hope’. Advertisements highlight infertility as the cause of incompleteness, guilt and fear (lack of one’s own biological child) in their life, and show ART as the only/final solution to overcome this lacuna. This unilateral pressure of overcoming infertility or childlessness through ART is detrimental to not only the health (both mental and physical) of the individual undergoing the treatment, but also the larger notion of one’s own self-worth, one’s body, identity and the idea of family. Interviews with treatment seeking individuals highlighted a few factors which influence the consumption of these services and the selection of a particular clinic. It is clear that advertisements play a pivotal role in decision making, in explaining why potential treatment seeking individuals choose a specific clinic. When asked how they came to know about a particular fertility clinic, Chandrima from Kolkata responded:

“I came to know about this clinic through newspaper advertisement. And then I asked people about the clinic. I came for initial consultation after hearing good reviews about this clinic and then spoke to patients who were undergoing

treatment here. Everyone praised the behaviour of the doctors here and I am also satisfied with their behaviour and how they handle each case.” Chandrima, Kolkata

Similarly, Prema from Hyderabad added:

“I came to know about this particular clinic through my brother. He came across this clinic in the local newspaper. They were conducting some camp in our area and from there I started my treatment with them.” Prema, Hyderabad

Along with advertisements, package deals and fertility camps, success rates play a very important role in influencing consumer choice. These success rates are either advertised in different print and electronic media (in most cases these rates are inflated and not verified) or through couples/individuals who have already availed infertility treatment services at a particular clinic and were successful (here successful means having a baby, specially a biological child).

Srija from Kolkata elaborates:

“I came to know about this clinic from my husband’s colleague. He consulted this clinic for their pregnancy and they got a positive result. So they suggested us to visit this clinic. After coming to this clinic, I got to know that many of the people I know both in my office and neighbourhood have taken treatment here and were successful.” Srija, Kolkata

With these aggressive marketing strategies, the idea of the ‘biological child’ has gained currency to such an extent that alternate family forming options like adoption, has taken a backseat. Irrespective of the clinic and struggles of treatment options, the plausibility to have their own child acts as the only hope and motivating factor for the couples. The doctors also play a decisive role in convincing treatment seeking individuals to initiate and continue treatment and glorify the probability of having a biological child with the help of ART.

D2H comments:

“We do not force anyone to undergo any treatment, but when they come to discuss the available options with us we tell them the facts. With ART they can have a biological connection with the child, with adoption they will not have to undergo the financial, physical and mental pain of ART but will have a baby

with unknown bloodline. If they think they are ready to undergo any of the two options, we support them; we just tell them all the pros and cons.” D2H, Hyderabad.

In recent years, the marketing strategies are not only restricted to advertisement and achievement, but also includes other related offers - wellness packages, fertility yoga to enhance fertility and implantation success rate after embryo transfer, fertility diet and nutrition, fertility acupuncture, fertility ayurveda, fertility sharing circles and fertility counseling (refer Appendix A, Fig. 6, 7). Focusing on lifestyle changes to augment their success rates is now getting attention. Infertility sharing discussion groups, online networks with live consultation with different fertility specialists across the country and fertility meets are also being promoted in a big way among the more affluent urban sections of society. All this marketing shows how successfully the ‘idea’ of a biological child has captured the imagination of most ‘infertile couples’, even though the actual reality of having a child evades a large number.

4.5. Marketing of ‘Hope’

ART is better understood as ‘hope technology’ as it promises ‘hope’ more than a successful outcome, which makes it a more desirable option, even when it is expected to fail (Franklin, 1997, p. 192). The marketing strategies of the clinics inflate the idea of ‘hope’ and sell the belief in the treatment that ‘it does work’. Treatments are portrayed in overwhelming positive terms offering hope to desperate ‘patients’, without providing little to no evidence about the efficacy, risks, time consumed, and costs of the treatments that are offered. It promises a hopeful future without acknowledging the fact that the techniques fails for majority. This can be better understood by reading the taglines of select few clinics:

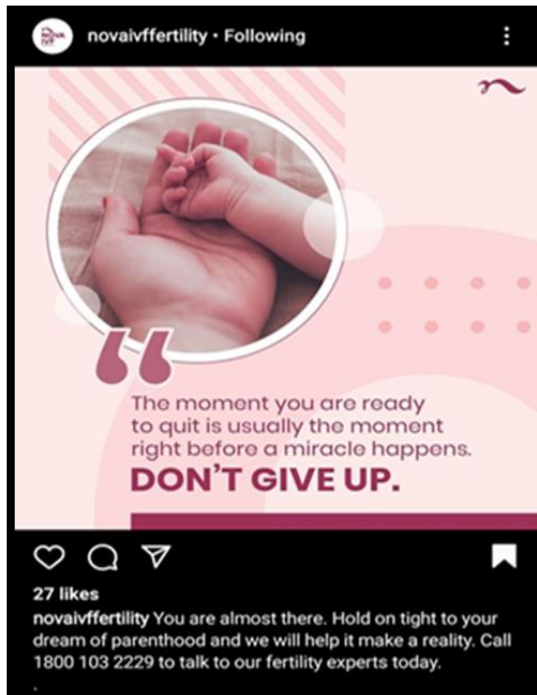
“Last resort for all the lost hopes.” (Padmaja fertility, Hyderabad)

“We turn your HOPE into HAPPINESS” (Mukherjee fertility centre, Kolkata)

These slogans are found across multiple platforms like the clinic’s website page, newspapers, advertisement on social media platforms (refer Fig. 20), roadside advertisement hoardings, and pamphlets. This marketing of hope is achieved through

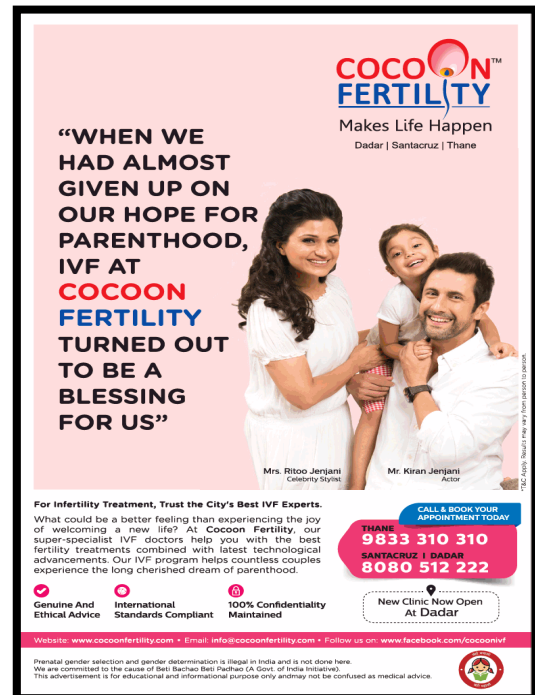
“various framing techniques, specific use of language, visual imagery, and weblinks” (Petersen & Seear, 2011, p. 331). They are accompanied with images of a cheerful, smiling baby with a woman or a smiling couple (refer: Fig. 21).

Fig. 20: Advertisement of NOVAIVI fertility



Source: Instagram.

Fig. 30: Example of a smiling couple advertising for a fertility clinic



Source: Google photos

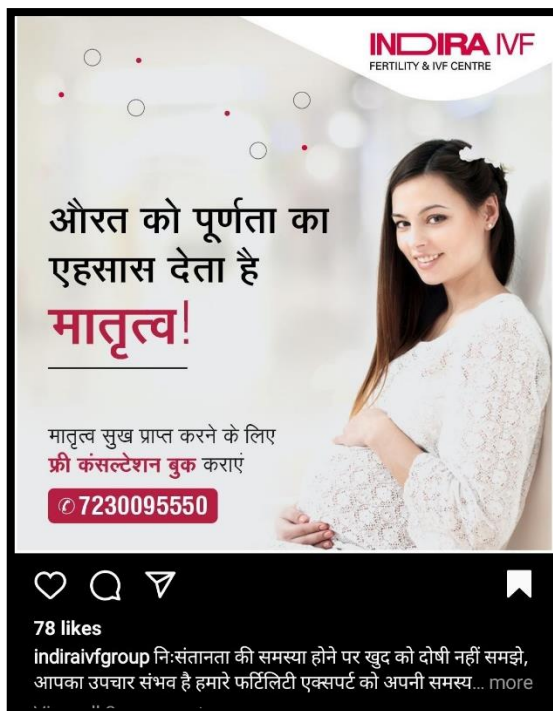
These happy pictures erase the pain, physical stress, despair, anxiety, psychological, financial stress which accompanies fertility treatment. The visuals project a journey which is happy and devoid of any pain, not acknowledging the number of failures which one undergoes. Since, infertility is still equated as a female reproductive issue and a maternal loss, most of the advertisements emphasise the loss of motherhood which is a result of infertility. Therefore, most often these advertisements and marketing strategies are targeted at women, highlighting the maternal loss which comes along with infertility and how they are deprived of the joys of motherhood. Men missing the joy of fatherhood are rarely sighted. Alongside, the treatment providers or the doctors “are depicted as heroes who are on a selfless mission to restore hope to

those who have none” (Petersen & Seear, 2011, p. 336). A corporate clinic which has branches across the country advertises:

Over the years, the doctors at NOVA IVI fertility have treated many patients with repeated IVF failures and helped them become pregnant.” Nova IVI fertility.

The same can be found across fertility clinics (refer: Fig. 22)³⁶

Fig. 22: Advertisement of a fertility clinic which says ‘motherhood completes womanhood’



Source: Instagram

While the selling of ARTs is linked to the idea of selling ‘hope’, the consumption of these technologies is based on the idea of both ‘hope’ and ‘fear’- fear of anticipatory regret, fear of losing the *only chance* to have a biological child, fear of taunts from family and relatives and fear of losing their own peace of mind. These technologies

³⁶ For more images refer Appendix A, Fig. 17 - 19

make the couple suffer not only from regret, but also anticipatory regret. What if they would have got a successful result if they persisted long enough? They get trapped in a vicious cycle where they cannot get off or stop despite repeated failures, as they continue to cling on to the possibility of having a biological child. The clinics create hype through their advertisements that claim these technologies do result in babies. A reading of these advertisements of different fertility clinics in the country and in Hyderabad and Kolkata in particular, clearly reveals the ‘manufacturing of hope’ with claims of high success rates.

An advertisement pamphlet of one clinic reads:

“Are continuous IUI & IVF failures, making you lose hope? Evaluate your fertility status today.”

It was interesting to find that this particular clinic mentioned male infertility and also targeted male treatment seeking individuals. It wrote:

“Proud to introduce for the first time in India. State of the art microscope with 40x magnification. A boon for azoospermic men who can now experience fatherhood by using the high end novel technique of micro TESE with the 40x magnification.”

As mentioned earlier, the slogans on pamphlets, advertisements and accompanying photographs, try to invoke extreme emotions of despair (of not having a child) and hope (of ART helping to have a child). As highlighted by Petersen and Seear (2011) *“images of pristine and hygienic clinics and offices; photographs of medical equipment accompanied by language describing these enterprises as “world class,” “state of the art,” at the forefront of “cutting edge” science and as world “leaders” or “pioneers;... and references to the qualifications of experts and to their previous achievements or honors and to prestigious individuals under whom they trained or with whom they are associated”* (Petersen & Seear, 2011, p. 340) are nothing but marketing strategies. They are sanitised of the entire trauma, difficulty which one goes through in travelling the path from despair to hope. It gives an impression as if it is a one step process, wherein their life changes in one snap. The continuous re-invoking of the idea that they are missing something in their life, they are childless prevents these individuals to consider alternate options. They are flooded with excessive awareness and so much information by everyone around them. This makes them go on a spree to ‘normalise’ their situation,

to correct their fertility issue, to be complete. As they do not want to stand out in the society because of their inability to have a biological child. In order to be acceptable by their family, friends and the larger society, they consider fertility treatment as their only resort to gain acceptance.

The advertising and marketing of hope is not only limited to - make people aware of these available fertility treatments, make them consider it as an option and to initiate these treatments, but also to make them continue with such treatments for a considerable amount of time. This hope of a biological child keeps couples persisting with the treatment in spite of physiological and financial hardship, as for them, the idea of 'giving up' is filled with anxiety and doubt, and is hence, not an option. This persistence and hope, is further accelerated if they achieve any success in the early stages of treatment. Achievement at one stage compels them to move to the next. This is highlighted in the stories of Nitu and Sanjay, and Sudha and Rajesh.

Nitu is confident about her prospects, and confides:

*"It is two months since I have started my treatment again. I am looking forward to a healthy pregnancy and I am praying that I have a boy this time, and then my family will be complete. I already have a four year old girl. No one in my family knows that we are undergoing treatment; my husband does not want the family members to know and he is also against adoption. During my earlier pregnancy my follicles were small and my husband had some issues. That time we underwent IVF and my fourth cycle was successful. I am sure this time also it will be successful - may be not the first cycle but might be the next."*Nitu, Hyderabad

Nitu (34 years) is married to Sanjay (38 years) for nine years. They have a four year old daughter (with the help of IVF) and they have been trying for a second child for the past two years. It has only been two months that they have started their treatment again. She is against adoption as she knows and is confident that with the help of technology, she can have her own biological child. She and her husband are secretive about their treatment; they do not want family members or friends to know that they are undergoing treatment, as they do not want to entertain questions and suggestions from others. She came to this particular clinic because she got a positive result the last time.

On similar lines, Sudha and Rajesh narrate their story—

“It has been one month since I have resumed treatment for IUI. My first child (boy) was also born here after the second IUI. This time I am less stressed and mentally prepared because I know the drill. I know I will be successful this time also, because last time I got a positive result in this clinic only. My family knows that we are undergoing treatment and they are against adoption because they were very happy after my first child. So, they want us to try again.” Sudha, Hyderabad

Sudha (29 years) is married to Rajesh (33years) for the past eight years. She suffers from female factor infertility - diagnosed with Polycystic Ovarian Syndrome (PCOS) and small follicles. They have a four year old son and are looking forward to another baby. Their first child was conceived after two successful IUIs and they have again resumed their treatment with IUI. At the time of the interview, they were undergoing treatment for first IUI. While Sudha wants to adopt a child as she already has a child of her own, her husband is against the idea. He thinks their family and society will not accept an adopted child, as they already have a biological child. On her husband's insistence they have resumed treatment.

This dilemma of 'hope' reflects what Sarah Franklin (1997) articulates – *“it is the feeling of ‘having to try’ which creates the feeling of ‘having to choose’ IVF”* (Franklin, 1997, p. 171). It is interesting to understand the nature of ART in this context, which makes it an inevitable option. As Franklin (1997) rightly puts it, *“in most cases when one opts for IVF (or any other ARTs), it is not even a ‘decision’ or a ‘choice’ at all, “but more of an inevitability. If there was a chance, it had to be taken. If there was hope, it had to be pursued.”* (Franklin, 1997, p. 175). This resonated in the response of Nitu, Sudha and Debjani. Debjani, when asked whether they ever considered adoption as a plausible option. She confessed:

“We want to try this (IVF) first. Technology has advanced and now we have so many options, it is normal to try all these. We search online about the success rate, people who are in our condition (hinting at age and childlessness) what are they doing. We need to be in this loop and be aware. And because of our profession we automatically get updated, and there are people who themselves come up to us and give us information. You tell me is it not normal to try all this. I will be a fool if we don't try all this. If we do not try, we will be questioned.” Debjani, Kolkata.

Debjani (42years) is married to Niladri (46 years) for fifteen years. By profession both of them are teachers. Three years back they lost their thirteen years old daughter to encephalitis. They have been trying to conceive again for the past two years, without any positive result. At the time of the interview they were undergoing IVF treatment, and were even considering surrogacy as their last option.

Debjani and Niladri's story is a snapshot of a larger picture which makes one wonder why enough never seems to be enough in fertility treatment seeking stories. The desperation to have a child invariably indicates the cultural importance placed on having a biological child – it not only assures the continuity of bloodline, genetic kinship but also helps one to prove their individual completeness as a woman or a man, and the success of a marital union. The transformation of a woman or a man to become a mother and father (here biological) is deemed to be of utmost importance in one's own lifetime.

Technology has transformed the treatment of infertility from a natural condition to a medical problem, which needs medical interventions (in most cases). Sandelowski (1991) argues that these technologies have an inherent quality of never being enough. One fails to understand the fine line between trying enough and trying too much. The easy availability and accessibility of these conceptive technologies, creates an environment where couples/individuals diagnosed with infertility are obliged/forced to try. As Sandelowski writes, "*Infertile couples today can suffer the opprobrium of failure, not just because they fail to reproduce but also because they fail to try to reproduce*" (Beck-Gernsheim 1989) (cited in Sandelowski M. , 1991, p. 32).

This new pressure (with the coming of ARTs) among the fertility treatment seeking individuals in Hyderabad and Kolkata was felt strongly – in some cases, they expressed it explicitly and in others, they implied indirectly. Today they might have an array of choice about the type of treatment, but they lack the choice to decide whether they want to initiate the treatment, continue with it or even stop the treatment. It appears these decisions are all taken for granted and a couple's agency in decision making is lost or reduced. In most cases, ARTs are projected as 'choice', but in the everyday life it is more of a 'paradox of choice', because on the one hand, one makes the choice to opt for ARTs and on the other, it is described as an inevitable, predetermined choice, which one had to make.

In some cases, individuals/couples opt for ARTs not only for a biological child, but also to resolve their sense of loss of self-worth, which was undermined with the sudden diagnosis of infertility. Continuing the fear of anticipatory regret, treatment seeking individuals might also opt for ARTs to get a 'peace of mind'. While they continue their struggle to balance hope and their preparedness for failure, they are always found to be waiting for a miracle, thinking and hoping they will be one of the successful couples that they have read about or seen in the clinic brochures or advertisements. For them, once they board the roller coaster ride of fertility treatment, they find it impossible to get off. While they are aware of the uncertainty of ARTs itself, they are hopeful that they will have a successful result in the near future. In this dichotomy of loss/failure and hope that defines their life; their lifeline is clinging on to hope as promised by ARTs. This conflict pushes them to a situation where they find themselves to be at a 'double-loss'. While they are glad, they are trying the available ART options to complete their dream of a 'complete family', on the other hand, the long drawn fertility treatment is becoming an expensive investment (both financially and physically), without any returns.

One can discern this tension in Alka's desperate and helpless questioning of herself. Alka (28 years) is married to Santosh (36 years) for the past six years. They have been trying for a baby for the last four years without any result. They suffer from primary, couple infertility. Just before the interview she came to know that her second IVF has failed because the embryo did not get implanted. She was devastated as she was hopeful about her second IVF, as she was told (by the doctors) that her chances of getting pregnant were higher than her first IVF cycle. In her anguish, she questioned:

"You tell me what I am getting out of it (IVF)? The doctor does not know what is wrong but my treatments are failing. I am doing whatever could be done. We are in huge debt. I am not sure whether I can afford this treatment further. I do not know whether I want to continue it further or not. Ultimately after doing everything, I am still at where I was before the treatment (meaning childless). Rather I am in a worst state. I feel broken and cheated." Alka, Kolkata.

Although the treatment seeking individuals pin all their hopes on ARTs, they are also aware that they might not be successful. For some individuals/ couples, opting for ARTs is a way to get a closure to their quest for conception and a way to move on in life. While this idea of closure is debatable as it is true of only a small number, most

continue with treatment in the hope that a miracle will happen. Most respondents across Hyderabad and Kolkata, revealed a sense of denial in acknowledging and accepting that their treatment has failed. From the field data it is clear that most couples spend an average of four years on fertility treatment, with the maximum being fifteen years. This speaks of the reluctance to accept a situation where though they see their hopes shattered a number of times, they continue with the treatment cycles one after another, clinging on to the 'hope' of having a biological child.

4.6. Living with the Financial Burden of ART

In India and other developing nations, majority of the reproductive policies and government schemes are focused on population control programmes, contraception and fertility reduction. This has affected the location of fertility treatment services, which are mostly concentrated in the private sector, with little or no presence in the public sector. As a result, most couples seeking fertility treatment are forced to go to the private clinics that are driven by market demands and charge a high price. Also, fertility treatment is long drawn, can take years and in some cases finally be a failure. This pushes up the cost of treatment for a couple and usually runs into lakhs of rupees for most. Further, there is no regulation or control by the Government on monitoring the pricing of these services. Since fertility treatment majorly deals with a desire for a biological child, and is not related to survival (ESHRE Capri Workshop Group, 2015), the sky rocketing pricing of these services automatically filters a large section of society who cannot afford such treatment. It is obvious that till fertility treatment is dominated by the private sector, it will continue to be out of reach to the poor. For fertility treatment to be more egalitarian and available to all sections of society, the public health sector has to step in to offer these facilities at minimal cost.

ARTs are invariably expensive across the globe, while there have been concerns over the cost of these technologies, it was never designed to be accessible to the masses. It is an optional line of treatment. However, in societies which are deeply patriarchal and pro-natalist like India, fertility treatment services are considered a boon for couples (who can afford it), who are struggling to have a biological child and are victims of societal discrimination because of their infertility. A doctor in Kolkata (D4K) comments:

“See any form of ART treatment is expensive in comparison to other health treatments one might undergo. I agree it is expensive and maximum of our clients struggle to afford that treatment. But as I always tell my clients – do not look at the cost in isolation. Always compare it to what you will get in return. The 5-6 lakhs which you pay for one cycle of IVF is nothing compared to the baby you will have. You will have your own biological child and the joy of being a parent is way beyond the financial difficulty which you might have to face during the treatment.” D4K, Kolkata.

The providers of ART which includes the doctors, clinics, pharmaceutical companies are well aware of the financial burden of ART, but they justify it in terms of investment and returns. The birthing of a baby at the end of the treatment is placed at a value which cannot be evaluated and compensated for. They also rationalise these sky-rocketing expenses for ART as it involves the birthing of a new human being. While there is an idea of ‘choice’ associated with ART, in societies like ours and even in the global north, the availability of ART brings pressure and a compulsion to try these services at least once. In most cases, one might enter with an idea of trying one cycle, but gets trapped in the vicious cycle of ART with cycles one after another, all based on the selling of ‘hope’. As Jaya from Hyderabad says in a hopeful voice:

“I will start my 10th IVF next week. I am a bit exhausted but I want to try for some time more. So many people are getting positive result, so I am sure we will also get. It’s just that it is taking a bit longer for us. But I feel this time we will be successful. I hope my prayers will be answered finally.” Jaya, Hyderabad.

Although the value associated with fertility treatment cannot be captured easily, as it deals with the birth of a new human being, the struggle which couples undergo to finance their treatments is painstaking and often heartbreaking. In some cases, if initially they do manage to initiate treatment, later, it becomes difficult for them to continue and sustain the treatment as it is a long-drawn process. There are instances where couples had to sell off all their assets including gold and land and invest all their life savings to finance their fertility treatment, with the hope of having a biological child of their own. While some are still managing to continue their treatment with loans and help from relatives and friends, few have quit the treatment cycle because of increasing debts which started impacting their everyday life.

Abbas from Hyderabad says:

“We are continuing infertility treatment for almost ten years now. It has been a challenge for us. We have sold all our gold, land and have lot of debts to repay people. We are deep down in debts, so we have asked her family to help us through this.” Abbas (Nazia’s husband), Hyderabad.

On the other hand, Preethi from Hyderabad in a dejected voice cries:

“We tried everything. As you know after my second marriage we tried surrogacy, but that also failed. We have quit treatment as of now because we cannot afford it anymore. For surrogacy we took a lot of loans and now we are in deep debt. Once we repay that then only we can think about treatment. Now I have left everything to god.” Preethi, Hyderabad.

Preethi (45 years) was the only respondent who opted for surrogacy after multiple failed IUI and IVF. This is her second marriage with Anand (47 years) who was a widower. She was diagnosed with adenomyosis³⁷, which was caused as a side effect of the local herbal powder which her first in-laws forced her to take during her first pregnancy to induce an abortion. In the follow up interview, Preethi narrated the difficult times they faced mentally and financially after the surrogacy failed. Preethi and her second husband have quit the treatment but are still hopeful for a miracle.

In India the practice of dowry has been a long tradition. Over the years the pattern of dowry practices might have changed but the practice still continues to exist in both rural and urban areas across the country. While there are cases of explicit dowry practices where dowry is openly demanded, (negotiated and bargained) by the groom’s family during a marriage, there are also cases of implicit practices which takes the form of informal dowry. Interestingly, few couples interviewed in Hyderabad mentioned about a new strategy to finance their fertility treatment. Specific to reproductive health and infertility, fieldwork in Kolkata and Hyderabad has pointed that the cost of fertility treatment services has become one of the new forms of dowry practices in this 21st

³⁷ Adenomyosis is a condition of the female reproductive system, where the tissue from the lining of the uterus grows into the uterine wall, enlarging the uterus. This extra tissue can cause the uterus to double or triple in size, leading to abnormal uterine bleeding and painful periods, and can cause infertility. (Source: <https://my.clevelandclinic.org/health/diseases/14167-adenomyosis>) last accessed on 10.10.2021.

century. This practice was specifically found in Hyderabad. Respondents in Hyderabad mentioned about a cultural practice across class, caste, religion wherein the expense for the first pregnancy and delivery of the girl is paid by the girl's family. It is considered to be a cultural practice which has become accepted across generations. Any deviation from this practice is stigmatised and criticised by the larger society.

While few families readily follow this custom, others who cannot afford or are reluctant to pay the medical expenses for their daughter's first child are demanded to pay a huge sum of money directly as a part of the dowry. This dowry payment is not only restricted during the marriage, but extends to any life events (like child-birth, husband's loss of job, purchase of a house, birthday of the child and so on and so forth) in the future. It is considered a moral responsibility and duty of the girl's family to pay for such events. Therefore, this medical expense for the first child involving fertility treatment is nothing but an indirect form of dowry, which is commonly demanded, accepted and followed by the families. In such a scenario, if the couple is diagnosed with infertility (in some cases) the girl's parents are forced to pay not only for the delivery of the child but also all the medical expenses related to fertility treatment services. 11 out of 40 respondents in Hyderabad admitted to taking help from the wife's family for fertility treatment without any intention of repayment, but rather, considering it as the moral and traditional responsibility of the wife's family. In Kolkata, 8 respondents out of 35 spoke about taking financial help from the wife's family as a form of loan, with the intention of repaying it in the near future.

Samyukta from Hyderabad says:

"My husband is uncooperative and my mother-in-law cannot stand me. They want me and my family to resolve this infertility issue and have a baby as early as we can. They clearly mentioned that it is the tradition that my family has to pay for all this. My parents cannot afford my treatment; they are farmers in my village. So, my brother has agreed to pay for my treatment and he accompanies me for all the visits here (to the clinic). I cannot object either because this is normal, everyone does that and I myself cannot pay for it." Samyukta, Hyderabad.

Samyukta (28 years) is married to Abhinav (31 years) for the past thirteen years. They have been diagnosed with primary, female infertility where Samyukta suffers from

tubal blockage and cervical insufficiency.³⁸ They hail from a lower middle class family where Abhinav is a small farmer and Samyukta works as a cleaning assistant at a local food joint. Since Samyukta's brother is financing her treatment, he has changed his job for a better pay but stays in Hyderabad away from his own family.

Similarly, Pooja says:

"My husband cannot afford the cost of treatment here. So we have asked my family to help us with it. He is trying his best but my parents should also pay. All the parents pay here, that is only normal here. That is the custom here." Pooja, Hyderabad.

In one instance, one respondent also mentioned how her husband agreed to pay for their fertility treatment services after a lot of convincing. Initially her husband refused to pay for their treatment and demanded money from the girl's family as Suzan was diagnosed with female infertility. The girl's family refused to pay such a huge amount as they cannot afford. Later when he was diagnosed with low sperm motility, her husband made a deal that he will partially pay for the treatment and the girl's family should bear half the expenses till the delivery. She believes, her husband agreed after knowing that he can claim a certain amount through his company's health insurance policy, and therefore he collects all the bills of medical expenses (which the girl's family is paying) so that he can claim his money. She is well aware of her husband's actions, but finds herself in a helpless position as she had to quit her job because of the treatment schedule and can neither help herself nor can she indirectly help her own parents. Suzan says:

"I know my husband is partially paying for the treatment because he has also been diagnosed with some problem. If it were only my issue, he would not have agreed to pay a single penny. The custom here is that the girl's family should pay all the delivery expenses of the first child, but he swapped it with my parents because delivery is covered under medical insurance not infertility treatment. So my parents are also partially contributing for the treatment" Suzan, Hyderabad.

³⁸ Cervical insufficiency or cervical incompetence is a condition where either the cervix is too small or is much dilated. This can be caused by previous trauma to the cervix area, cervical rupture, damage to the cervix and many other conditions. It can create miscarriage, pre mature birth and other complications. (source: <https://www.healthline.com/health/pregnancy/short-cervix#complications>) accessed on 13.05.2021.

The scenario in Kolkata was quite different compared to Hyderabad in relation to financing of fertility treatment services. None of the respondents mentioned about any such practice as was found in Hyderabad. In Kolkata, respondents either financed their treatment themselves or took loans and financial support from their friends and family. Few of the respondents in Kolkata mentioned that an availability of easy monthly installments (EMI) options at the clinic would be of great help for them. However, like most clinics, the research site also did not have any EMI options, and accepted bulk payments in two to three installments, depending on the line of treatment. One of the respondents in Kolkata said:

“If the expenses were a bit low and less expensive, then it would have been better for us. Moreover, EMI would also help us a lot because it is difficult for us to pay such huge amounts in one go.” Riyaz, Kolkata.

Although Riyaz and Jasmin hail from an upper middle class family they were finding it difficult to finance their infertility treatment. Invasive medical services for male infertility are generally more expensive than procedures required treating female infertility. ICSI in general is a more expensive line of treatment³⁹ in comparison to IUI⁴⁰ or IVF⁴¹, and is the only treatment option for men suffering with low sperm count and low sperm motility.

5.7. Summary

This chapter moves from the mapping of infertility and the spatial understanding of fertility clinics in Hyderabad and Kolkata to analyse the market of the fertility industry. The different stakeholders and their ways of operation are understood with the help of secondary resources and primary data collected through fieldwork. The economics behind the fertility industry is an important feature to identify and understand, in order to get a sense of the functioning of the clinics.

³⁹ At the clinic in Kolkata a package of one cycle of ICSI costs around Rs. 2-2.5 lakhs which excludes multiple scans, medicine cost, and different diagnostic tests throughout the treatment. It only includes the procedure cost and doctor consultation charges.

⁴⁰ At the clinic in Kolkata one cycle of IUI costs around Rs. 2000 only for the procedure and doctor consultation with 5-6 scans.

⁴¹ At the clinic in Kolkata, an IVF package costs around Rs. 1-1.5 lakhs which includes consultation, embryo transfer, and multiple scans throughout the treatment.

For prices in Hyderabad refer Appendix C

At first, the chapter makes an attempt to broadly identify the three models of fertility clinics found in Hyderabad and Kolkata, their rapid mushrooming and how they broadly function. The chapter then moves forward to understand the commodification of infertility through the narratives of the field respondents and focuses on issues like marketing and selling of ART. It provides a critical reading of the medicalisation of infertility, the rapid growth of the fertility industry, its marketing strategies and how it operates on the ground. While research sites in Hyderabad and Kolkata display a few differences that may be linked to their cultural context (which are elaborated in the following chapter), it is the similarities between them and broad trends which have been largely discussed in this chapter. The fertility industry seems to have standardised and leveled out differences across regions, in the way it functions and markets itself.

The larger economics of the fertility market is better understood from the providers, i.e., the doctors and the clinics perspective than the patients who are using or consuming these available options. The idea of hope plays an important role in this strategy, where hope is not only manufactured but also marketed and consumed through stereotypical emotional and cultural tropes. It is believed in fertility services, that hope meets science and the driving force is the desperate need of the treatment seeking individuals for their own biological child. This chapter elaborates the larger debates and regional picture regarding the economics of infertility and/or reproductive loss and its treatment. Since most of the societies are pro-natalist, patriarchal and over-medicalised over a period of time, it has enabled the expansion and consumption of ART.

Another component which has gained recent popularity in the global economy is “femtech”. Femtech companies have added a new dimension to the fertility industry, enabling digitisation of female health issues. With the growing popularity and acceptance of femtech in certain upper class sections of society, femtech becomes an important site of research in understanding the fertility industry and its market. In India and specific to the research sites, while it has not expanded considerably one can assume that in the near future it will have a larger pool of users and will add a new perspective to infertility research. Although concerns related to the privacy of data regarding femtech are flagged in the chapter, it requires a larger group of respondents to make any conclusive argument.

Furthermore, the chapter critically reviews the strategies involved in marketing the idea of a biological child and parenthood. Since children are highly valued in the Indian

society, and the idea of kinship, lineage and pure/impure bloodline are still dominant in our everyday lives – it has paved the way for the expansion of fertility treatment industry with its promises of fulfilling the wish of having one's own biological child. The advertisements, brochures, slogans, websites of these fertility clinics provide insights into its functioning and the strategies deployed. Articulating the importance of a biological child and the incompleteness of family life otherwise becomes the key register to attract consumers. The idea of regret, repentance and anticipatory guilt plays an important role in the acceptance of ARTs by treatment seeking individuals. The clinics not only emphasise that they can assist in bypassing fertility issues, but also project themselves as the only savior for the infertile individuals.

This marketing of the idea of a biological child and selling the dream of parenthood is achieved with the marketing of “hope”. Hope plays a pivotal role in the overall functioning and success of the fertility industry. The providers of these technologies invoke the idea of hope – hope to have a biological child, hope to complete a family, hope to overcome infertility and achieve parenthood - to reach the target audience. Since, infertility and/or reproductive loss can be understood as a life crisis, the individuals become vulnerable, desperate and at that very moment ART appears as the only beacon of Hope and they get blinded by its lofty promises of success rates, happy ending, and positive stories (the repeated failures and high costs are sanitised from this ‘selling of hope’). The manufacturing of hope through different marketing gimmicks and its marketisation are the key factors behind the success of the fertility industry.

In conclusion, the chapter highlights the burden of financial cost which these fertility treatments bring upon the treatment seeking individuals. Since the fertility industry is majorly located in the private sector, the costs of the services are not subsidised or regularised, but are rather arbitrary and vary from clinic to clinic. The high cost of treatment which spreads over a considerable period of time (minimum 2 years) pushes treatment seeking individuals into debts and a financial crisis situation, wherein people end up selling gold, land and their other life-savings, in exchange of the hope which these technologies promise. These hope technologies or ART have led to the reinvention of dowry practices in India in general and in Hyderabad specifically, where the cost of fertility treatment is considered as a part of dowry of the couple (irrespective of male or female factor infertility), to pay for the birth of the first child. It has not only led to the exploitation of the girl's family but also led to other unfavourable means to

navigate through infertility and its expensive treatment. While individuals have found ways to negotiate the high financial cost of ART, they are still struggling to steer through the physical and mental cost, which they undergo in fertility treatment. The following chapter aims to understand the life-worlds of fertility treatment seeking individuals, through their daily experience of ‘living infertility’ (Bharadwaj, 2016). Their everyday experiences with infertility and/or reproductive loss and how it has impacted their understanding of themselves and the world around them forms the core of the next chapter.

CHAPTER 5

Living with Infertility: Everyday Experiences of Reproductive ‘Loss’ and ‘Hope’

Changing notions of infertility and the growing demand for treatment has not only influenced the market but also the socio-cultural understanding of infertility, reproductive loss and the ways to overcome it. The larger tropes of medicalisation, commercialisation, and the macro-economic aspect of reproductive loss have been discussed in the previous chapter. This chapter documents the everyday experiences of those diagnosed with infertility, have had reproductive loss and undergoing fertility treatment. It highlights their daily struggles at multiple levels and their changing social relationships. These individuals are constantly making efforts to reconcile with their medical condition and the consequences of treatment. They have suddenly found themselves in a situation, where they are publicly judged and advised on a most private aspect of their lives i.e. birthing a child.

It is very common and natural to consider one-self-fertile until proven otherwise, and one normally does not consider the probability of being infertile, till their fertility has been put to test. Therefore, the realisation of not being able to conceive, makes them ill-prepared to cope and desperate to prove their fertility. Their life-world, where having a child is considered so important for their happiness, undergoes a sudden traumatic change. This not only affects their individual personality – their idea of self, but also other social relationships and their social outlook. Having a biological child becomes their only goal and purpose in life, where their career and other life-goals lose importance.

Many studies have proved that the inability to conceive a child or experiences of reproductive loss induces stress not only in the individual but also in the couple (Menning, 1980). As individuals, they suffer from stress and anxiety irrespective of them being diagnosed with infertility or not, it also brings their marriage under pressure, with their relationship being tested. In this context, Arthur Greil’s (1997) understanding of infertility becomes very important and relevant where he points out that psychiatric symptom can either be the cause of infertility or the consequences of it,

or both. One must understand the difference between the stress caused by infertility and the stress caused by infertility treatment itself. An attempt must be made to clearly differentiate the two (Greil, 1997).

Similarly, Chen et al (2004) conducted a study at a particular clinic in Taipei, Taiwan to understand the psychological impact on women undergoing fertility treatment. They found that depressive and anxiety disorders were highly prevalent among women who visited an assisted reproduction clinic for a new course of the treatment. In their sample, 40.2% have a psychiatric disorder in which generalised anxiety disorder was the most frequent diagnosis (23.2%), followed by major depression (17.0%) and dysthymia disorder (9.8%) (Chen, Chang, Tsai, & Juang, 2004). Another study, tried to determine the prevalence of psychiatric disorders in infertile women and men undergoing IVF treatment at a particular clinic in Sweden. It concluded that psychiatric disorder was present in 30.8% of females and 10.2% of males in their sample. Major depression was the most common disorder, prevalent in 10.9% of females and 5.1% of males, anxiety disorder was found in 14.8% of females and 4.9% of males. (Volgsten, Svanberg, Ekselius, Lundkvist, & Sundstrom Poromaa, 2008).

For individuals, reproductive loss and/or infertility become a crisis situation, which invariably causes psychological stress. Both, the condition of infertility/reproductive loss and the attempts to overcome it, i.e. seeking medical interventions is stressful, and has multiple consequences. Many studies have dealt with the emotional consequences of infertility (Bhatti, Fikree and Khan 1999; Fledderjohann 2012) and the gender difference in distress levels (Greil 1997; Malin, et al. 2001; Greil, McQuillan, et al. 2011; Greil, Shreffler, et al. 2011; Johnson and Fledderjohann 2012). In this chapter an attempt has been made to show the everyday experiences of individuals of ‘living infertility’⁴², through select registers that emerged from the field interviews. The following sections document the major recurring themes that were voiced by the interviewees’, as part of their everyday experiences of mediating, negotiating and living infertility and/or reproductive loss. This chapter deals with personal accounts and makes an effort to depict the ‘life-worlds’ of the respondents/participants, and will portray their narratives through their voices. Their stories reflect not only struggle, loss and failure but also hope, desperation and desire.

⁴² Refer Aditya Bharadwaj, 2016, p. 32.

5.1. Living with Stigma

Medicalisation of health has changed the way we see our bodies and health in our everyday life. In the last few decades, infertility has also become a subject of over-medicalisation. Earlier, infertility and childlessness was accepted as one's own fate or adoption was seen as an option. But now with the rapid growth of the fertility industry spearheaded by the pharmaceutical companies and the medical establishment, infertility is diagnosed as a disease that requires expensive medical treatment. It is interesting to note that the available fertility treatment options are not actually a cure to infertility which will reverse the condition, but a way to bypass the problem and create ways to fertility.

Since most cultures are pro-natalist in nature which puts a huge value on babies and the continuation of kinship line, any deviations from the expected social role is not accepted easily and is subjected to criticism and judgment. This makes the experience of infertility very distressing for individuals and couples, where stigma plays a very important role in the overall infertility experience. Individuals diagnosed with infertility, or have had reproductive loss are subjected to stigma at multiple levels- from their immediate family members, to extended family, neighbours, colleagues and even random strangers. This prevalent stigmatisation and humiliation facilitates the entry of the fertility treatment industry, to sell the idea of 'hope' and expand its market among the infertile couples and individuals. Marketing strategies harp on these painful experiences and victimisation, projecting them as a tool to reverse their current painful life experiences and provide them with the joy of parenthood.

In this respect, Erving Goffman's theory of stigma has been most widely used and also critiqued to understand stigma associated with infertility (See Whiteford & Gonzalez, 1995; Bharadwaj, 2016; Riessman, 2000). For Goffman, there are three conditions from which stigma might germinate – physical deformity, individual character deformity, or deviation from group identity (Goffman, 1963). Among scholars, infertility has been categorised into all the three classifications of stigma as proposed by Goffman. While, Charlene E. Miall (1985) suggests the category of stigma stemming from physical deformity can be closely associated with infertility (Miall, 1985); Whiteford and Gonzalez (1995) associate this stigma from infertility with the deviation from group identity (Whiteford & Gonzalez, 1995). Furthermore, Robert Scott's (1978) argument about physical deformity and stigma, rightly fits in understanding infertility, where he

says, stigma carries “a series of moral imputations about character and personality...the fact that...stigma leads [non-affected people] to regard [the affected] as their moral inferiors, psychological, moral and emotional inferiors” (Scott, 1978, p. 385) (cited in Whiteford and Gonzalez, 1995, p. 30). The stigma of infertility extends to the entire social identity of an individual, where their inability to conceive becomes an identity marker. Therefore, Goffman’s theory of stigma becomes the umbrella theorisation in understanding infertility.

Fieldwork in both Kolkata and Hyderabad pointed out two categories of stigma as proposed by Goffman - stigma arising out of physical deformity and deviation from group identity. The field responses highlighted that stigma is the dominant trope which effected every respondent interviewed in some form or the other. As Navya points out:

“You know after marriage, everyone is interested in your married life. How is it going? When will you have kids? And so on. So now after five years of my marriage we are still trying for a kid, and people are so nosy and curious about it. We cannot hide the fact that we do not have kids, right? So everyone will have curiosity, questions and suggestions. And I am tired of all this. They make me feel low. They keep saying do this, do that then you will conceive. They keep pin pointing that we do not have kids and we should do something about it. We are doing, but we do not want to go around and tell everyone, so I just listen to them quietly and nod.” Navya, Hyderabad.

Navya (28 years) is married to Rakesh (32 years) for the past five years. They are diagnosed with primary couple infertility, as Navya is suffering from PCOD⁴³ and hypothyroidism and Rakesh is diagnosed with diabetes. Although they do not have a specific medical problem with their reproductive system, they are failing to conceive naturally. At the time of the interview they had completed two cycles of IUI with no positive result, and were preparing for their third IUI cycle. Navya was visibly annoyed with people constantly asking them why they have no kids, and it has affected her to an extent where she started believing that it is only her body which is incapable of reproducing a child. She agonises:

“You tell me, have you ever heard anyone not being able to get pregnant because of hypothyroidism? My PCOD and thyroid levels are way in control but

⁴³ Polycystic Ovarian Disorder. It is argued that PCOD is one of the major factors causing infertility among women.

still I am not being able to conceive. Thyroid issues are so common, and so many people are getting pregnant despite it. But somehow, I am not being able to. In these three years of treatment seeking, the doctors could not find any major issue with both of us, but somehow all our attempts are failing. I do not know what is wrong with my body!” Navya, Hyderabad.

This idea of her body failing her, or being incapable of reproducing a child was very common in the narratives across respondents in Hyderabad and Kolkata. One can assume that women were more vocal about it because they were subjected to harsher stigmatisation, name calling and being subject of discriminatory behaviour in comparison to men. Many women recalled being called *baanjh*⁴⁴, *baja* or *bondha*⁴⁵, and *godralu*⁴⁶ across Hyderabad and Kolkata. However, this does not eliminate men from being stigmatised, and as a consequence makes them also question their own body and masculinity, because most often for men fertility is associated with virility. While there is a lack of vocabulary for infertile men in local Telugu and Bengali language, only one male respondent in Hyderabad recalled being called *napunsak*⁴⁷.

The stigma linked to infertility stems from the pro-natalist, patriarchal nature of the Indian society where birthing a child is considered an essential step to reach womanhood and/or manhood and hence claim an important position not only in the family but also in the larger community and society. Therefore, when one fails to fulfill the expected role of being a biological mother or father, one is stigmatised and made to feel ‘less’ of oneself. Stigma plays a direct and indirect role, in coercing couples to seek medical interventions. Or if one is already under treatment then it acts as an important push factor to continue the treatment as long as they can. The obsession to overcome this stigma and prove one’s fertility to the family and society plays an important role in driving the consumption of these technologies and the expansion and growth of fertility industry in India.

The ideas of shame, incompleteness, inadequateness, failed body, are the major markers through which stigma plays out in their everyday lives. The absence of a child in a marital union is considered as proof of the individual’s inability to reproduce – hence a physical deformity. As this absence is visible to others, it becomes difficult to hide or to

⁴⁴ Local Hindi word for barren.

⁴⁵ Bengali colloquial word for sterile women.

⁴⁶ Local Telugu word for infertile women.

⁴⁷ Local Hindi word for impotent men.

secretly manage such conditions. The visibility of pregnancy as a proof of the couple's fertile union, exposes those who cannot become pregnant. Since pregnancy is enacted through the women's body, they become the victims of stigmatisation and a subject for public analysis and blame.

In a pro-natalist society, especially in India, biological children carry immense value to both, the individual and the family. They are not only important to carry the lineage and kinship forward, but they are also considered as security for their parents in their old age. In such a scenario, being childless (voluntarily or involuntarily) is seen as deviant behaviour, which is against the norm of society, and invites stigma and blame. Veevers (1980) and Miall (1985), while talking about North American society, mention two primary procreative norms which predominate – (i) all married couples should reproduce; and (ii) all married couples should want to reproduce (cited in Whiteford and Gonzalez 1995, p. 28). These two procreative norms are not only limited to North American societies but can also be observed in other societies, including South Asia, especially India. The fertility industry picked up the second norm, i.e. 'all married couples should want to reproduce', and used it as its unique selling proposition (USP).

For the fertility industry, the inability to reproduce should not act as an obstacle for any individual; instead they should want to reproduce. Consequently, their obvious desire to be a mother or father can be fulfilled with a little help in the form of medical interventions with ARTs. This becomes a very important aspect of fertility industry. On one hand, it presumes or rather forces individuals to aspire for motherhood and fatherhood, and on the other hand it projects itself as a savior for the individuals and couples who cannot reproduce. As Qadeer mentions, *"The socio-cultural 'need' of women suffering from harassment and social rejection was also used by providers to give ARTs the image of a gender sensitive technology."* (Qadeer, 2010, p. 18).

Family (especially with a biological child) and parenthood are considered as an integral part of normal life course not only in the societal but also in the government imagination and policies. This probably explains the lack of governmental recognition of infertility as a pressing concern as it is viewed as a deviation from the norm. Infertility care management has never been a priority in India's health policies. This not only includes technological interventions and curative care, but most importantly preventive care facilities as infections, STDs, RTIs, which are the common causes of infertility in developing countries (Qadeer, 2010). Women, being part of such societies,

most often than not, internalise the cultural pressure to have children. When one fails to follow this accepted path of marriage, followed by parenthood, women become subjects of stigma and gossip, and are considered incomplete and deviant from the larger group. As Arthur L. Griel (1991) argues, *“the heart of the experience of infertility appears to lie in the inability to proceed with one’s life according to life course norms that are both reinforced by others and accepted as valid by the affected individual”* (Greil 1991, p 133, quoted in Whiteford and Gonzalez 1995, p 28). Therefore, the fertility industry has expanded not only due to over medicalisation, but also as a response to socio-economic-cultural factors which stigmatise childlessness.

This stigmatisation due to infertility was found in the narratives across respondents, in both Hyderabad and Kolkata. When asked about their experience with infertility and associated stigma and being called out by others, respondents replied:

Sinjini: *“I have felt that multiple times. My extended in – laws do pass comments often, specifically my aunt in-law.”* (Kolkata).

Debanjana: *“Yes neighbours do pass comments and talk among themselves. They don’t say anything directly to me, but I get to know all these from other people.”* (Kolkata).

Raziah: *“It is terrible at my in-laws place. They cannot even let me stand for a second. All day they keep fighting and abusing. I can understand that it is better if I do not stay with them. Just because I do not have a child, they make me feel very unwanted and bad.”* (Kolkata).

Ayesha: *“I have faced a lot of nasty remarks and unwanted questions.”* (Hyderabad).

During the field work, although men and women have both responded in the affirmative, when asked about being called out or stigmatised in their daily lives, the manner in which women are subjected to it, is different from men. Women were questioned not only in their private spaces but also at their workplaces, while men were not. From parents, in-laws, extended family members, neighbours, colleagues, distant relatives – women are traumatised by being constantly questioned about their

childlessness, while men in most cases are not subjected to such persistent personal questioning experiences. Some men did encounter uncomfortable questioning from their immediate family members, but were not subject to such personal questioning by friends, colleagues, neighbours and distant relatives. Interestingly most often men were not directly asked about their own fertility intentions but were asked about their partner's fertility, with questions like – “when is your wife giving us the good news?” In some cases they were even advised to take their wife for a medical consultation, without any pressure to undergo a test themselves. This speaks volumes about the gendering of infertility and its related stigmatisation.

Though Goffman's theory of stigma has been widely used in understanding infertility, it has also been criticised in analysing infertility in the non-western settings. As Riessman (2000) points out the Eurocentric assumption that individuals strategically manage information about themselves, when they find themselves in stigmatised conditions, does not hold true in non-western settings. This is especially true of India, where most individuals are not autonomous, having very little decision making capacity in a society where privacy is considered a luxury. Selective disclosure of their condition (infertility and/or reproductive loss) becomes impossible when there is hardly any distinction between one's private and public life. They are constantly publicly questioned, judged and evaluated for their incapacity to birth a child. The invisibility of a child in their marital union becomes 'too visible' in both the private and public domain. Fieldwork conducted in Hyderabad and Kolkata corroborates this view.

Interviews from the two field sites showed that women who were discriminated in public spaces because of infertility and/or reproductive loss, were either subjected to ridicule, nasty comments or were denied participation in auspicious functions like marriage, baby shower or other such events. When asked about an incident which has hurt them the most, Kolika recalls:

“I still remember one incident vividly. After around 8 months of my miscarriage- almost two years back, one aunty from the neighbourhood came to our place to invite us for her daughter-in-law's baby shower event. They are almost like family to us. Just before leaving (in my absence) she asked my mother-in-law not to bring me to the event as I just had a miscarriage and shouldn't be around her daughter-in-law's baby shower. My mother-in-law felt

offended and none of us went but somehow I can never forget that incident.”

Kolika, Kolkata.

Kolika (25 years) is married to Indraneel (31 years) for the past four years and they are undergoing fertility treatment for two years. They have been diagnosed with primary infertility, with the husband suffering from the condition of premature ejaculation. They hail from a lower middle class family, and Indraneel is struggling to pay for the increasing fertility treatment expenditure. Although being financially stressed, they still want to keep trying for some time with the hope of a positive result in the near future. The stigma they face, forces them to continue the vicious cycle of treatment, where quitting is seen as failure and a reason for more stigma. They keep on investing physically, emotionally, financially with the hope of a better future, where they believe that having their own child will be the answer for all the humiliation they have suffered.

Discrimination and humiliation affect their psychological well-being and their idea of one's own self. To overcome such situations, respondents have devised few coping strategies, which include – strategic avoidance (Riessman, 2000), living in a separate household, and providing vague or incomplete information about the treatment. Refusing to attend some events to avoid stigmatisation and public judgment, or to voluntarily distance from participating in such events by making some excuse, are some of the other ways by which these women (and sometimes men) navigate their everyday lives. Ayesha, Chandrima and Nitu complain:

“I have faced a lot of nasty remarks and unwanted questions by relatives, neighbours and strangers. That is why I refuse to participate in any social occasion. It is better to sit at home and watch TV.” Ayesha, Hyderabad.

Similarly, Chandrima from Kolkata affirms:

“I hardly go for any social gathering or event. I am tired of answering questions related to my pregnancy. No matter what the event is about, people will be interested to know about my pregnancy and when are we planning for a child. Even in a funeral I was asked about my pregnancy, when are we planning for a kid etc. I do not want all that. I hardly respond to them. And sometimes if I cannot escape from a situation I just say – ‘yes we are trying, let's see what happens.’ Not providing details is the easiest way to end the conversation.

People do not understand that they are invading our privacy.” Chandrima, Kolkata.

Nitu admits:

“We have not informed anyone that we are undergoing treatment for pregnancy. This is a secret between us. We do not want others to know, because if they get to know, every time we will have to update them about the progress of the treatment and entertain unwanted concern. It is better if we deal with it ourselves.” Nitu, Hyderabad.

Like Ayesha, Chandrima and Nitu, almost all the respondents interviewed have devised ways to cope with the trauma of stigma and questions related to pregnancy. They keep changing their strategies according to the situation, mostly by avoiding family events as they feel that is the best way to deal with unwanted attention on their infertility and/or reproductive loss. These defense mechanisms have been deeply ingrained in them, that they have become their reflex actions. Living with years of stigmatisation, questioning and being subjected to unsolicited advice, they have found ways to withdraw from family and society, become inward looking and carefully navigate their everyday life-worlds.

5.2. Living with Reproductive ‘Loss’

In general, any illness or disease has two aspects – the physical/physiological (somatic) and the emotional (psychological). The relationship between the mind and body is complex. In some cases, it is considered that the psychological stress overpowers the physiological illness and contributes to a larger burden of the problem. Infertility as a disease falls into this category, where people diagnosed with infertility exhibit higher levels of stress, anxiety, and trauma. A large part of scholarly work on infertility has engaged with this psychological aspect of infertility, fertility treatment and stress management. Both quantitative and qualitative research has tried to understand the level of stress which the patients undergo. In some studies, efforts have also been made to quantify such results to make it comparable and provide an objective view of the results. The treatment seeking individuals experience stress because of infertility and/or reproductive loss (not having a desired child), and also because of fertility treatment. As explained earlier, this research considers involuntary childlessness or/and infertility as

‘reproductive loss’ as it is a more inclusive term which takes into account infertility, loss of a child, early and late miscarriage, termination of a pregnancy, stillbirth, perinatal and infant death, maternal death, loss of a ‘normal’ reproductive experience, and all other associated pregnancy losses (Earle, Komaromy, & Layne, 2012).

The emotional burden of infertility has been addressed at length by scholars like Greil (1997), Bharadwaj (2016), Bell (2015), Ulrich and Weatherall (2000), Whiteford and Gonzalez (1995), Nachtigall, Becker and Wozny (1992) and many others. The couples are subjected to multiple emotions once they are diagnosed with infertility. This continues and rather increases, during the long treatment process. In some cases, the stress and anxiety continue, even after the birth of a child. While many longitudinal and cross-sectional studies have highlighted the emotional burden of infertility in the global North, there is a lack of quantitative and qualitative research on the emotional aspect of infertility in the global South. There are studies on infertility in the developing countries but the available literature is either region specific, or are mostly cross-sectional and not longitudinal, therefore making it difficult to compare. This study makes an attempt to understand infertility and/or reproductive loss in the context of Indian society, specific to the cities of Hyderabad and Kolkata. As elaborated earlier, this research aims at understanding the lived experience of individuals suffering from reproductive loss and/or infertility, focusing on the emotional burden of infertility and its various ramifications. Since the term ‘reproductive loss’ is broad and all inclusive it encapsulates a variety of experiences and the associated responses.

Respondents in both Hyderabad and Kolkata have all exhibited stress, anxiety, despair. Although no quantitative attempts were made to measure emotional stress and rank it according to different scales; the level of stress, anxiety and the emotional burden was understood qualitatively, through the narratives of the respondents who mentioned it implicitly or explicitly. The various tropes through which the respondents understood and exhibited their emotional burden include – the idea of shame, guilt, anxiety, despair, failure, loss and hopelessness. These will be briefly discussed below with insights from the field in Kolkata and Hyderabad.

5.2.1. The Feeling of Shame - Blame – Guilt

The diagnosis of infertility brings with it a wide range of psychological pressures and consequences. Since parenthood and having a biological child is given utmost importance in almost all the cultures, failing to achieve that goal brings stress and despair. There is a sense of loss of identity, owning a defective body and incompleteness. They feel they are flawed, inadequate, inferior – leading to a feeling of shame and self-blame. As William Petok (2006) highlights, shame is one of the important emotions in the experience and journey of infertility. It is associated with a sense of loss of control over the body, feeling of incompleteness or defectiveness and a feeling of exposure in some way (cited in Galhardo, Pinto-Gouveia, Cunha, & Matos, 2011, p. 2409).

Gilbert (1998) proposes that there are two kinds of shame – internal and external. Internal shame or shame when internalised, emerges as a private feeling related to an individual's own negative personal judgments of their characteristics, feelings and fantasies. External shame is focused on the social and external environment, where the individual believes that they exist negatively in the mind of others as inferior, inadequate or flawed (Gilbert, 1998). Therefore, the main consequence of both internal and external shame is self-devaluation, self-blame and self-judgment. Interviews with respondents corroborated Gilbert's idea of internal and external shame. For most treatment seeking individuals the idea of shame works at two levels – (i) shame of not being able to reproduce naturally (shame of barren-ness), and (ii) the shame of undergoing treatment (shame of an artificial/unnatural pregnancy).

Fertility treatment is like a double edged sword, where one is judged if they undergo treatment and also judged if they do not try hard / long enough. The idea of shame appeared in the narratives of both men and women. However, it was more recurrent and explicit among women than men. Women felt their body had 'failed' them; they are incomplete and incapable of carrying a natural pregnancy to term. This idea of 'not being enough' gives rise to the feeling of shame. In some cases, the respondents blame themselves, feel guilty and ashamed for their own medical condition, while in others, it is orchestrated by other family members and are complicated with the idea of stigma. Stigmatisation of infertile individuals by others makes them question themselves and assess their 'lack of capabilities'. It somehow plays a role in making them critical and harsh about their own body and self-worth and pushes them to consider their body as

inferior and defective. As Rohini Rajagopal mentions in her book – ‘*there is a very thick veil of shame that hangs over most who enter the IVF clinic*’. (Rajagopal, 2021, p. 90) These ideas resonate in the narratives from the field.

“I never imagined that I can be infertile. It does not come to us generally, right? I always knew I will have kids after marriage. Maybe I took that for granted. And now here I am struggling to get pregnant. I do not know what is wrong with my body. It is a terrible feeling. I do not like myself anymore. Everyone around me is either getting married or having kids, and I am only running after fertility clinics. I hate myself for this!” Fatima, Hyderabad.

“Whenever I go out I feel everyone is staring at me. It is like I can feel their stare hurting me. I have stopped reacting to nasty remarks and stopped answering unwanted questions. Now people do not ask/tell me anything directly, but I get to know. I am tired of this drama every day. I know we are a topic of discussion for my neighbours and extended families, but we cannot do anything about it anymore. We are trying our best. I feel uncomfortable to meet people now.” Debanjana, Kolkata.

Fatima (28 years) is married to Mufsin (40 years) for the past ten years. They have been diagnosed with primary - male infertility, and have been trying for pregnancy for the past 7 years. Similarly, Debanjana (33 years) is married to Indrajit (36 years) for the past eight years. They have been trying for a pregnancy since one year after marriage and are undergoing fertility treatment for the past 6 years. They are diagnosed with primary-unexplained infertility, where the doctors are still struggling to understand the cause of the problem. They have suffered two miscarriages and are still trying without any positive result. Both, Fatima and Debanjana’s stories reflect not only the external shame which they feel, but also how they have internalised shame unconsciously. They have become the subject of discussion-judgment and ridicule over a period of time, which has made them cynical and wary about participating in any public meeting or event. This idea of shame forces one to seek medical intervention, and to persist till they get a desired result. ‘What will people say if I do not try and persist longer?’ is a major reason which pushes the respondents to seek and continue treatment.

The feeling of guilt was a bit tricky to understand. In general, both men and women felt guilty of being in an infertile union. However, it is interesting to note that men were

explicitly guilty or claimed that they feel guilty when they were diagnosed with male infertility. But for most of the women they felt guilty irrespective of whether they were diagnosed with female infertility, male infertility, couple infertility or unexplained infertility. They felt guilty even when they did not have any fertility problem themselves. Those women who had unexplained infertility (with or without spontaneous miscarriages), confessed that they felt guilty that their body is not able to carry a pregnancy to its term, irrespective of no symptoms of female infertility. It can be assumed that since pregnancy is carried through the woman's body, they feel a much stronger sense of guilt, where they start questioning their own body and womanhood. This is further complicated by the patriarchal nature of Indian society where the worth of women is reduced to their ability to have children. The patriarchal gendered socialisation inculcates this idea since childhood where a girl is taught that being a mother will make them complete and that is the ultimate goal of her life. So in due course, when they are faced with a situation where their fertility desire does not become fruitful, they feel they are worthless and have failed in achieving the ultimate goal of their life.

Shame and stigma attached to infertility and/or reproductive loss and fertility treatment goes beyond the individual self of the treatment seeking individuals and even encompasses the space of the fertility clinic. The clinic space is associated with stigma, shame, embarrassment - compelling them to not disclose where they go for treatment. While some refrained from admitting that they are consulting an infertility specialist for their pregnancy, others when asked about their pregnancy vaguely referred to them as a 'normal gynecologist' and did not provide details of the clinic. This idea of shame and guilt even led a few respondents to propose a change or modification in the name of the clinic. Coincidentally, both the clinics in Hyderabad and Kolkata have the phrase 'Test Tube Baby Centre' as part of their name. During interviews, the respondents expressed their dissatisfaction and wanted to suggest to the clinic to remove this phrase from the sign board. Rupsa and Subhadeep explain -

"You know when people ask us which clinic we are visiting and we tell the name of this clinic, since 'test tube baby centre' is part of the name, they automatically assume that we are undergoing fertility treatment. If we want to hide that we are undergoing treatment, we cannot. So sometimes we just tell the doctor's name and not the clinic. The name of the clinic doesn't help us in

keeping our treatment a secret, which is not fair.” Rupsa and Subhadeep, Kolkata.

5.2.b. Anxiety- Despair- Depression

The feeling of anxiety is very common among patients who are undergoing any form of medical treatment. With illness comes anxiety – anxiety not only about the current health problem, but also about the treatment. Similarly, in case of fertility treatment, anxiety is not only about the outcome but also about the treatment procedure. The treatment seeking individuals enter a vicious cycle of anxiety, hopelessness, despair and failure. This does not rule out the success stories and the joy they achieve after having a desired child, but the proportion of success stories are far less than the stories of loss, failure and despair. By immersing themselves in the treatment procedure they are not only alienated from their immediate life-world, but in some cases also from themselves, as they are unable to understand their body and the level of stress they are undergoing. The treatment process becomes so addictive and they become so fixed on achieving reproductive success, that they find it difficult to quit. Narratives from the field indicate that psychological impact of infertility and/or reproductive loss and fertility treatment is the greatest cost women pay in comparison to physical and financial burden. The stress, anxiety stays with them for a long time, irrespective of the outcome of the treatment.

In most cases, the diagnosis and treatment procedures are not fully explained to the patients, they lack the knowledge about the experience which is awaiting them. This is more common in case of invasive procedures, where the patients are not properly counseled or mentally prepared and are hence, apprehensive and shocked when their privacy is invaded and they feel violated. Debanjana from Kolkata confessed:

“It is funny when I look back at the initial days of my treatment. I went for a TVS (trans-vaginal sonography) and I did not know what it was. I was wondering what they will do and at that moment the doctor just asked to lift my leg and he inserted the sonography stick without any warning. I was too shocked to react or feel anything. Later I felt very disturbed and pained with that experience.” Debanjana, Kolkata.

She continues:

“Even for my IUI I had a bad experience. At the time of sperm transfer I was not told what I will have to undergo and what will I experience. I was lying on the bed guessing what will happen next. Moreover, they got a junior doctor to train for IUI inside the lab without informing or telling me why he was there. I felt very uncomfortable but could not say anything. After that I got used to it.”
Debanjana, Kolkata.

While some respondents categorically mentioned about their stress and anxiety which they undergo every day because of their infertility and its treatment, others hinted at it implicitly, unable to categorise it into a single emotion. Their conversations, body language, the nervousness – all hinted at anxiety levels of hoping for a miracle to happen. The attempts to keep oneself busy by reading different magazines available at the clinic, constantly checking their phone, re-reading previous reports and prescriptions, rehearsing what to ask the doctor, fidgeting and nail-biting – speak of the high stress levels these individuals are subjected to and living with on a daily basis. These were common sights observed in both the clinics in Hyderabad and Kolkata.

“You know, I am always worried about what will happen next. I have already undergone 5 IUI and 2 IVFs, but still something is wrong.... I am not getting a positive result. I do not know what is wrong, and this is making me restless. I am always anxious, lost, worried, and thinking something.” Nazia, Hyderabad.

Nazia (34 years) is married to Abbas (46 years) for the past fifteen years. They have been diagnosed with primary, couple infertility where Nazia suffers from small follicles and Abbas is diagnosed with low sperm count and low motility. In the past thirteen years of treatment they consulted around ten doctors and underwent 5 IUI and 2 IVFs. They hail from a low middle class family, where the husband runs a small *paan* (beetle leaf) shop. With more than ten long years of treatment without any positive result, Nazia is slowly losing confidence, patience and hope. While she accepts she has become restless and anxious in her everyday life, she attributes the reason to the *“long treatment for ten long years without any miracle happening and knowing you are getting physically and financially exhausted, is not an easy job”*.

The anxiety for Nazia is not only about getting pregnant and having a baby, but it is also related to her depleting physical and financial strength. According to her, the

anxiety has now crept into her everyday life and her persona, and is not limited only to her pregnancy.

Similarly, Sarthak from Kolkata elaborates:

“She is worrying about it a lot. She is always lost and has become very absent minded and cranky. I keep talking to her but she will not listen. She knows the drill but she is still very stressed and anxious.” Sarthak (Tanushree’s husband), Kolkata.

Tanushree (33 years) is married to Sarthak (39 years) for the past fourteen years. They suffer from secondary, couple infertility, where Sarthak is diagnosed with asthenozoospermia⁴⁸ and Tanushree suffers from tubal blockage. They have a 12 year old son, who was also conceived with the help of IVF. For their second pregnancy, they underwent 2 IUI cycles, and at the time of the interview were waiting for their pregnancy report after the second transfer. While Tanushree is restless and anxious, Sarthak appears a bit calm. He feels, since they have already undergone all these procedures previously with success, there is no point in getting worked up.

Both Nazia and Tanushree showed signs of anxiety and stress which was related to both their infertility and the treatment they were undergoing to overcome it. While Abbas (Nazia’s husband) was equally, if not more, stressed like Nazia, on the other hand Sarthak (Tanushree’s husband), exhibited no signs of pressure and was concerned about Tanushree’s negative attitude towards and during the treatment.

Nazia, Abbas and Tanushree’s stories are just a glimpse of the larger picture of despair that people with infertility and/or reproductive loss are dealing with and navigating every day. Almost all the respondents interviewed were struggling with varying levels of stress, anxiety, restlessness. The treatment had become so important in their lives that they were forced to arrange their lives around it, and this led to a point where their entire existence depended on the result of the treatment. Field narratives resonate with many such poignant stories of the respondents that echo their feelings of despair, hopelessness, helplessness and depression. For these couples, especially women, coming to terms with their reproductive loss has been difficult. The efforts to have a

⁴⁸ Asthenozoospermia is an infertility condition in men wherein a man produces sperms with low motility. Reduced sperm motility decreases the chances of the sperm to successfully fertilise the egg in the female reproductive tract. <https://www.novaivffertility.com/fertility-help/what-is-asthenozoospermia/> (last accessed on 30.03.2021).

child, have taken a toll on their body, both mentally and physically. Added to this is the financial burden that all of them have to constantly deal with. It is therefore not surprising that one observes a strong feeling of frustration and betrayal with their body, that is subjecting them to this trauma of ‘reproductive loss’.

Field observations indicate how the feeling of stress and anxiety was somehow felt immediately after entering the fertility clinics. The crowded waiting or the lounge area had a kind of stillness in its ambience. The quietness amidst the chaos of appointments, scans, procedures; the tension of awaiting results, the anxiety of what will happen next, was felt inside the clinic space. Interviews and conversations with respondents and clinic staff pointed to the fact that anxiety is the dominant emotion found among all fertility treatment seeking individuals, irrespective of their stage of treatment.

Further, the waiting area plays a very important role, as it is considered to be the liminal space where the respondents are in between results of certainty. The act of waiting is very important in fertility treatment seeking behaviour. And the anxiety associated with it sometimes overpowers every aspect of treatment and the individuality of the person undergoing that treatment. ‘Waiting anxiety’ was not only felt by the treatment seeking individuals but also their accompanying family members. The body language of the individuals and their attempts to initiate small talk with other fellow patients and clinic staff revealed their increasing anxiety. It also indicated their effort to distract themselves from their appointment with the doctor and the results of the previous test and further course of treatment.

Neelam from Hyderabad revealed:

“Every time I enter the clinic, my hands and feet become cold. Waiting for an appointment or test result seems like the longest wait. I feel the time becomes stagnant. Out of anxiety I feel nauseous and shaky. The tension and anxiety makes me feel sick.” Neelam, Hyderabad.

Neelam (27 years) is married to Saaket (30 years) for the past five years. They suffer from primary female infertility where Neelam has been diagnosed with tubal blockage. Three years back Neelam had to undergo induced abortion as she was diagnosed with ectopic pregnancy and since then she has been struggling to conceive. They have already undergone two IVF cycles without any success, and at the time of the interview they were considering to start the third cycle of IVF. While Neelam confessed about the

pressured environment in the clinic space and her personal battle with the anxiety of fertility treatment, some even equated this feeling of waiting anxiety with the feeling which one has just before the exams – the idea that it will decide the future course of action and their life trajectory.

Since this research aims to look at reproductive losses as cases to understand the experience of infertility, the feelings of loss, despair and grief dominated the narratives from the respondents across Hyderabad and Kolkata. Most of the respondents interviewed have either experienced a failed IUI cycle, IVF cycle or miscarriages. The loss of a child or loss of a chance to get pregnant, loss of a reproductive future has been felt by almost all of them. Despair, grief and helplessness, was not only articulated in their words, but could also be seen on their face and in their body language. Rohini Rajagopal (2021) in her book about her own journey with infertility and fertility treatment writes –

“All the heartache accrued over the years tumbled out and I cried a helpless cry. Not just the eight eggs, but for all the things that had gone right and wrong in treatment, for the months and years of seesawing hope and loss of hope, for my husband waiting outside oblivious to my cries,....”

She continues,

“I turned to the side facing the wall and spent the next three hours crying. I mourned the too-few eggs, the too-many cycles, and the too-little payoff. In the flimsy solitude of that hospital bed screened by white curtains, I mourned all the injustices in my life that caused varying degrees of hurt.” (Rajagopal, 2021, p. 92)

With every failed cycle, the loss keeps accumulating to an extent where one feels there is always a baggage of loss and uncertainty to deal with. Alka talks about her experience with loss in a sad, victimised manner. Just before the first interview she came to know that her beta HCG levels were low and the IVF cycle failed to implant, and hence she is not pregnant. She broke into tears as soon as she was informed about her blood report and took some time to gather herself and then volunteered for the interview. She said:

“Everyone will come and give advice. But do you think they will understand what I am going through? They cannot! They will never understand. I know how

it feels to have a miscarriage and then never get pregnant after that. I feel hollow, like a dead person. I just want a baby of my own, nothing else. Do you think that is too much to ask for?" Alka, Kolkata.

Alka (28 years) is married to Santosh (36 years) for the past six years. They have been trying for a baby for the last four years without any result. They suffer from primary, couple infertility. While Alka elaborated on her medical condition with blocked fallopian tubes and thyroid, she refused to talk about her husband's medical condition. She just shrugged it off by saying that her husband also had medical treatment for his condition. During the initial year of their marriage they got pregnant naturally but suffered a miscarriage in the second month of pregnancy. Since then, they have found it difficult to get pregnant, with or without the help of assisted reproductive technologies. They underwent two IVF cycles where implantation of the embryo failed, leading to the loss of pregnancy.

At the time of the first interview, Alka was angry and upset with both the doctors of the clinic and herself, blaming them and herself for the failed pregnancy. Almost three years after the first interview when she was contacted for a follow up, she admitted to feeling more hopeless and depressive. She is continuing her struggle with pregnancy, with five failed IVF cycles. However, due to the pandemic⁴⁹ she was unsure of when she could resume her next treatment after a gap of almost eighteen months. For Alka, the loss which she has suffered is inexpressible for her and she believes others lack the sensibility to understand her predicament.

The story of Debjani and Niladri from Kolkata similarly echoes the emotions of loss-despair-grief and hope. Three years back they lost their thirteen year old daughter to encephalitis. They have been trying to conceive again for the past two years, without any positive result. At the time of the interview they were undergoing IVF treatment, and were even considering surrogacy as their last option. Almost three years after the first interview they were contacted for a follow up session, during which they revealed that they had 3 failed IVF cycles and are now looking at surrogacy as their last option. However, due to the Coronavirus pandemic of 2020 their plans for surrogacy got delayed, and they are again planning to resume their fertility treatment shortly. Their life story is unusual and poignant, as they have experienced a natural pregnancy, the

⁴⁹ The Coronavirus pandemic of 2020

death of their 13 year old daughter, and the struggle with ART with multiple failed attempts. They have felt loss and grief since their daughter passed away, and are now living on hope and confidence that ART will enable them to have their own biological child very soon. They say:

“No one can understand our pain. We lost our thirteen year old daughter two years back. We had a child and we saw her growing, but now we do not have anyone. The pain that we feel will not be understood by people who never had a child and even by people who have their children with them. At our age, treatment (ART services) is the only hope to make our family complete again. And we are not exceptional. So many people at our age have had successful result with IVF and I am hopeful that we will also be successful. It is just a matter of time. Please pray that we get back our lost daughter again.” Niladri, (Debjani’s husband) Kolkata.

5. 3. Feminisation of Infertility

“My in-laws do not know we are consulting infertility specialists. Every time we tell my mother-in-law we are going to a general physician for regular check-up. She will not be happy if she comes to know that her son has fertility issues. She might support us but that will also be a burden. Every time she will ask about updates and we will have to update her and we will get unsolicited advice and suggestions. I do not want that. It is better like this, we are handling it ourselves. My family also doesn’t know about my husband’s condition. I am not sure how they will react. Everyone in my family knows that I am undergoing treatment.” Srijia, Kolkata.

This was Srijia’s response when was asked whether her family knows about their medical condition and how they feel about it. Srijia (29 years) is married to Akash (30 years) for the past five years. Srijia is a teacher by profession and her husband works at a public sector bank. On the day of the interview she had her second IUI. Srijia’s way to handle the stigma attached to male infertility largely reflects the gendering of infertility and the medicalised embodiment which has affected women far more than men. Scholars like Arthur Greil (1997, 1988, 2011, 2010) Robert D. Nachtigall (Nachtigall, Becker, & Wozny, 1992) Gay Becker (Becker & Nachtigall, 1992) have extensively

written on how women are directly affected by infertility more than men. This is tied to the larger socio-cultural context where women's identity and social status is interconnected to child bearing and motherhood.

Infertility has long been synonymously understood as female infertility, with less attention on understanding the role of men and treating male infertility (Sandelowski, 1993). This societal feminisation of infertility happened way before it became commercialised or medicalised. Infertility was earlier defined as - the disease of the reproductive system of women. Early literature on infertility points out the exclusion of men from these studies and the treatment procedure. Among those identified as infertile couples, it is most likely that women will undergo treatment first - their bodies are the first site of correction. Only if the female partner does not exhibit any condition, then the male partner comes under the radar of examination. Though things have progressed in the medical front with respect to diagnosis, with the diagnosis of the couple now done together, there are reports and studies that document how women, who belong to an 'infertile couple' category, are likely to undergo treatment without personally having a medical problem (Greil, 2002).

The field research in both Hyderabad and Kolkata reinforced this gendering of infertility. Women continue to be blamed, abused and discriminated because of infertility, irrespective of whether they or their partners are infertile. More often than not, they are the victims of social stigma, community ostracism, public ridicule, family pressures, personal anxiety, frustration, marital duress, marriage dissolution and abandonment. In addition, they bear the burden of the risks of medical interventions. This has invariably affected the way these treatment seeking individuals are seen by others and how they see themselves. This feminisation of infertility is a major characteristic of the social definition of infertility, especially in India. Razia in Kolkata narrates her story on similar lines, recounting the torture she endured at her in laws place. Razia is diagnosed with hyperthyroidism; her husband Arif suffers from low sperm count. When asked how her family reacted to their treatment, she hesitantly says:

"No, my in-laws do not know that my husband has fertility issues. We have not informed them. My husband has asked me not to tell anyone anything. Everyone knows that the entire problem is with me. And I cannot go against my husband, otherwise he will not support for the treatment. No one knows everything. Only my husband and my mother know everything, because she accompanies me

every time to the clinic. My in-laws are not interested in all this. They do not even want us to get treated. For them, this is our problem and we should deal with it. My mother-in-law does not want me to be a part of their family”. Razia, Kolkata

Razia's story forces one to understand how patriarchy constructs infertility and/or reproductive loss and medical embodiment. Her predicament with infertility and the mental and physical torture which has been brought upon her is a story of so many other women who have found themselves in similar circumstances. She is a victim of patriarchy and its construction of motherhood. Her husband gets an easy pass to hide his own medical condition and put the entire burden of infertility on her, and she has no other option but to accept and bear the torture every single day. Since her family or she herself cannot afford the fertility treatment, she has been left with no choice but to endure it till the treatment becomes successful.

Razia's mother is supporting them as she wants her daughter to be accepted by her in-laws. She agrees that being a mother is important for a woman, and if that is the only clause for her in-laws to accept her daughter and respect her, then so be it. She is not very aware of the medical conditions and procedures required to overcome infertility. But with her limited knowledge she supports her daughter in every possible way. While Razia's mother is displeased with the behaviour of her daughter's in-laws, she feels there is no point in protesting, as this is very common and acceptable behaviour. The discrimination and victimisation of women because of her inability to reproduce, is a documented social phenomenon in major sections of the society. Patriarchy and the construction of motherhood has intertwined to an extent across generations, that women are unable to see the need to come out of it, as they consider it to be a normal course of action.

It is important to understand how infertility and/or reproductive loss is played out to understand the social processes which encompass the lived experience of these individuals. For them, the meaning making of their infertile condition and the consequent journey of treatment seeking is contingent on multiple social, economic and cultural factors. In some cases, both men and women might have certain degree of control over their situation but in another, they are helpless victims of circumstances. This victimisation is mainly due to the patriarchal, pro-natalist nature of the society where the individual is located, as in the case of Razia.

The discourse on medical embodiment of infertility can be largely divided into two approaches. The first group of scholars claim that women usually appear distressed regardless of who is diagnosed with infertility, whether they are personally diagnosed with infertility or their partner is diagnosed, or the infertility factor is unknown (Greil, Slauson-Blevins, & McQuillan, 2010). This is so, because the success or failure to conceive plays out through women's bodies (Clarke, Matthews, & Matthews, 2006). These women experience 'spoiled identities' and are more likely to take responsibility for a couple's infertility. This prevalence of 'spoiled identities' is gendered and affects women more than men (Nachtigall et al 1992; Throsby & Gill 2004).

The concept of 'spoiled identities' was used by Erving Goffman (1963) in his classic work to refer to an identity that causes a person to experience stigma. When an individual possess a stigma or "*an attribute that makes him different from others in the category of persons available for him to be, and of a less desirable kind*" (Goffman, 1963, p. 5), they may be considered a "tainted" or "discounted one". This creates a gap between one's desired identity and the actual identity, thereby producing a 'spoiled identity'. This spoiled identity is contingent on the social recognition of the undesired difference. Also, from personal recognition and internalisation that one's identity is spoiled and lacks the desired attributes (Johnson et al, 2020). The feeling of not being normal or incomplete and its associated stigma is the core essence of spoiled identity. The experience of "spoiled identities" is recounted by most of the female respondents interviewed across the two research sites. The idea of loss of control over one's own body, being incomplete or defective, angry with their own self and body is a common reference.

Samyukta from Hyderabad elaborates:

"I am undergoing treatment for the past six years, and with every passing year I am losing hope. Honestly speaking whenever I see any pregnant woman or a couple with a child I feel very jealous. Everyone around me is having babies except me. I feel something is wrong with me only that is why treatment is also not working. Maybe I do not deserve to be a mother and have to live my life like this only. I feel hollow inside - I cannot explain how I feel every single moment." Samyukta, Hyderabad.

Similarly, Moumita from Kolkata says:

“These days whenever I see kids around me I feel irritated and sad. There are so many people who do not want kids and they are getting pregnant so easily. But in my case I am struggling to have a child of my own. I do not know what is the problem with me. I have consulted so many doctors and none of them could identify a problem. But there must be something seriously wrong that is why nothing is working out for us. I feel so terrible inside and no one can understand my pain. I know people around me talk about us and make fun of us, but we cannot do anything.” Moumita, Kolkata.

Samyukta and Moumita’s story highlights their struggle with themselves and how they are torn between being hopeful with ART and losing hope with every failed step in their treatment. They increasingly feel unworthy to deserve the happiness of being a mother. They consider themselves to be impaired, undeserving, inadequate, incomplete and broken. This self-criticism and self devaluation is an indicator of “spoiled identities” and it echoes in most of the stories shared by these women. Samyukta and Moumita are not alone, but stories of Srija, Razia, Chandrima, Alka, Nazia, Rupsa, Tanushree speak on those lines.

The second group (Miall, 1986; Blenner, 1990; Olshansky, 1987), addresses infertile identities suggesting that medical diagnosis plays an important role in the experience of the individual. They claim that women who are not personally diagnosed as infertile, ‘strongly distinguish themselves’ from those who were (Miall, 1986). Rather, when they are personally diagnosed and identified as infertile, they experience a more immediate, intimate sense of bodily failure, which is again legitimised by medical authority. According to them, this medical legitimation or labeling of one’s body as infertile is important in their infertility journey (Johnson & Fledderjohann, 2012).

However, the interviews with respondents in Hyderabad and Kolkata clearly show that there is hardly any difference in the stories/experiences of women when they are personally diagnosed as infertile or being fertile with an infertile partner - their distress remains unaffected. The question which is therefore critical in the Indian context is, whether women are still taking the blame for couple’s infertility, especially in a male infertility situation and the reasons behind such practice. While in some cases they volunteer to take the blame, in others, they do not have any choice as they are made

scapegoats by the husband or his family to take the blame upon themselves to save their husband's reputation and from being questioned about his masculinity and virility.

Chandrima's story from Kolkata conveys something similar. Chandrima (39 years) is married to Anirban (44 years) for more than ten years and they are undergoing fertility treatment for seven years. Both of them work as Post Office agents and have a hectic work and treatment schedule every day. Her mind is also troubled as she doubts the sexuality of her husband, even after ten years of marriage. To overcome her stress and anxiety about not having a child, she has found solace in her little nephew, and often meets him to cheer herself up. She tries to fill the gap in her life by spending as much time as she can with her nephew. She confides:

"The problem is my husband could never perform well. From the very first day I found him to be strange around me. He is a 'mumma's' boy. In the early years of treatment all my reports were normal, but he had sexual dysfunction which he never treated. We consulted doctors but he did not pay any heed. Still we kept on trying. But now when he is forty four years old and I am thirty nine years old, my egg count has also naturally reduced. Everybody thinks the problem is with me, and I am too tired to correct them. Even my mother in law is strange; she is still possessive about her son. This will be our second IVF in the coming week, hope everything works well." Chandrima, Kolkata.

On the other hand, Anjali whose husband is also diagnosed as infertile keeps blaming herself for her inability to have a child.

"I feel guilty and responsible. My body has betrayed me, and I am angry."
Anjali, Hyderabad.

Anjali (29 years) is married to Arun (39 years) for six years. Her husband has been diagnosed with male infertility, where he suffers from azoospermia (the medical condition of a man whose semen contains no sperm), while all her reports are normal. They have tried two IUI with donor sperm but have been unsuccessful. It is poignant to note that throughout the interview she kept on blaming herself and believed that her body has failed her, and attributed not being able to have a child to some bad deeds she may have done, and this is God's punishment for her *karma*⁵⁰. Anjali and Arun both

⁵⁰ Karma, is a Sanskrit word that roughly translates to "action". It is one of the core ideas of Hinduism and many other religions. It generally denotes the cycle of cause and effect — each action a person

work with an Information Technology (IT) company in Hyderabad and hail from a middle class family. Although they are not facing difficulty in affording the treatment owing to their high paying jobs, they are facing trouble in explaining the husband's medical condition to their families. Without the knowledge of their families they opted for donor sperm insemination as they believed Arun's family will not agree for donor sperm insemination as they are a bit conservative. It is interesting to note that in treatments which require donor ovum or sperm, most of the treatment seeking individuals readily agree for donor ovum with husband's sperm but are hesitant when the situation is reversed. There is still a dilemma when they have to undergo treatment with wife's ovum and donor sperm. The attempt to hold on to husband's bloodline was strongly felt across both the research sites in Hyderabad and Kolkata. Irrespective of the diagnosis and the line of treatment, it is women who are cornered and forced to take the blame of infertility upon themselves.

Anjali's story reveals what Bharadwaj (2016) refers to as the fine difference between 'stigma' and 'blame'. He writes, *"While women may be blamed for being barren or men (more rarely) for being sterile, stigma can attach itself to a married body."* (Bharadwaj, 2016, p. 71) In simple words, while blame is specific to an individual (usually the female and rarely the male) who is assigned the responsibility for a certain condition; stigma is attached to include both the man and the woman who is part of the 'infertile union'. Therefore, blame is person specific and stigma is the outcome or the social experience caused due to the blame, which is experienced by the couple together. This lived experience of infertility is more complicated than it appears. The gendered nature of infertility is very evident in our everyday lives. The burden of infertility rests unequally heavy on women, where they are in a constant struggle, not only to prove their sexuality and gendered expectations to themselves, but also to the larger society. The absence of a child in their marital union becomes visible, as it is seen as the only rationale for their marriage. Their other social identities, roles and expectations become insignificant in relation to their quest for conception and parenthood.

This feminisation of infertility explains the experience of greater psychological distress among women and their stigmatisation. Stigma comes from their expected gender roles

takes will affect him or her at some time in the future. With karma, like causes produce like effects. Therefore, a good deed will lead to a future beneficial effect, while a bad deed will lead to a future harmful effect.

Source: <https://www.livescience.com/41462-what-is-karma.html> accessed on 09.06.21.

which they fail to meet and the cultural importance of a woman being a mother. India being a pro-natalist, patriarchal society – the absence of a (biological) baby in a heterosexual marital union is not easily understood or accepted. The social pressure to produce children not only reflects the continuity of bloodline and kinship, but is also a way to prove one's own sexuality. This has eventually led to the glorification of parenthood (both motherhood and fatherhood) to an extent that individuals grappling with infertility and/or reproductive loss become helpless victims of those tropes.

5.4. Living with Male Infertility

Historically, issues of reproduction have always been categorically gendered to an extent that a woman's health is often reduced to woman's reproductive health. Since pregnancy and child birth takes place through the woman's body, with reference to infertility, science and reproductive medicine (ART) have therefore focused majorly on a woman's body. Men have always been excluded and considered irrelevant in discussions related to reproduction or reproductive health – making their experiences and perspectives invisible. Most often, due to the over-emphasis on women and their reproductive health, men have been considered as the 'second sex' in research related to reproduction (Culley, Hudson, & Lohan, 2013). Marcia Inhorn (2012) argues that the marginalisation of men in reproductive research is a serious lapse, because it not only conceals their reproductive concerns, experiences and reproductive decision making, but also their role in women's reproductive health and their decisions. However, in recent years, these practices have changed and men have found some space to articulate their voices on issues related to reproductive health. A growing body of academic research has emerged in the last few decades which focus on men's reproductive issues, their role and the way forward (See Culley, Hudson and Lohan 2013; Hinton and Miller 2013; Wischmann and Thorn 2013).

Various studies have argued that the first step to manage or overcome infertility is to accept that one is infertile. In general, across cultures, one is socialised and raised to imagine one's own family in the future, with a biological child / children and this dream takes fertility as granted and normal for everyone. So, when one is faced with a situation where the individual or the couple is diagnosed with infertility – or a reproductive disruption – it results in a life crisis, where the couple takes time to accept

their infertility, becomes desperate and vulnerable to the reality and makes efforts to overcome it. For both women and men, the acceptance of infertility is traumatic.

Therefore, when a couple struggles to conceive a child especially in a pro-natalist society, the woman starts self-doubting first and believes she must be having some medical condition which is preventing her from becoming pregnant. One may assume this is related to the old culture of victimising women for childlessness. For men, it is difficult to accept their condition, come forward and take the first line of diagnosis, owing to the ideas of masculinity and hegemonic masculinity⁵¹. Since fertility is very often linked to masculinity and virility of the person, the male individual struggles to acknowledge and accept one's medical condition, if diagnosed with male factor infertility. The point here is that, men still hesitate to undergo diagnosis and to eventually accept their condition of infertility, if and when diagnosed.

In the research study out of 75 treatment seeking individuals, 21 respondents suffer from male factor infertility and 18 respondents suffer from couple infertility which includes both male and female factor infertility. Many of the female respondents who were interviewed without their male partners, complained about their husband's attitude towards the fertility treatment. While some faced difficulty in convincing them to undergo the preliminary diagnosis, others faced trouble in persuading them to initiate and continue fertility treatment. Fatima from Hyderabad discloses:

"It took me 5 months to convince my husband to consult a doctor and go for preliminary diagnosis. He was later diagnosed with azoospermia. After the reports, he did not believe the test results. He was in denial and was not ready to go for any treatment. It took a lot of effort from me and the doctor here in explaining that with medical intervention we can still have a baby, and then he agreed for treatment after 2 months of convincing." Fatima, Hyderabad.

Similarly, Chandrima from Kolkata reveals:

"My husband took a lot of time to come to terms with our test report. I always had the doubt that something is wrong with him because he could never perform well. He had sexual dysfunction which he never treated. He lives in denial and thinks the problem is with me. After multiple doctor consultations he realized his

⁵¹ Raewyn Connell's (1987) concept of hegemonic masculinity implies those attitudes and practices among men that perpetuate gender inequality. It involves not only men's domination over women and other minority groups, but also power over other groups of men. (cited in Jewkes, et al. 2015)

problem and now I feel it is too late. But we are still trying.” Chandrima, Kolkata.

Voices from the field reflect the cultural practices of the society. In the case of India, secondary literature review and field work, have both highlighted the struggle men and women face in accepting infertility. Owing to the gender hierarchy, men face a silent battle and have difficulty in coping with infertility. Women are still the focus of biological and clinical diagnosis and treatment. Not only majority of assisted reproductive procedures carried on the women's body, but the clinical file is usually in her name and has her health details. She is the first point of contact at the clinic, irrespective of the type of infertility and the procedures prescribed to overcome it. Field work in both Hyderabad and Kolkata showed that the clinical file is always in the name of the woman - even in cases of male infertility. This suggests how women continue to carry the burden of reproductive loss / failure not only by their family and society, but also the medical establishment. This erasure of male role in infertility is rooted in the deep internalisation of patriarchy, where women are viewed as primary agents of reproduction and therefore, blamed if they do not/ cannot have a child.

Gender plays a very important role in shaping the narratives related to infertility. Trajectories of fertility and infertility has largely been associated with the question of sexuality of the person, where a failure to reproduce a biological child is seen as evidence to question the sexuality and the completeness of the individual. Recent work addressing male reproductive health issues affirm that male infertility raises questions on masculinity and virility (Nachtigall, Becker and Wozny 1992; Throsby and Gill 2004). However, the degree of stigmatisation and its consequences are dependent on the cultural setting of the individual. Men and women both experience secrecy, isolation, stigma along with the feeling of detachment, uncertainty, incompetency, failure, hopelessness when they are diagnosed with infertility, and when they embark on their treatment journey. Sometimes, men are also the victims of stigmatisation, but the ways and degrees are different. Infertility for men, is a question about their masculinity, wherein having a biological child is proof of being 'man enough'. Men who are diagnosed with infertility therefore feel guilty and self-victimise. Riyaz says:

“I keep questioning why it has happened to me? I am sure there must be some mistake on my part. May be if I would have known it before marriage, I might have corrected it and then got married. It's affecting my daily life. I cannot do

any work perfectly; I am always distracted and feel lot of pressure. This is the biggest mental pressure we have. In a family, not having a child is the biggest problem. So much of family tension, nasty remarks - those are part and parcel. This is the biggest problem in our life now.” Riyaz (Jasmin’s husband) Kolkata.

Riyaz (32 years) is married to Jasmin (20 years) for the past four years. They suffer from primary, male infertility where Riyaz has been diagnosed with oligozoospermia and asthenozoospermia. At the time of the interview they had undergone two cycles of Intracytoplasmic sperm injection (ICSI) without any success and were preparing for the third cycle.

Across studies, men have narrated how infertility has cast aspersions on their masculinity, virility and male-hood. Not having a child is seen as a failure of their ‘maleness’, while having a child is viewed as their success as a man. During the interviews in Kolkata and Hyderabad, men recalled how the requirement to produce sperms in laboratory settings created a pressure on them leading to ‘performance anxiety’ and they found it awkward and humiliating. While a few over emphasised their own experience and were more vocal about it, others felt it was nothing compared to what their female partners undergo during the treatment.

“The day I came to give my samples (semen samples) I felt like I was going for some school examination. That feeling, giddiness (you know what I mean), tension – I was feeling everything together. I was having performance anxiety as I knew so many things were dependent on it. It was weird and so many thoughts were going inside my head. Whenever I recall that day, I get cold feet. That was the most stressful day of my life! No one will ever understand that stress.” Abbas, (Nazia’s husband) Hyderabad.

“I was very worried on the day of my test. I was full of anxiety, tension. But more than me my wife was anxious, and I know what she goes through in every visit. This was nothing in front of that. We want a kid, and we have to do this. She is suffering more than me.” Indraneel, (Kolika’s husband) Kolkata.

Both Abbas (46 years) and Indraneel (31years) are suffering from primary-couple infertility, where they have been diagnosed with male infertility issues. While Abbas felt his experience of giving a semen sample in the clinic collection room was the most stressful part of his life, Indraneel was aware that his experience was not as stressful in

comparison to what his wife goes through in every visit. The anxiety and stress was evident in both the couples, but Abbas preferred to prioritise his experience over Nazia's, while Indraneel downplayed it, instead, highlighting what his wife Kolika was going through. These two examples help us to understand the nuances on how men perceive and participate in these fertility treatment procedures.

As elaborated by Hinton and Miller (2013), the role of men in reproductive issues can be divided broadly into three categories which are not exclusive and universal in nature, but are parallel and overlap in many ways. They include: (i) men as reproductive actors, (ii) men as onlookers, and (iii) men as supporters (Hinton & Miller, 2013). Interviews in both Hyderabad and Kolkata pointed out how the role of male respondents could be categorised into all the above three categories with overlapping features. The male individual not only performed the above three roles, but their role was spread across the three categories without clear demarcations. Since men are not the focus of most of the assisted reproductive technologies, some complain of being neglected, unwanted, and useless in the entire fertility procedures. The feeling of not being of any help, ignored, marginal, irrelevant was dominant in the narratives of most of the men who undergo fertility treatment. Absence or irrelevance in procedures associated with ART (like scanning, monitoring, blood tests, routine check up to address the progress of the treatment and others), men feel distanced and dissociated with the entire process.

One respondent from Hyderabad even called himself as an 'accessory' to his wife while talking about their fertility treatment journey. Yash (31 years) is married to Pooja (28 years) for the past three years and they are suffering from primary unexplained infertility. While Yash was very talkative and excited during the interview, Pooja was a bit shy and hesitant to speak her mind. Yash was very vocal about his feelings and how he is not needed for all the visits. He says:

"I just come here as a mental support for her, otherwise there is no use. I am not needed in anything further. For regular check-ups and scans, I do not come as there is no point in that. It will take a toll on my work and later I cannot get leave. So whenever we have to meet the doctor or discuss some reports I accompany her, or else I am like an accessory (or rather a suitcase) tagging along behind her." (Laughs.) Yash, Hyderabad.

Across cultures, women have been categorised as emotional, weak, and vulnerable and men have taken the role of being rational, decision makers, strong and the responsible one. These gender differences are very prominently marked in the infertility stories. Almost all the male respondents pointed out how they have to bear the burden to keep the treatment going; to be emotionally strong, and act as a support system for their partners and sometimes even for the family. A feeling of a strong sense of responsibility was articulated by every man interviewed for the research. Some even confessed that this tight rope balancing act of being the main support for their wife, and also manage their own disappointment and emotions, leaves them stressed. And they do not have anybody to talk to or share with or discuss about their anxieties. They do not even consider talking to their partners in the fear that it will increase her already high level of stress and anxiety. Indraneel from Kolkata who has a small garment business discloses:

“I’m preoccupied with my business all the time. I am not that close with my friends that I will discuss my personal life with them. It’s very formal. I worry when I am idle after my shop closes, but at home my mother and wife are already tense, so I do not want to add on to that. I have to keep myself occupied and busy to keep from worrying.” Indraneel, (Kolika’s husband) Kolkata.

As pointed by Hinton and Miller (2013), in their study on infertility and fatherhood among men, they also undergo stress related to their reproductive trajectories. This stress mainly stems from the expected gender role of a man, where he is expected to be caring, strong, supportive yet unaffected by the everyday experiences. In their study, few men even expressed how they feel caught in paradoxical situations, where he is expected to commit for the treatment but is also marginalised and irrelevant for the same treatment. They find themselves in a spot where they do not know what is expected of them and what they should do (Hinton & Miller, 2013).

Fieldwork in both Hyderabad and Kolkata highlighted the fact that men do not experience “spoiled identities” as women do. They appear to easily avoid, distract and compartmentalise their roles and responsibilities. Since achieving fatherhood is not generally considered as a rite-to-passage for a man (as compared to a woman), they channelise their energy, frustration, despair, hopelessness, stress, anxiety and anger into their work. However, some want to be equal partners but are limited by the nature of ART procedures and the expected gender role. There were also few cases (6 cases) where men did not own up their diagnosis publicly (when diagnosed with male factor

infertility) and made the woman take the blame and shame for their infertile condition. While, few women were forced to take the burden of their husband's medical condition, some, voluntarily accepted the burden as they wanted to keep the male infertile condition as a secret - protecting their husband from public questioning and victimisation. Anjali from Hyderabad confessed:

“Our families do not know the specifics of our treatment. Both the families know that I am undergoing fertility treatment. He feels it is unnecessary to explain everything to everyone, so there is no point telling about the condition (hinting at azoospermia). He does not want to reveal it. And I am fine with it.” Anjali, Hyderabad.

Anjali (29 years) is married to Arun (39 years) for the past six years. He has been diagnosed with male factor infertility, where Arun suffers from azoospermia. They hail from a middle class family and Arun works with an IT company in Hyderabad. Since Arun does not want to disclose that he is suffering from male factor infertility, he has convinced his wife to keep it a secret and take the blame on herself.

On a different note, Stephie volunteered to take the blame on herself, thinking it will help them to manage their family and their fertility treatment well. She says:

“My family knows that that my husband has some fertility issues, though not in detail. But his family does not know anything. We know they will not understand this, so we did not inform specifically. They know I am undergoing treatment. It is easy to handle them that way.” Stephie, Hyderabad.

Stephie (27 years) is married to Garry (31 years) for the past five years. They have been trying to conceive for the last two years without any result. They have been diagnosed with primary male factor infertility and were on their second cycle of IUI at the time of the interview. Stephie was cheerful and blatantly honest about her life and her husband. While she uninhibitedly expressed her disbelief in following religious practices in overcoming infertility, she also expressed the futility in eating a fruit given by the Church (to enhance her fertility) as she herself is not diagnosed with any serious medical problem. She was honest in telling how she does not share a bond with her husband in which she can talk about her stress, anxiety, despair related to infertility and fertility treatment, because he does not understand her.

The secrecy around male-infertility was largely normalised by the couples, and was an obvious and easy choice for the men concerned. Male infertility was hidden and not talked about. Women were either forced or volunteered to keep male infertility a secret and take the burden of infertility on themselves to protect the ‘image of malehood’ of their husband. This internalisation of patriarchy was found in both Hyderabad and Kolkata. Few of the women interviewed tried to hide that their husbands are suffering from male factor infertility. Depending on the observation of their body language and their inconsistent responses, an attempt was made to probe their basic diagnosis result with the clinic staff through casual conversation whenever possible. Based on their revelation it was concluded that few women tried to hide the correct diagnosis report during the interview. One woman revealed that her husband was bearing all the expenses of the treatment just because he is diagnosed with oligospermia⁵², but her apprehension was that he will stop paying for the treatment once his condition improves. She confides:

“As of now my husband is bearing all the expenses because he has been diagnosed with low sperm count. He has already informed me that once the pregnancy is confirmed he will not bear any further expenses because that means he has overcome his medical condition.” Lavanya, Hyderabad.

Therefore, while in some cases men were inconsistent in accepting and acknowledge their infertility, in other cases women voluntarily or involuntarily tried to take the burden of infertility on themselves, despite being fertile. Patriarchal pressures and gender socialisation play an important role in such cultural practices, where infertility is still synonymous with women, while men get the power, authority and ‘choice’ to decide whether they want to reveal their true medical diagnosis or not.

However, there were also cases where men uninhibitedly accepted and acknowledged their infertility and were concerned about the aggressive treatment their partners were undergoing. Although, they were unhappy with the cultural appropriateness of infertility on their wife and wanted to reverse their medical condition with maximum effort, they themselves never had “spoiled identities” where treatment has taken over

⁵² Oligospermia is a condition of male infertility characterized by low sperm count (Source : <https://www.healthline.com/health/mens-health/oligospermia#:~:text=Oligospermia%20is%20a%20male%20fertility,can%20vary%20throughout%20your%20life.>) accessed on 26.04.2021

their entire existence. They still managed to separate their professional, personal life and other priorities from the goal of being a father.

5.5. Alternate Treatment Options and Infertility and/or Reproductive Loss

In all societies, reproduction is guided by religion in some form or the other. Almost all religion encourages reproduction and the expansion of kinship. Conception and the expansion of the lineage and the continuation of the bloodline are considered as a rightful duty of every individual. Literature on reproductive loss, infertility, assisted reproduction and the role of religion is scanty and is very local in nature (Greil, et al, 2010). While there is a small body of literature on infertility, infertility treatment and religion focusing on Egypt (Inhorn, 2012) Jews, Christians and Muslims (See Roudsari, Allan and Smith 2007; Inhorn 2006), there is not much body of work focusing on India or Hinduism in general except very few (Bharadwaj 2006; Sewpaul 1999; Dutney 2007).

Fieldwork in Hyderabad and Kolkata highlighted the presence and importance of religion in the fertility treatment journey. It was observed that almost all the fertility clinic spaces had one or more religious symbols like – idol of a god/goddess, photograph of a god, a worshipping space where every day puja is conducted, motivational quotes or messages (which are part of the clinic décor and visual aesthetics) referring to any God, religion, spirituality, miracle or any cosmological force beyond us. The presence of an idol of lord Ganesha, framed picture of lord Krishna, framed picture of Jesus and mother Mary, picture of Kaaba were common sights across clinics in Hyderabad and Kolkata. These iconographic presence of divine interventions reflect the importance placed on religion in scientific, medical treatments and our common understanding of healing. The role of religion in fertility treatment and ART is not only limited to visual composition of the clinic but also came across during interviews conducted with the treatment seeking individuals, doctors, clinic staff and field observation notes.

Interviews with doctors revealed how the help of divine intervention is sought even with the state of art technology and medical innovations. Doctors unanimously acknowledged the role of divine interventions in the success of any infertility treatment. Bharadwaj (2006) reckons assisted reproductive technologies to be “incomplete

science”, the success of any infertility treatment is attributed to the joint role of divine blessing and modern science. On similar note, a doctor in Hyderabad endorses:

“ART is nothing new for the Indian society. Historically there have been cases of alternative reproduction in both Ramayana and Mahabharata. Gandhari’s 101 sons and Kunti’s pregnancy are nothing but ancient ART technology. So we should take pride and not be hesitant in using it.” D4H, Hyderabad

D4H is one of the well-known senior obstetricians in the city of Hyderabad who is attached to one of the clinics which refused to participate in the research citing issues related to the confidentiality of the treatment seeking individuals. She has more than twenty years of experience in this field and hardly has any time to spare other than for patients and potential clients. Her views echo what Sanjay Kalra et.al. (2016) write,

“King Dashrath is perhaps the first reported case of infertility in the world. Trying to achieve fertility, he conducted a horse sacrifice, and for this he received God-sent porridge. This porridge was divided among his wives.....It must be noted here that though Dashrath might have been the cause of subfertility (male factor), the treatment described was female-centric, and was the forerunner of induction of ovulation.

Sagar, the King of Ayodhya, was affected by infertility as well. His wives Kesini and Sumati received medication from Sage Bhrigu who asked them to choose between two types of drugs. Sumati opted to take an “ovulation inducer” which created 60000 capable sons...

Janaka, King of Mithila, tried a different mode of treatment. Unable to beget children, he and his wife received their daughter Sita as a gift from mother Earth. This was probably an example of adoption, or surrogate motherhood, practiced with utmost confidentiality.” (Kalra, Baruah, & Kalra, 2016, p. 717)

While D4H traced advanced assisted reproductive technologies to Indian myths like Mahabharata and Ramayana, D3K from Kolkata believes science does not act in vacuum alone but needs assistance of divine power. She says:

“Everything is not in our hand. We do the medical procedures to the best of our abilities and knowledge. But at the end of the day it depends on God’s will. Otherwise how do you explain varying results for same procedures done on two

different individuals with the same conditions? There are few things which science cannot explain, they are beyond our control.” D3K, Kolkata.

D3K is a renowned obstetrician and advanced laparoscopic surgeon who has collaborated with the best hospitals in Kolkata and has also joined the upcoming corporate hospitals which offer fertility services as a specialist. She acknowledges that there are limitations of what scientific expertise can achieve and needs external assistance in creating a human life; this is what Bharadwaj (2006) calls “*the process of assisting nature itself needed assistance*” (Bharadwaj, 2006, p. 456). This reliance on spiritual or religious explanations was not only limited to the providers of these technologies, but also the treatment seeking individuals who drew a lot from such faith.

Respondents in both Hyderabad and Kolkata, kept invoking terms like “god’s will”, “destiny/fate”, “karma”, “god’s gift”, “miracle” and “*kismet/bhagya*”. It was interesting to note that both the success and failure of any treatment was associated with God’s will, cosmological forces, and destiny, but not the low success rate of such technologies (10-20% in general).

Namrata’s story reaffirms this. Namrata (32 years) is married to Krishna (33 years) for the past twelve years. They were diagnosed with primary unexplained infertility and were undergoing treatment for the past 9 years. They have faced 5 failed IUI and 4 IVF cycles in this last nine years. They hail from a middle class family where Krishna runs a small family business. They were in huge debt but still wanted to continue treatment for few more years with the hope of a positive result. She laments:

“Our fourth IVF attempt also failed. We will start with the 5th cycle of IVF very soon. I do not know why it is not working. We are doing everything and the doctors here are also doing their best still it is not happening. The doctor cannot identify any problem either. May be there is more struggle in our fate. We have left this to God, whenever God will want we will have our baby. We can only try our best from our side and we are doing that. Hopefully we will be successful in the next cycle. (Please pray for us).” Namrata, Hyderabad.

On the other hand Pratibha from Hyderabad says:

“I voluntarily underwent caesarean delivery because my son is a precious baby. I cannot afford to have any complications during the delivery. I thank God everyday till today for blessing me with a baby. I was on the verge of committing

suicide but I am happy God finally listened to my prayers.” Pratibha, Hyderabad.

Pratibha (38 years) is married to Vamshi (45 years) for the past fourteen years. They were diagnosed with unexplained infertility and underwent treatment for ten long years. After 16 failed IUI and 2 IVF Pratibha finally gave birth to a healthy baby boy. At the time of the follow up interview, her son was around 3 years old. She still believes the first doctor conducted experiment and fertility research on her without her knowledge and that is why for ten years she did not see any success with that doctor. With the change in the doctor, her immediate IVF within the first month was successful and she is a happy mother now. She considers herself to be lucky and her son to be the “gift of god” and shows her gratitude to the almighty every single day. She happily exclaims that she thanks god daily for blessing her with a child.

Namrata and Pratibha represent extreme ends of a spectrum, where Namrata has only witnessed disappointment, failure, uncertainty and hopelessness, and Pratibha has finally seen the success of her long fertility treatment journey. In both the cases the presence of a supernatural force in the form of God is acknowledged irrespective of a treatment failure or success.

Interviews with other respondents also highlighted the association between religion, reproductive loss, infertility and fertility treatment. There were also respondents who admitted to keep religious fasts on specific days of the week, have made a “*mannat*”⁵³ to go for a pilgrimage to Mecca, or Kashi, or Tirupati or Shirdi, wear amulets made with herbs and roots given by local healers and priests to enhance their chances of conception. Respondents also confessed to tying stones, wishes written on a piece of paper and/or *uyyala*⁵⁴ to different trees, temples and dargahs (refer Fig. 23, 24, 25). Offering puja to fertility specific goddesses like *Parvati*⁵⁵, *Gauri*⁵⁶ and *Manasa*⁵⁷ were

⁵³ Mannat is a wish that one desires to come to fruition and the vow one makes to God after his/her wish comes true (Wikipedia) https://en.wikipedia.org/wiki/Mannat#cite_note-Asghar2016-2 last accessed on 11.07.2021.

⁵⁴ Uyyala are miniature baby cradle made of paper or silver and are tied to holy tree inside the temple complex at Komuravelli in Telangana. In the local folklore it is believed that if one makes a wish tying a uyyala and consumes the leaves from the two holy trees - Bandari and Gangiregu as part of their ritual then their wish of a child will come true.

⁵⁵ Parvati is a Hindu goddess associated with fertility, marital felicity, asceticism and power.

⁵⁶ Gauri or Bhavani is a Hindu goddess who is associated with fertility and abundance. She is worshipped mainly in the southern part of India.

also common in the narratives of these treatment seeking individuals. They believe that religion usually answers the questions that cannot be answered by science.

Fig. 23: Temple at Komuravalli, Telangana where childless couples tie coconut wrapped in a cloth with rice with the hope of getting their wishes fulfilled



Source: Researcher

Fig. 24: Temple near Hyderabad where people make wish for a child by tying rice in a red cloth



Source: Researcher

⁵⁷ Manasa or Manasa Devi is a Hindu goddess of snakes, associated with prevention and cure of snake bite and also for fertility and prosperity. She is worshipped mainly in the eastern part of India specific to West Bengal, Jharkhand, Bihar and other parts of northeastern India.

Fig. 25: Uyala or baby cradle made of silver to tie in the holy peepal tree at Komuravelli in wish of a baby



Source: Researcher

Along with allopathic treatment many respondents followed different religious beliefs, superstition and alternate treatment options. Ayurveda, Unani and Homeopathy were the most sought after alternate treatment options found in Hyderabad and Kolkata respectively. There were some cases where treatment seeking individuals started non-allopathic treatment at the beginning and after getting no success they shifted to the modern biomedical treatment options (allopathic). Alternatively, there were also cases where individuals continued their allopathic treatment along with alternate treatment options, religious practices simultaneously to maximise their chances of conception. There were also cases where individuals transgressed from their own particular religion to another religion with the hope of a divine miracle. As Preethi from Hyderabad says:

“I pray at the local temple, do every day regular prayer at home and I keep fast on every Sunday. I also visit the dargah at Gulbarga⁵⁸ once a month. I have made a wish there; hopefully it will come true very soon.” Preethi, Hyderabad.

Preethi was the only respondent who opted for surrogacy after multiple failed IUI and IVF. She is struggling with her health issues and is not medically capable of carrying a pregnancy to term. She believes there is no one but God who can help her now to beget a child.

⁵⁸ The Khwaja Bande Nawaz Dargah at Gulbarga is revered by Muslims and people of other religion. It is believed that at the grave of Khwaja Bande Nawaz's daughter there is a neem tree and if one chews a few neem leaves from that tree and makes a wish, it is believed the wish comes true.

Therefore, the relationship between religion and infertility and/or reproductive loss and fertility treatment is very important and delicate. When one loses hope with scientific, medical approach, then they try and cling on to religious and spiritual beliefs to get through their suffering and difficult times. The uncertainty of their reproductive future, of medical procedures and eventually their life goal to be a parent, is left to be fulfilled by the cosmological forces. Although there were a few respondents who were dismissive of such ritual practices, citing the necessity to approach infertility in a scientific manner, there was a large pool of respondents (including both doctors and treatment seeking individuals) who had faith in religious and spiritual forces to act in collaboration with medical interventions.

5.6. Living with Hope of Motherhood/Parenthood and ‘Rainbow Babies’

As elaborated in earlier part of the thesis, it is this idea of hope that drives the fertility market, not only from the market perspective, but also from the consumer perspective. The narratives from the two field sites reinforce the fact that ‘hope’ is what makes the couples coming back for treatment, despite repeated failures. Most respondents struggling to cope with infertility and/or reproductive loss and fertility treatment believe there is always a ray of light at the end of the tunnel, and that is ART. Hope plays a significant role in shifting attention from the present vulnerability to a hopeful future. The faith in science and technological advancement is the core idea behind the global acceptance of medical advancement in improving one’s life condition. More often than not, this belief in science leads to blind faith in modern biomedical interventions making people believe if anyone can achieve their goal once, they too can achieve the same goal. This is echoed in Sarthak’s narrative. While elaborating on his confidence in ART and dismissing Jayshree’s anxiety and apprehensions, he narrates:

“I know we will be successful this time also because we had our first child through IVF too. We just have to keep trying and at the right time we will have good news. We just need to hold on till then. I am confident that with the help of science we will get the desired result. We have already been successful with our first child and I know we will be successful again”. Sarthak, Kolkata.

The idea of hope helps one to overcome a difficult situation. Hope is what keeps these treatment seeking individuals going. They are always constantly questioning

themselves, reviewing their treatment options and asking each other – *Do we have any reasons for hope?* Although this question might appear too simple, it is the most difficult question for them to answer. Most respondents confess that they always try to respond in the affirmative, because pessimism will not take them anywhere other than the dark world of guilt, shame and failure. Niladri says:

“I am hopeful that we will be successful with IVF, if not the first time but may be the second time. We are taking donor eggs to improve the chances and the doctor has assured us that there is still chance for us to have our own baby with the help of IVF. Many people are using these technologies and are becoming successful, so we are taking our chances too. We do not have much time to waste. If we fail with IVF and surrogacy then we will think about adoption, otherwise not.” Niladri, Kolkata.

This act of clinging on to hope was found across every respondent interviewed in Hyderabad and Kolkata. Irrespective of whether this hope was manufactured by the clinics through advertisements, brochures and awareness camps, or by doctors – the treatment seeking individuals have absorbed it and want to cling on to it as long as they can.

The quizzical question of what makes women like Nazia, Chandrima, Pratibha, Nausheen and Samyukta undergo fertility treatment for more than five years and extending it even to ten to fifteen years, can possibly be answered if one looks at their fertility treatment journey through the lens of hope. Each failed attempt shatters their hope and they go into self-doubt and evaluate their situation, but every single success in each step makes them hopeful of a better result in the following attempt. If in the first attempt their embryo fertilisation failed, they undergo a second attempt. If in the second attempt their embryo implantation fails, they consider moving on to the third cycle because the second cycle was a progress from the first cycle. And this cycle of clinging on to hope with every passing cycle and consecutive steps continues. They might be financially and physically exhausted, but after investing so many years in fertility treatment and the desperation to make it successful, makes them scared to think about their lives without treatment and therefore without a child. This is reflected in Pratibha and Nazia’s stories. Pratibha confesses:

“You know around fifteen years back she was one of the top doctors in Hyderabad who was doing fertility treatments. I continued treatment with her for 10 long years and underwent 16 IUIs, 3 laparoscopic surgeries and thousands of scans and tests. I never doubted her and thought of changing doctor because she always assured me that my reports are good and my chances are improving. But after 10 years of continuous failure I changed the doctor and immediately my next IVF was successful.” Pratibha, Hyderabad.

Similarly, Nazia says:

“I am continuing treatment for the past fifteen years now. Doctors say our individuals reports have improved and there are high chances of conceiving. Earlier I had two successful IUIs but had spontaneous miscarriages in fourth and fifth month respectively. I know I can get pregnant but it is just taking a longer time and I am willing to hold on as long as it takes. I have told the doctor to do anything but I just want a child.” Nazia, Hyderabad.

As elaborated earlier, hope is not only manufactured by the providers of these technologies, but they are marketed in a way where an illusion of choice is created. Where one is made to believe that they are making a choice to undergo certain medical interventions and it has an easy entry and exit. On the contrary, in reality that choice is already predetermined and it is constructed in such a way that one fails to see one's existence without it. So as Patrick Brown (2017) writes, *“So while hope can be a potent tool in coping with vulnerability, there is always something about hoping which makes us vulnerable in turn”* (Brown, 2017).

Success stories of other couples also acts as an encouragement factor for these treatment seeking individuals to continue their fertility treatment for years. The feeling that “we are not far behind”, “we might also get a good news any time soon” are recurrent in narratives across both the research sites. The stories of ‘rainbow babies’⁵⁹ makes them persistent and desperate to elongate their treatment duration than initially planned.

⁵⁹ A rainbow baby is a name coined for a healthy baby born after losing a baby due to miscarriage, infant loss, stillbirth, or neonatal death. The name “rainbow baby” comes from the idea of a rainbow appearing in the sky after a storm, or after a dark and turbulent time, signifying hope and healing. (Source <https://www.healthline.com/health/pregnancy/rainbow-baby>) last accessed on 01.04.2021

Out of 75 treatment seeking individuals interviewed, 3 respondents had successful deliveries and are parents to healthy kids. 2 respondents in Hyderabad and 1 respondent in Kolkata had successful pregnancies after undergoing IUI and IVFs. Pratibha is a mother of 3 year old son and believes that is the greatest gift she has got in her life. After struggling with infertility at the young age of 24 years old, she continued fertility treatment for 10 long years and finally gave birth to a healthy boy in 2018. Looking at her son she confesses:

“That day when the doctor refused to treat me after 10 years of treatment and told me that there are no chances of me getting pregnant, I was shattered. You will not believe but I was considering committing suicide. My life was nothing without becoming a mother. After changing the doctor when I got a positive result in the next IVF I did not risk anything. My son is the greatest gift of my life. He is a precious baby. Now whenever I look at him I feel those 10 years of pain and disappointment was nothing in comparison to the joy of becoming a mother.” Pratibha, Hyderabad.

Similarly, Sarmistha reiterates:

“I underwent 4 IUIs and they failed. Last year I underwent first IVF and my first IVF was successful. My daughter is now 6 months old and she is healthy and happy. All of us were shocked with the first attempt being successful, even the doctors did not expect that. We were certain that we have to undergo at least 2 IVF cycles to be successful. But miracles do happen, right? When I look at my daughter - her laugh, her cry everything just melts my heart. Those 4 years of treatment is insignificant in front of that. When you see a part of yourself everyday it gives a different feeling of joy, which I cannot express.” Sarmistha, Kolkata.

These stories of successful treatment and achieving their dream of parenthood are not only circulated among fellow treatment seeking individuals in a particular clinic, but are also used as strategies for the fertility clinics to create a sense of hope among the infertile individuals. Sarmistha's successful story came to notice when the fertility clinic in Kolkata was visited for a follow up and her photograph with her new born daughter was on the clinic wall of success stories. Upon noticing her happy photo with her newborn born daughter she was contacted for further interview. She was not only

ecstatic to share her joy but also consciously wanted to put out a message that – there is light at the end of every tunnel.

5.7. Summary

This chapter shifts from the macro - economic aspect of fertility industry to the micro everyday experiences of the treatment seeking individuals. It makes an attempt to understand the everyday struggle of the respondents and their changing social relationships. At the foremost, the chapter highlights the importance of the social location in understanding infertility and/or reproductive loss. The cultural matrixes, the nature of the society, the value given to kids in the society are important markers in understanding the consequences of infertility and/or reproductive loss, and what these treatment seeking individuals' experience. A great amount of work has already been done focusing on the psychological effect of infertility on individuals. Though this research resonates with the findings of earlier pool of literature on infertility and its psychological effects, it alerts one to understand the nuances between understanding the different emotions and how they are generally gendered. With the help of broad emotional categories like anxiety, shame, blame, guilt, stigma, despair the research tries to understand the everyday experiences of these treatment seeking individuals.

The stigmatisation of infertility and its feminisation have long been discussed across studies on different research settings. The Indian scenario is no different. Fieldwork in Hyderabad and Kolkata reaffirms the patriarchal, pro-natalist nature of the society and the regional differences are nothing but glaring. Women have been found to suffer from “spoiled identities” owing to the gender socialisation and the importance placed on motherhood for women to be complete, respected, valued and recognised in the society. However, men also expressed their psychological distress related to fertility treatment and how they feel either left out or irrelevant in the entire treatment journey, as most of the medical interventions are directed towards the woman and the female body. While some men expressed sympathy and concern about their female partner and the physical cost they pay for undergoing fertility treatment, others were dismissive and felt that was a natural result of the failure of a woman's body.

Infertility and/or reproductive loss brings a lot of changes in the social relationship of these individuals. Their inter-personal relationships with each other (husband and wife),

their family members, and the larger society goes through massive changes as they feel they are inadequate, incomplete and not normal like other individuals in the society. Religion plays an important role for these individuals to navigate through these uncertainties and stress. It not only provides an anchor for them to sustain their faith in science and in the larger cosmological forces like God or any divine power but it also provides them with a relief, a way to distract from the worldly insecurities and their uncertain future of parenthood.

Finally this chapter concludes, by elaborating how the idea of hope plays a pivotal role for every stakeholder in the fertility industry. Hope is one of the important factors which make these individuals cling on to the fertility treatments. It can be harmful and a matter of concern for most of the individuals who spend more than five years of their life undergoing such aggressive treatment as few of them see light at the end of the tunnel.

Few success stories provide meaning to their long tryst with infertility/reproductive loss and fertility treatment. Except three respondents (two in Hyderabad and one in Kolkata) out of 75 respondents interviewed, none had a successful pregnancy over a span of three years of interview and years before that. In such a long span, the number of times they must have faced failure, loss, despair, hopelessness and in some cases death of their unborn child can be easily imagined and estimated. The journey which they make (out of choice or otherwise) is long drawn and with multiple obstacles. Each step they hope, takes them closer to their dream, but again with every successful step forward they have more at stake if they fail. The three respondents with their 'rainbow babies' claim to defeat infertility and consider themselves to be infertility survivors. They believe the birth of a child erases all the struggle, difficulty, and pain, loss they underwent over the past few years and see their child as the biggest gift from God.

For many, families have played an important role throughout their fertility treatment journey. While some preferred to shift in a nuclear family set up because of everyday nagging and struggle with the other family members, or because of the distance from the fertility clinic, others found a support system in their extended joint families. Since the experience of infertility and/or reproductive loss cannot be generalised in terms of medical and emotional requirements, one cannot assess the value of the family set up. Everyone has their own battle to fight. Some were very dependent on their families both

emotionally and financially, but some were also independent and self-reliant on matters of both emotional and financial support.

The idea of hope definitely drives them to embark and to continue their fertility treatment journey, but it has high stakes – emotional, financial and physical stress. The stories of these treatment seeking individuals resonate with multitude of emotions related to anxiety, despair, failure, loss and hope. While a few respondents were skeptical and hesitant to participate and answer honestly during interviews, most found the interviews as a vent to let out their emotions to a complete stranger, with no fear of judgment and criticism. Some found it therapeutic and cathartic to revisit and speak of their fertility journey. It appears that while living with infertility has become a part of their identity and everyday world, the emotional toll it has taken and is continuing to take, is something they have still not come to terms with.

CHAPTER 6

CONCLUSION

The title of this dissertation elucidates the purpose of this research, which is to establish linkages between the concepts of ‘Reproductive Loss’, ‘Infertility’ and ‘Hope’, by focusing on the experiences of fertility treatment seeking individuals in the context of Hyderabad and Kolkata. As mentioned at the outset of the research, due to the concentration of the fertility industry in the private health sector, this research is primarily based on a study of private clinics. This thesis draws on the voices of the respondents to let the field speak. Field narratives were categorised into different themes to bring out the major commonalities and differences among the respondents, without missing out the nuances. The narratives of these individuals have been documented in a manner which answers the broad research objectives flagged at the beginning of the thesis.

To recapitulate, the research objectives broadly include – firstly, to map infertility spatially across global, national, regional scales, and configure the place making of the clinic space. Secondly, to understand the fertility industry and how ‘hope’ is used as a tool in its marketing. This is achieved by reviewing the processes of commodification of these ARTs and unraveling the marketing strategies deployed, which are strongly influenced by hetero-patriarchal understanding of social institutions and relationships. Thirdly, to document their life world, the research attempted to capture the everyday experiences of these individuals’ struggle with reproductive loss, infertility and the subsequent treatment journey. Furthermore, it tried to identify the factors behind the consumption of these aggressive technologies and the meaning making processes associated with it, through in-depth interviews conducted with different categories of respondents.

This line of investigation and interpretation of data (both primary and secondary) thus pursued, provided certain important themes for discussion and analysis. These themes that emerge from a study of Hyderabad and Kolkata may be relevant at a national and global level, for situating the larger debates of fertility/infertility, childlessness, gender and body. Locating the main findings of this thesis within the identified conceptual frames of ‘place making’, ‘hope technologies’, and ‘reproductive loss’, the attempt in

this concluding chapter will be to capture and elaborate the key arguments that emerged in response to the broad research objectives outlined. It is hoped the thesis will contribute to the existing body of knowledge in infertility studies from a non-western standpoint.

6.1. Place Making of Clinic Spaces

The spatial perspective is important for this research as it highlights the need for understanding particularities and contexts. This was achieved through a qualitative study of the dynamics of fertility industry in India, focusing on the experiences of fertility treatment seeking individuals. As elaborated in Chapter 3, the mapping of fertility clinics across the two cities of Hyderabad and Kolkata helps in identifying broad spatial patterns and trends.

Based on the field work conducted, three tentative broad models are identified in the private fertility industry to understand the functioning and the organisational structure of the clinics and hospitals. The first model (Model 1) includes the corporate hospitals or hospital chains that provide fertility treatment services. These hospitals or clinics have branches across major urban locations in the country with corporate ownership structure. The centres are identical in their visual aesthetics, standard architecture, similar interior designing. The second model (Model 2) comprises a group of doctors who are specialists in their respective fields, come together in a hospital or polyclinics set up and operate as a collective aimed at providing fertility treatment services. They have private ownership structure. The visual aesthetics are unique to the clinics as they are standalone units without any branches. In the third model (Model 3), a single doctor (usually a Gynecologist) is the face and name of a particular clinic. Other doctors in the team specialise in related areas but the clinic is identified with one particular doctor. It has joint ownership structure but centralised decision-making with the founding doctor enjoying greater powers. These clinics also have their unique visual aesthetics and do not resemble other clinics as they are standalone units.

The models are non-exhaustive, tentative and based on the fieldwork conducted in the two cities. They provide optics to understand the differences in clientele, pricing of the services provided, facilities available, intensity of treatment, and most importantly the experience of the treatment. The models provide an insight into the everyday

functioning of the clinics and the procedures a respondent undergoes during each visit, which becomes crucial in their long treatment journey.

At the micro level, the spatiality of the clinic space became a critical register for this research. The clinic was an important site for understanding the functioning of the market, and unpacking the experiences of treatment. Since the clinic space is the 'site of consumption' where all stake holders converge, it influences and defines these processes. As discussed in the thesis, the three conceptual frameworks of 'therapeutic landscape', 'waiting room aesthetics', and 'spaces of hope', help in understanding the place making process of the clinic.

The vision and rationale shared by the doctors interviewed highlighted the intentionality in projecting their clinic in a certain manner. Fertility clinics are conceptualised with a certain rationale, vision and purpose, which are entrenched in the ideas of healing, cure, and optimism. The visual aesthetics, the designing, and the underlying principle behind projecting the clinic space in a certain way is premised on pregnancy, birth of a child, hope for the hopeless, and a child for the childless. Clinic space through its décor and design endorse the heteronormative, patriarchal notion of a family being incomplete without a biological child. The therapeutic nature of the clinic space (in its built environment), the making of the waiting room (with its pictures/ photos), all combine to project the clinic space - as a space of hope.

Findings from field work show how the clinic space is infused with different meanings and hope for individuals visiting the place. The experience of each individual associated with a particular clinic depends on their relationship with the clinic (as a doctor, 'patient', clinic staff, and visitor), their location in the treatment journey and other individual factors. It is important to understand that fertility treatment procedures are long drawn, extending over months/years and comprising multiple visits to the clinic. The respondents' fertility treatment duration ranged from 2-15 years, making it a long engagement with the clinic space.

Narratives also highlighted how the clinic space functions as a safe haven for these individuals. It offers a degree of comfort as each one is aware that the others there belong to the same 'incomplete family' group. There appears to be a feeling of consolation in being part of a homogeneous community, sharing a similar desire. The familiarity with each other and each other's' struggle (both literally and

metaphorically), itself becomes therapeutic for them. For them, it is the clinic space where they are not stigmatised, instead it is here that they see a possibility to overcome their situation. The clinic signifies multiple meanings for the respondents, of which hope is most dominant, but is also marked by loss and despair. It has witnessed far more episodes of loss, despair, failure than success, which are made invisible in the advertisements/ brochures and other marketing tools of the clinic and the fertility industry. Therefore, the clinic space is not only a 'space of hope', but also a space of loss.

As demonstrated in the chapters, for the fertility 'patients' whose treatment regimen is long drawn, waiting is an important part of their treatment journey. They either are waiting to consult the doctor, waiting for tests, waiting for results, or waiting to recover or be cured. As all these happen in the waiting room or lounge, this particular space becomes an important register to understand their experience of infertility and/or reproductive loss and treatment seeking behaviour. It is considered to be the liminal space where the respondents are in between results of certainty. Since 'the act of waiting' also was what the researcher went through while conducting her research, observations in the clinic space became part of the study description. The 'waiting room' was the common area where both the respondents and the researcher met and where most interactions took place. It was here that all emotions were visible, sometimes publicly. Often, the body language of the respondents revealed far more than their narratives. The tension, anxiety, stress, hope, of the respondents found expression in this comforting space. 'Waiting' provided insights in understanding the clinic space and the necessity to identify it as an important matrix to understand the processes and experiences related to fertility treatment.

The liminality of the place was articulated across the groups of respondents. It was observed, that the clinic space acted as a 'rite of passage' for these treatment seeking individuals. Outside the clinic space was their 'incomplete' life, where they felt they missed the joy of parenthood and were blamed for the same, while the clinic and the waiting room (the consultation room and labs) held the promised future of a biological child to make their family 'complete'. From their entry into the 'hope' of the clinic space to counter the stigma of the outside social constructions and relationships, to their exit into the world full of despair, hopelessness after failures in treatment, is one of the most difficult and painful journeys they have to constantly negotiate. Thus, the time

spent in the clinic and especially in the waiting room/lobby, becomes a liminal phase for them, crucial in deciding their reproductive future. While one agrees that the meaning making process of a space is dynamic and one particular space does not hold the same meaning for everyone, the attempt in this research was to broadly elucidate the larger trends, patterns and processes which take place in the clinic that have larger implications. It is this place where the chronic optimism and profit motive of the fertility industry, and the desperate desire of the fertility treatment seeking individuals to have their own biological child, come together.

6.2. Marketing of ART as Hope Technologies

This research acknowledges the different vantage points of understanding ‘hope’ as a concept, but restricts and anchors itself in the commonsensical understanding of hope and its application in the field of health sociology (See Petersen, 2015; Petersen & Wilkinson, 2015). As discussed in the thesis and especially in Chapter 4, in order to understand the functioning of the fertility industry, it is crucial to understand the nature of the ARTs and services provided, and the strategies deployed in marketing them. The selling of ART as the ‘cure’ for infertility and reproductive loss and positioning it as ‘hope technologies’ have impacted how the treatment seekers view these treatments and what they expect from it.

In the earlier chapters, a critical reading of advertisements across different media, brochures, leaflets, flyers, reveal an exaggeration about the biological clock, increasing infertility rate due to changing lifestyle factors – creating a sense of urgency and panic for people to avail these treatments. The marketing strategies evoke the feeling of ‘missing the joy of parenthood (of a biological child)’, which are internalised by the respondents. The intentionality of these adverts, only highlighting the optimism of high success rates, positive outcomes and a happy journey towards achieving motherhood/fatherhood/ parenthood, creates a false sense of illusion among the prospective treatment seekers.

Aggressive projection and advertising the clinic as a ‘miracle’ space through fertility treatment, creates a sense of hope among the fertility seeking individuals, invariably creating a demand for the consumption of these technologies. Marketing of hope, projecting the clinic as the only saviour for the couples/individuals struggling to have a

biological child, is documented in the chapters. Moreover, the hyper visibility of these fertility clinics along with the easy availability and accessibility of ARTs have played an important role in the rising consumption of these invasive technologies, despite the skewed success rates. Hope is used as a tool to an extent that the hyper visibility of happy faces, success stories make the audience ‘blind’ towards other unfavourable possible outcomes of the treatment. When in their treatment journey they meet with constant failure, despair and struggle, contrary to what was promised by these technologies, they get stuck in a limbo, where they find it difficult to continue but do not want to quit the treatment.

In this context, it is important to understand that the dominance of the biomedical model in fertility treatment and its concentration in the private health sector has raised questions of affordability and accessibility, which reinforces the phenomenon of ‘stratified reproduction’ (Colen, 1995). The financial resources of an individual determine their accessibility to these treatments. However, as this research reveals, the marketing of hope and the desperation of fertility treatment seeking individuals, initially ignores these questions of pricing, affordability, and financial burden. Respondents narrated the ways and means to avail the services of ART - selling land, gold, and drawing on life-savings, borrowing money from local money lenders, bank loans, and expecting the wife’s family to pay – they have tried all options.

As elaborated in the chapters, among the respondents interviewed there were only three individuals undergoing aggressive fertility treatment for secondary infertility. Successful result with IVF in their first pregnancy gave them the confidence, assurance, hope, to undergo fertility treatment for their second pregnancy. Their decision makes one question the rationale behind the consumption of these technologies with respect to the cost (financial, emotional, and physical) one bears. The desperation behind the consumption of these aggressive technologies is not just to cure ‘infertility’ for some, but to meet their personal wish to achieve their desired family size, which is made possible with the availability and accessibility of these technologies. Against this backdrop, it becomes meaningful to understand the nuanced experiences of infertility and reproductive loss which individuals and couples undergo, and how it shapes their social relationships and their own individual identity.

6.3. Understanding Reproductive Loss and Infertility

One of the research objectives for this study was to understand the experience of reproductive loss and infertility. The attempt was to identify and interrogate the factors and processes which shape the varied everyday experience of infertility. As demonstrated, the marketing of ARTs as hope technologies have greatly influenced the decision of ‘consumers’ or individuals availing these services. The experience of stigma, gender discrimination (for both men and women), psychological distress, emotions of blame, guilt, anxiety, and despair dominated the narratives of the respondents in both Hyderabad and Kolkata. The socio-cultural location of these individuals informs their understanding of their body, their childlessness, their family relationships and their identity.

Everyday experiences of these individuals speak of the trauma, despair, hopelessness which span across years of their life in the attempt to ‘correct/ fix’ their failed bodies. The notions of a failing body, incomplete self and of being inferior to others are shaped by the cultural understanding of a woman’s body, the institution of marriage, and ways of defining a family. This has led them to devise various ways and means to navigate through the long journey of fertility treatment with regard to finance, social relationships, and family structure. Reinventing dowry practices in Hyderabad, finding coping strategies through strategic avoidance, shifting to a nuclear family structure, hiding the husband’s issue of male infertility – evolved as coping strategies to mediate the complex terrain of infertility and/or reproductive loss and fertility treatment.

The constant reminder of being childless and the high visibility of ART treatments, wreak havoc on their sense of their individual self, mental health and their relationships. Most got distanced from family members and relatives, and in some cases they even have problems with their spouse. The anxiety, stress and the psychological burden creates a rift in their marriage, where they feel left out, less understood, with a low sense of self-worth. Since both reproductive successes and reproductive loss are marked through the female body, the burden of being childless is disproportionate, affecting women much more than men. Nevertheless, this does not imply that men are not affected or their experiences can be dismissed or trivialised. But due to the patriarchal bias in understanding the female body and reproduction, the trauma of infertility for women is deep rooted and gendered.

It is important to note that individuals struggling with reproductive loss or childlessness differentiate themselves from the 'infertile'. A couple who lost their 13 year old daughter to encephalitis assert that their trauma and loss cannot be felt by anyone, not even by the infertile individuals/couples. They had a normal pregnancy and for them, losing a child is more traumatic than never being able to have a child, because they were once parents! Similarly, another woman who adopted her sister's daughter - still considers herself 'infertile' because she did not experience pregnancy. With adoption she completed her family and their dream of parenthood, but she still feels her family is incomplete and she is flawed.

In this context, it is interesting to understand how the 'treatment has become the illness' itself (Sandelowski, 1993). Respondents admitted about the treatment taking over their entire life-world, to an extent that some women quit their job to adhere to the hectic schedules of scans, tests, and medication. Some became so invested in the treatment that their life and everyday schedule revolved around each treatment cycle. Women were found to be suffering from "spoiled identities", where few of them admitted to being at a stage when they identify themselves only with the treatment, without which they feel lost. It appears that for some the treatment dominated and dictated their lives. Their lived experience of reproductive loss overshadowed their other social identities and relationships. They seem to be caught in a situation where they have internalised a strong desire for a biological child, with the hyped up promises these technologies make, over which they have little control to resist or question.

6.4. Hyderabad and Kolkata: Regional Contexts

It is important to reiterate that this study does not attempt to make a comparative analysis of Hyderabad and Kolkata, but rather takes these two sites as specific cases to understand the particularities reflective of the region they are located in. The study highlights how 'space' and 'region' emerge as important tropes to make sense of the findings. As the research is located in Regional Studies, it is useful to interrogate how the learning from this study can inform a spatial understanding of infertility that possibly other disciplines would find peripheral or not address. The regional lens helped one to map the two cities against the backdrop of their respective health policies,

demography, cultural practices and its influence in the dynamics of the current fertility industry.

Hyderabad had a long history of health reforms, privatisation of health and the dominance of corporate clinics providing health care services, making it one of the leading destinations for medical tourism, especially fertility tourism. The city was a popular surrogacy centre serving couples coming from across the world and India. Owing to the wide availability of private ART services, the acceptance of fertility treatment and ARTs happened early, leading to the prevalence of more aggressive treatment procedures and a longer treatment journey. On the contrary, Kolkata witnessed a late entry of private sector in health care, and the growth of fertility clinics is more recent. It appears that these factors may possibly explain the difference in treatment regimen and cost between Hyderabad and Kolkata, with a lesser presence of clinics, milder and cheaper treatment in the latter.

The regional studies approach helped in the mapping of clinics in each city, highlighting a spatial pattern of distribution. Most of the fertility clinics in Hyderabad and Kolkata, like elsewhere in the country, are in the private sector, with the corporate fertility clinic franchises making rapid inroads into all large cities and towns over the last decade. This fast growth of the fertility industry indicates the promise that the market holds for these services. The concentration of clinics in particular pockets and their scattered presence in other parts of the city, reflect the variations in the demographic and socio-economic characteristics of the localities. In both the research sites, the central parts of the city and the upscale areas (newer part of the cities) have witnessed the mushrooming of these clinics (across the three broad models identified) in the past few years. On the contrary, the older part of the cities sees less investment by the fertility industry, which could be a result of poor infrastructural facilities and transport network and/or lower paying capacity of the residents. This could also be due to the lack of space available in older parts of cities, tax and renting building regulations as compared to more planned and spread out relatively newer parts of the city. The study clearly shows that the spatial distribution of the clinics (particularly the corporate fertility clinics), reveal a clustering in the new and relatively affluent localities of the respective cities.

The specificities of the local contexts emerged as it drew attention to the local cultural practices that impact the understanding and experience of infertility and/or reproductive

loss. Respondents in Hyderabad admitted to ways to navigate the financial burden of treatment in the form of indirect dowry. In this new method of indirect dowry, the girl's family is obliged to pay for the fertility treatment and the delivery of the first child irrespective of the type of infertility. This practice seems fairly widely accepted, followed, and encouraged in Hyderabad, across religion, caste and class, as it is considered the duty of the girl's family to take care of the expenses of the delivery of the first child of their daughter.

There seems to be high resistance towards accepting male infertility in Hyderabad. Among the respondents interviewed in Hyderabad, the male respondents were hesitant to talk about their medical condition, and in some cases women too refused to elaborate on the infertility diagnosis of their husbands. There were also a few cases where women admitted their husband's refusal to undergo various tests which led to delays in treatment. The reluctance in informing the husband's family about his infertility and the tendency by the women to protect their husband and take the blame upon themselves, speaks volume about how the idea of bloodline, kinship and the patriarchal construct of the family that is ingrained in every individual. The reductive understanding of the purpose of women's lives – to reproduce progeny for the family and the larger society is culturally encouraged and supported by medical and legal institutions.

In some cases, couples in Hyderabad, admitted to seeking treatment for infertility after only six months of marriage, owing to extreme family pressure to have children and undergo treatment. Social acceptance and faith in ARTs was higher in Hyderabad and extended to not just the couple, but extended family too. This could possibly be due to the longer history of fertility treatment in Hyderabad in comparison to Kolkata. The difference in the history of health policies and the cultural practices, impact the type of family pressure one faces in the case of marriage and reproduction. In Kolkata couples spoke of moderate family pressure, with almost all the respondents waiting for 1-2 years after marriage before initiating fertility treatment.

In Hyderabad, there was a strong resistance towards the acceptance of male infertility, to an extent where some respondents were categorical about not using donor sperm in their treatment procedure. There were instances where a few respondents were hesitant and resisted accepting donor sperm but not donor ovum. While they were particular about using only the husband's sperm to continue the treatment, they were rather indifferent about whether the wife's ovum is used or not. Their strong desire to continue

the patriarchal bloodline was clearly evident. Furthermore, the respondents were dismissive about adoption, and considered ARTs as the only way to make their family 'complete'. Therefore, one notes that the obsession with bloodline, presence of patriarchal control over reproduction and the female body is explicitly visible even in the use of ARTs and other state-of-art technology.

In Kolkata, there were some differences observed from Hyderabad. There was a prevalence of Homeopathy, Ayurveda and other alternate medicines as first line of treatment. Almost all the respondents in Kolkata like Hyderabad were strongly dismissive about adoption, except a few who wanted to consider adoption only after exhausting all the ARTs options. Acceptance towards donor sperm and ovum was more flexible, where majority of the respondents prioritised the birth of a healthy child over issues of bloodline. In Kolkata, acceptance towards male infertility appears better, men interviewed openly discussed about their fertility issues, volunteering to seek treatment and were open about seeking medical help.

6.5. Key Findings and Directions for Further Research

As argued in the thesis, there is lacuna in understanding reproductive loss and infertility in not only our everyday lives, but at the larger global, political and policy making level. Historically, the interest in studying human reproduction has been restrictive in its approach, focusing only on fertility and the attempts to achieve reproductive success. The acknowledgement of reproductive failure and its consequences have not been an interest of research. However, with the changing conversations around fertility, and a growing interest in studying reproductive loss and specifically infertility, this has become a new focus of research. Reproduction or procreation is understood as one of the important purposes of the institution of marriage and the progression of an individual's life course. Almost all world religions are pro-life, encouraging the birth of a child as a divine and moral duty. Therefore, failures to have a child or any disruptions have dire consequences, particularly for the woman. If one has to understand these particularities or differences, one has to employ a regional perspective and the regional studies approach which may help to draw attention to the socio-cultural, economic, political, demographic factors that can explain different experiences of infertility.

The study points to the connections and intertwining of the global-national-regional-local scales. Global technologies have become accepted in the local/regional/national contexts with modifications and have given birth to interesting local practices which are articulated in varied ways – which this research tried to capture. This particular study is part of a larger picture of childlessness and how this childlessness is played out through the female body. Narratives of the respondents reveal how the modern technology of ARTs is hinged on the traditional stereotypical hetero-normative understanding of the complete family and the control of the female body.

ARTs might project themselves as optional treatment procedures, but in reality, the availability of these technologies in a society where birthing a child is celebrated and considered essential for transitioning from one life course to another, puts tremendous pressure on a woman and does not remain a reproductive choice. This reproductive ‘choice’ of whether to avail or not ART services does not rest with the woman. Other actors and processes inform those decisions where it is considered as the only option to overcome their childlessness. There is rather a lack of ‘choice’ and ‘agency’ for the women. Instead there is a ‘paradox’ of choice, where there is a sense of ‘compulsion to choose’; otherwise these women and couples will regret or will be made to suffer from anticipatory guilt of not trying hard enough.

Women interviewed revealed how in most cases, although it was the woman who initiated the treatment, yet decisions regarding treatment were made by the husband, as the financial control rests with them. Similarly, the medical decisions about the line of treatment were taken by the doctors and the service providers. Therefore, while ARTs are projected as providing an agency to women’s reproductive health, it rather proves to be a double edged sword where they are under a new form of control and surveillance. In most cases, women with a desperate desire to become mothers, find themselves powerless and helpless, where there is no scope of refusing to undergo a procedure or a particular line of treatment. This was articulated by stories of women whose health was affected by the invasive treatments, but who were still continuing the treatment.

The cultural and familial pressure to reproduce is further accentuated with ARTs. The fertility industry is built on the idea of reducing women to their reproductive capabilities and is now assisted with this tool of hope. Among the 75 treatment seeking individuals interviewed in Hyderabad and Kolkata, only 3 had a successful pregnancy during the three years of interview and years before that. A reading of the narratives of

the respondents clearly points out that even though most of them were unhappy with the situation that they were in at the time of the interview, yet none of them were willing to stop the treatment. The question that arises is what drove these 72 individuals interviewed, to continue the treatment? And the larger question is, despite the low success rate of these treatments (along with financial and physical stress it incurs), why is there a growing demand for these invasive and aggressive fertility treatments?

The answers may possibly lie in the convergence of the discourse on hope, commodification, marketing of ARTs as hope technologies and the intentionality in the place making process of the clinic space. These combine to lure these individuals to continue their treatment and prevent them from quitting. The desperate pressure to have a biological child which is culturally motivated, has pushed adoption as the last resort for just a few, and for many it is not even an option with the availability of ARTs. Through this research, the clinic space emerged as a very important node connecting all the stakeholders, and where the domination of the market is clearly visible. The clinic is the site where market, cultural notions of a 'complete family', patriarchy, and region – converge and get reinforced. This combination creates a situation where once you enter; exit is discouraged, is difficult and ridden with guilt. The respondents are caught in a vicious cycle of hope – treatment – failure – treatment – hope.

Concluding Comments:

In conclusion, it can be said that this thesis attempts to understand and unpack the experiences of infertility and/or reproductive loss through the different tropes of lived experiences, marketing strategies, and consumption behaviour. It highlights the growing over-medicalisation and commodification of health, specifically of fertility treatment. The research found that the discourse of hope plays a vital role in the marketing and growth of the fertility industry, and explains its rising consumption. The idea of Hope although abstract and subjective, is given a form and rather transformed into a commodity by the fertility industry. It can be inferred that the consumption of ARTs is nothing but the consumption of the hope or the illusion which it suggests. The epistemology of hope enables one to understand the complex nature of ART and its associated nuances. It helps one to navigate and interrogate the fertility business which

is growing, has rising demands despite skewed success rates, and high costs (financial, physical and mental).

Although ARTs are latest technologies, they are used to reinforce traditional, stereotypical understandings of body, particularly the female body, marriage, family, and parenthood. The feminist perspective enables one to identify the main factors behind the rapid expansion and consumption of ARTs. The uncritical internalisation of patriarchal constructs and practices by both the market and society; help in transforming ARTs as double edge sword where it has become more oppressive than emancipatory, contrary to the promise made by the technological advancement of science. The fertility industry harps on terms like ‘bloodline’ and ‘biological child’ as the cornerstones of its marketing policy, thus encouraging ARTs and surrogacy. While childlessness/infertility before ARTs, saw adoption as a popular option, today it is not so, as most prefer the invasive fertility treatment to have their own biological child. Consequently, women’s bodies continue being the experimental laboratory for fertility treatment.

This thesis can be seen as a work located in health sociology and regional studies, attempting to enlarge our understanding of hospital ethnographies in the global south. It is hoped this will add to the literature in infertility studies, particularly from a non-western standpoint. However, due to constraints of time (and the COVID-19 pandemic) a doctoral research is unable to capture all the complex dimensions of a research problem. A few interesting themes are identified with reference to ARTs and its consumption, which can be pursued for further research.

Due to the COVID-19 pandemic, one could not go back to the field to probe individual case studies of select respondents that would have provided thick descriptions into their lives and their experiences, helping one to understand their ‘lived experience’ better. This study could not address experiences based on the intersectionality of caste, class, religion, gender, sexuality, integral in the Indian context, and this needs to be probed as it offers interesting possibilities for further research. Including clinics of different model categories, from both public and private health sectors, would provide a better picture of the market reach of ARTs. While this study failed to engage with adoption in India in relation to the growing fertility industry, it acknowledges that this is an important aspect that needs further research. Finally, the role of the family is crucial in decision making for the individuals to undergo treatment and as a support system during the treatment. Since interviews were restricted only to the treatment seeking individuals, voices of the

immediate family members of the individuals/ couples undergoing treatment, can add to a more nuanced understanding of infertility.

Perceptions and experiences of childlessness, infertility, are not homogenous. Undoubtedly informed by heteronormativity, there is still some room left for personal sentiments, aspirations, and inhibitions, allowing differential attitudes and interpretations towards the entire process of ARTs, childbirth, and 'family'. It is this gap that offers possibilities of questioning beyond the pedantic notions of progeny. For e.g. why do some couples choose not to have a child? Why are some couples not in favour of ARTs? Why do some couples prefer adoption over ARTs? In case of those who do opt for ARTs, not only cis-heterosexual couples, single parents, queer couples as well, the way science provides them with an alternative, a cure for what is deemed as their 'impediment', redefines traditional views on 'parenthood', 'kinship', 'family' as sanctioned by society. These questions were beyond the scope of this study, but provide exciting possibilities for future research agendas.

BIBLIOGRAPHY

- Ademola, A. (1982). Changes in the patterns of marriage and divorce in a Yoruba town. *Rural Africana*, 14, 1-24.
- Amir, M. (2006). Bio-Temporality and Social Regulation: The Emergence of the Biological Clock. *Polygraph: An International Journal of Culture and Politics*, 18, 47-72.
- Anupama, M. (2019, February 12). Infertility on rise among couples: Doctors. *The Times of India*.
- Aravamudan, G. (2014). *Baby Makers. The Story of Indian Surrogacy*. Noida: HarperCollins .
- Balen, F. v., & Inhorn, M. C. (2002). Introduction. Interpreting Infertility: A View from the Social Sciences. In M. C. Inhorn, & F. v. Balen (Eds.), *Infertility Around the Globe. New Thinking on Childlessness, Gender, and Reproductive Technologies* (pp. 3-32). London: University of California Press.
- Baruch, E. H., Jr., A. F., & Seager., J. (Eds.). (1988). *Embryos, Ethics, and Women's Rights. Exploring the New Reproductive Technologies*. New York: Harrington Park Press.
- Basu, M. (2014, December 25). Falling total fertility rate in Kolkata sets alarm bells ringing. *LiveMint*.
- Bates, V. (2018). Sensing space and making place: the hospital and therapeutic landscapes in two cancer narratives. *Medical Humanities*, 0(1), 1-11.
- Becker, G., & Nachtigall, R. D. (1992). Eager for medicalisation: the social production of infertility as a disease. *Sociology of Health & Illness*, 14(4), 456-471.
- Bell, A. V. (2014). *Misconception: Social Class & Infertility in America*. New Brunswick: Rutgers University Press.
- Bell, A. V. (2015). Overcoming (and Maintaining) Reproductive Difference: Similarities in the Gendered Experience of Infertility. *Qualitative Sociology*, 38, 439-458.
- Bell, A. V. (2016). The margins of medicalization: Diversity and context through the case of infertility. *Social Science & Medicine*, 156, 39-46.
- Berger, P. L., & Luckmann, T. (1966). *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*. New York: Anchor Books.

- Bharadwaj, A. (2002). Conception Politics. Medical Egos, Media Spotlights, and the Contest over Test-Tube Firsts in India. In M. C. Inhorn, & F. V. Balen, *Infertility Around the Globe. New Thinking on Childlessness, Gender, and Reproductive Technologies* (pp. 315-334). London: University of California Press.
- Bharadwaj, A. (2003). Why adoption is not an option in India: the visibility of infertility, the secrecy of donor insemination, and other cultural complexities. *Social Science & Medicine*, 56, 1867-1880.
- Bharadwaj, A. (2006). Sacred Conceptions: Clinical Theodicies, Uncertain Science, and Technologies of Procreation in India. *Culture, Medicine and Psychiatry*, 30, 451-465.
- Bharadwaj, A. (2008). Biosociality to Bio-Crossings: Encounters with Assisted Conception and Embryonic Stem Cells in India. In S. Gibbon, & C. Novas (Eds.), *Genetics, Biosociality and the Social Sciences: Making Biologies and Identities* (pp. 98-116). London: Routledge.
- Bharadwaj, A. (2016). *Conceptions. Infertility and Procreative Technologies in India*. New Delhi: Orient BlackSwan.
- Bhattacharya, R. (Ed.). (2013). *Janani. Mothers, Daughters, Motherhood*. New Delhi: Sage Publications.
- Bhatti, L. I., Fikree, F. F., & Khan, A. (1999). The quest of infertile women in squatter settlements of Karachi, Pakistan: a qualitative study. 49, 637-649.
- Blenner, J. L. (1990). Passage through infertility treatment: a stage theory,. *Journal of Nursing Scholarship*, 22(3), 153-158.
- Blöser, C. (2020). Enlightenment Views of Hope. In S. van den Heuvel (Ed.), *Historical and Multidisciplinary Perspectives on Hope* (pp. 61-76). Switzerland: Springer.
- Blyth, E., & Landau, R. (Eds.). (2004). *Third Party Assisted Conception Across Cultures. Social, Legal and ethical perspectives*. London: Jessica KIngley Publishers.
- Boerma, J. T., & Mgalla, Z. (Eds.). (2001). *Women and Infertility in Africa. A Multidisciplinary Perspective*. Amsterdam: Royal Tropical Institute Press.
- Boivin, J. (2003). A review of psychosocial interventions in infertility. *Social Science & Medicine*, 57, 2325-2341.
- Boivin, J., Bunting, L., Collins, J. A., & Nygren, K. G. (2007). International estimates of infertility prevalence and treatment-seeking: potential need and demand for infertility medical care. *Human Reproduction*, 22(6), 1506-1512.

- Brown, P. (2017, April 05). *The Dark Side of Hope in Health Care*. Retrieved July 12, 2021, from <https://archive.discoversociety.org/2017/04/05/the-dark-side-of-hope-in-health-care/>
- Brown, P., de Graaf, S., & Hillen, M. (2015). The inherent tensions and ambiguities of hope: Towards a post-formal analysis of experiences of advanced-cancer patients. *Health, 19*(2), 207-225.
- Bury, M. (1982). Chronic illness as biographical disruption. *Sociology of Health and Illness, 4*(2), 167-182.
- Chakraborty, A. (2005). Confused Policy for Public-Private Partnership. *Economic and Political Weekly, 40*(5), 351-353.
- Chakraborty, A. (2021, February 24). *Is infertility rising in India? Probably, but doctors can't be sure due to lack of good data*. Retrieved July 25, 2021, from ThePrint: <https://theprint.in/health/is-infertility-rising-in-india-probably-but-doctors-cant-be-sure-due-to-lack-of-good-data/610185/>
- Chakraborty, A., & Mukherjee, S. (2003). Health Care in West Bengal: What Is Happening? *Economic and Political Weekly, 38*(48), 5021-5023.
- Charara, S. (2018, April 20). *Women's health tech is on the verge of something big*. Retrieved May 17, 2020, from Wareable: <https://www.wareable.com/health-and-wellbeing/state-of-womens-health-tech>
- Chen, T.-H., Chang, S.-P., Tsai, C.-F., & Juang, K.-D. (2004). Prevalence of depressive and anxiety disorders in an assisted reproductive technique clinic. *Human Reproduction, 19*(10), 2313-2318.
- Clarke, L. H., Matthews, A. M., & Matthews, R. (2006). The Continuity and Discontinuity of the Embodied Self in Infertility. *The Canadian Review of Sociology and Anthropology, 43*, 95-113.
- Colen, S. (1995). "Like a Mother to them": Stratified Reproduction and West Indian Childcare Workers and Employers in New York. In F. D. Ginsburg, & R. Rapp (Eds.), *Conceiving the New World Order. The Global Politics of Reproduction* (pp. 78-102). London: University of California Press.
- Connell, R. W., & Messerschmidt, J. W. (2005). Hegemonic Masculinity: Rethinking the Concept. *Gender & Society, 19*(6), 829-859.
- Conrad, P. (2007). *The Medicalization of Society. On the Transformation of Human Conditions into Treatable Disorders*. Baltimore: The Johns Hopkins University Press.
- Conrad, P., Mackie, T., & Mehrotra, A. (2010). Estimating the costs of medicalization. *Social Science & Medicine, 70*(12), 1943-1947.

- Constable, N. (2009). The Commodification of Intimacy: Marriage, Sex, and Reproductive Labour. *Annual Review of Anthropology*, 38, 49-64.
- Corea, G. (1985). *The Mother Machine: Reproductive Technology from Artificial Insemination to Artificial Wombs*. New York: Harper & Row.
- Costa, L., Vorinka, J., Landry, D., Reid, J., Mcfarlane, B., Reville, D., et al. (2012). Recovering our stories: A small act of resistance. *Studies in Social Justice*, 6(1), 85-101.
- Culley, L., Hudson, N., & Lohan, M. (2013). Where are all the men? The marginalization of men in Social scientific research on infertility. 27(3), 225-235.
- Das Gupta, M. (2016, August 24). *India proposes commercial surrogacy ban; live-ins, homosexuals worst hit*. Retrieved October 17, 2021, from Hindustan Times: <https://www.hindustantimes.com/india-news/india-proposes-ban-on-commercial-surrogacy-homosexuals-live-ins-worst-hit/story-Vb1fKz0XSJPdCT7GbympkO.html>
- Dasgupta, S., & Dasgupta, S. D. (Eds.). (2014). *Globalization And Transnational Surrogacy in India. Outsourcing Life*. New York: Lexington Books.
- Deomampo, D. (2013). Gendered Geographies of Reproductive Tourism. *Gender & Society*, 27(4), 1-24.
- Deomampo, D. (2013). Transnational Surrogacy in India: Interrogating Power and Women's Agency. *Frontiers: A Journal of Women Studies*, 34(3), 167-188.
- Diaz, M. Y. (2021). The Biological Clock: Age, Risk, and the Biopolitics of Reproductive Time. *Sex Roles*, 84, 765-778.
- Domar, A. D., Clapp, D., Slawsby, E. A., Dusek, J., Kessel, B., & Freizinger, M. (2000). Impact of group psychological interventions on pregnancy rates in infertile women. *Fertility and Sterility*, 73(4), 805-811.
- Down To Earth. (2018, June 25). Fertility in India is declining rapidly, says National Health Profile 2018. *DownToEarth*.
- Doyal, L. (1995). *What Makes Women Sick. Gender and the Political Economy of Health*. Hampshire: Macmillan Press.
- Drahos, P. (2004). Trading in Public Hope. *The Annals of the American Academy of Political and Social Science*, 592, 18-38.
- Dutney, A. (2007). Religion, infertility and assisted reproductive technology. *Best Practice & Research Clinical Obstetrics and Gynaecology*, 21(1), 169-180.

- Earle, S., Foley, P., Komaromy, C., & Lloyd, C. (2008). Conceptualising reproductive loss: A social science perspective. *Human Fertility*, 11(4), 259-262.
- Earle, S., Komaromy, C., & Layne, L. (2012). An Introduction to Understanding Reproductive Loss. In S. Earle, C. Komaromy, & L. Layne (Eds.), *Understanding Reproductive Loss. Perspectives on Life, Death and Fertility* (pp. 1-8). Farnham: Ashgate.
- Earle, S., Komaromy, C., & Layne, L. (Eds.). (2012). *Understanding Reproductive Loss. Perspectives on Life, Death and Fertility*. Farnham: Ashgate.
- Eberstadt, N. (2004). Russia's Demographic Straightjacket. *SAIS Review of International Affairs*, 24(2), 9-25.
- Ebin, V. (1982). Interpretations of infertility: the Aowin people of Southwest Ghana. In C. MacCormack (Ed.), *Ethnography of fertility and birth* (pp. 147-159). London: Academic Press.
- Ericksen, K., & Brunette, T. (1996). Patterns and predictors of infertility among African women: A cross-national survey of twenty-seven nations. *Social Science & Medicine*, 42(2), 209-220.
- Ernst & Young. (2015). *Call for Action: Expanding IVF treatment in India*. India: Ernst & Young.
- ESHRE Capri Workshop Group. (2015). Economic aspects of infertility care: a challenge for researchers and clinicians. *Human Reproduction*, 30(10), 2243-2248.
- Evans, J. D., Crooks, V. A., & Kingsbury, P. T. (2009). Theoretical injections: On the therapeutic aesthetics of medical spaces. *Social Science & Medicine*, 69(5), 716-721.
- Express News Service. (2021, July 11). Telangana: 8 in 10 patients at Warangal clinic have low sperm count. *The New Indian Express*.
- Featherstone, D., & Painter, J. (Eds.). (2013). *Spatial Politics. Essays for Doreen Maasey*. Oxford: Wiley- Blackwell.
- Finkler, K. (2008). What is Going on? Ethnography in Hospital Spaces. *Journal of Contemporary Ethnography*, 37(2), 246-250.
- Fledderjohann, J. (2012). 'Zero is not good for me': Implications of infertility in Ghana. *Human Reproduction*, 27(5), 1383-1390.
- Fortes, M. (1978). Parenthood, marriage and fertility in West Africa. *Journal of Development Studies*, 14, 121-149.

- Foucault, M. (1963). *The Birth of the Clinic: An Archaeology of Medical Perception* (1994 ed.). New York: Vintage Books.
- Foucault, M. (2003). *"Society Must Be Defended": Lectures at the Collège de France, 1975-1976*. (D. Macey, Trans.) New York: Picador.
- Frank, A. W. (2001). Can we Research Suffering? *Qualitative Health Research*, 11(3), 353-362.
- Franklin, S. (1995). Postmodern Procreation: A Cultural Account of Assisted Reproduction. In F. D. Ginsburg, & R. Rapp (Eds.), *Conceiving the New World Order. The Global Politics of Reproduction* (pp. 323-345). London: University of California Press.
- Franklin, S. (1997). *Embodied Progress: A cultural account of assisted conception*. London: Routledge.
- Fritsch, K. (2010). Intimate Assemblages: Disability, Intercorporeality, and the Labour of Attendant Care. *Critical Disability Discourses*, 2, 1-14.
- Galhardo, A., Pinto-Gouveia, J., Cunha, M., & Matos, M. (2011). The impact of shame and self-judgement on psychopathology in infertile patients. *Human Reproduction*, 26(9), 2408-2414.
- Gannon, K., Glover, L., & Abel, P. (2004). Masculinity, infertility, stigma and media reports. *Social Science & Medicine*, 59, 1169-1175.
- Garari, K. (2018, June 04). Fertility rate of Indian couples halves, says report. *Deccan Chronicle*.
- Geest, S. v., & Finkler, K. (2004). Hospital ethnography: Introduction. *Social Science and Medicine*, 59, 1995-2001.
- Gesler, W. (1992). Therapeutic Landscapes: Medical Issues in Light of the New Cultural Geography. *Social Science and Medicine*, 34(7), 735-746.
- Gesler, W. (2005). Editorial. Therapeutic landscapes: An evolving theme. *Health & Place*, 11, 295-297.
- Gilbert, P. (1998). What is shame? Some core issues and controversies. In P. Gilbert, & B. Andrews (Eds.), *Shame: Interpersonal Behaviour, Psychopathology and Culture* (pp. 3-36). New York: Oxford University Press.
- Ginsburg, F. D., & Rapp, R. (Eds.). (1995). *Conceiving the New World Order. The Global Politics of Reproduction*. London: University of California Press.
- Ginsburg, F., & Rapp, R. (1991). The Politics of Reproduction. *Annual Review of Anthropology*, 20, 311-43.

- Goffman, E. (1961). *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates*. New York: Anchor Books.
- Goffman, E. (1963). *Stigma: Notes on the Management of Spoiled Identity*. New Jersey: Prentice-Hall.
- Good, M.-J. D., Good, B. J., Schaffer, C., & Lind, S. E. (1990). American oncology and the discourse of hope. *Culture, Medicine and Psychiatry*, 14(1), 59-79.
- Greenhalgh, S. (Ed.). (1995). *Situating Fertility: Anthropology and demographic inquiry*. Cambridge: Cambridge University Press.
- Greil, A. (2002). Infertile Bodies. Medicalization, Metaphor and Agency. In M. C. Inhorn, & F. v. Balen (Eds.), *Infertility Around the Globe. New Thinking on Childlessness, Gender, and Reproductive Technologies* (pp. 101-118). London: University of California Press.
- Greil, A. L. (1991). *Not Yet Pregnant: Infertile Couples in Contemporary America*. New Brunswick: Rutgers University Press.
- Greil, A. L. (1997). Infertility and Psychological distress: A critical review of the literature. *Social Science & Medicine*, 45(11), 1679-1704.
- Greil, A. L., Leitko, T. A., & Porter, K. L. (1988). Infertility: His and Hers. *Gender & Society*, 2(2), 172-199.
- Greil, A. L., McQuillan, J., Lowry, M., & Shreffler, K. M. (2011). Infertility treatment and fertility-specific distress: A longitudinal analysis of a population-based sample of U.S. women. *Social Science & Medicine*, 73, 87-94.
- Greil, A. L., Shreffler, K. M., Schmidt, L., & McQuillan, J. (2011). Variation in distress among women with infertility: evidence from a population-based sample. *Human Reproduction*, 26(8), 2101-2112.
- Greil, A. L., Slauson-Blevins, K., & McQuillan, J. (2010). The experience of infertility: a review of recent literature. *Sociology of Health and Illness*, 32(1), 140-162.
- Greil, A., McQuillan, J., Benjamins, M., Johnson, D. R., Johnson, K. M., & Heinz, C. R. (2010). Specifying the effects of religion on medical helpseeking: The case of infertility. *Social Science & Medicine*, 71, 734-742.
- Gupta, A. (2016). Mapping Surrogacy in India: A Case Study of Hyderabad. *M.Phil Dissertation*. Hyderabad: University of Hyderabad.
- Gupta, A., & Prasad, S. (2019). 'Outsourced Pregnancy': Surrogate narratives from Hyderabad. *Contributions to Indian Sociology*, 53(2), 299-327.
- Gupta, J. A. (2000). *New Reproductive Technologies, Women's Health and Autonomy*. New Delhi: Sage Publications.

- Gupta, J. A. (2012). Reproductive biocrossings: Indian egg donors and surrogates in the globalized fertility market. *International Journal of Feminist Approaches to Bioethics*, 5(1), 25-51.
- Gurunath, S., Pandian, Z., Anderson, R. A., & Bhattacharya, S. (2011). Defining infertility - A systemic review of prevalence studies. *Human Reproduction Update*, 17(5), 575-588.
- Hakim, A., Sultan, M., & Faatehuddin. (2001). *Pakistan Reproductive Health and Family Planning Survey 2000-01. Preliminary Report*. Islamabad: National Institute of Population Studies.
- Harding, S. (Ed.). (1987). *Feminism and Methodology. Social Science Issues*. Bloomington: Indiana University Press.
- Heuvel, S. C. van den (Ed.). (2020). *Historical and Multidisciplinary Perspectives on Hope*. Switzerland: Springer.
- Hinton, L., & Miller, T. (2013). Mapping men's anticipations and experiences in the reproductive realm: (in)fertility journeys. *Reproductive BioMedicine Online*, 27(3), 244-252.
- Hochschild, A. R. (2012). *The Outsourced Self. What Happens When We Pay Others to Live Our Lives for Us*. New York: Picador.
- Hodges, S., & Rao, M. (Eds.). (2016). *Public Health and Private Wealth. Stem Cells, Surrogates, and Other Strategic Bodies*. New Delhi: Oxford University Press.
- Hollen, C. V. (2016). Feminist Critical Medical Anthropology Methodologies. Understanding Gender and Healthcare in India. *Economic & Political Weekly*, LI(18), 72-79.
- Hollos, M., Larsen, U., Obono, O., & Whitehouse, B. (2009). The problem of infertility in high fertility populations: Meanings, consequences and coping mechanisms in two Nigerian communities. *Social Science & Medicine*, 68, 2061-2068.
- Illich, I. (1975). The Medicalization of Life. *Journal of Medical Ethics*, 1(2), 73-77.
- Indongo, N., & Pazvakawambwa, L. (2012). Determinants of fertility in Namibia. *African Journal of Reproductive Health*, 16(4), 50-57.
- Inhorn, M. C. (2004). Privacy, privatization, and the politics of patronage: ethnographic challenges to penetrating the secret world of Middle Eastern, hospital based in-vitro fertilization. *Social Science & Medicine*, 59, 2095-2108.
- Inhorn, M. C. (2006). Making Muslim Babies: IVF and Gamete Donation in Sunni versus Shi'a Islam. *Culture, Medicine and Psychiatry*, 30, 427-450.

- Inhorn, M. C. (2008). Assisted Reproductive Technologies and Cultural Change. *Annual Reviews of Anthropology*, 37, 177-96.
- Inhorn, M. C. (2012). *The New Arab Man. Emergent Masculinities, Technologies, and Islam in the Middle East*. New Jersey: Princeton University Press.
- Inhorn, M. C., & Balen, F. V. (Eds.). (2002). *Infertility Around The Globe. New Thinking on Childlessness, Gender, And Reproductive Technologies*. Berkeley: University of California Press.
- Inhorn, M. C., & Balen, F. v. (2002). Interpreting Infertility: A View from the Social Sciences. In M. C. Inhorn, & F. v. Balen (Eds.), *Infertility Around the Globe. New Thinking on Childlessness, Gender, and Reproductive Technologies* (pp. 3-32). London: University of California Press.
- International Institute for Population Sciences (IIPS). (2010). *District Level Household and Facility Survey (DLHS-3), 2007-08: India. Andhra Pradesh*. Mumbai: IIPS.
- International Institute for Population Sciences (IIPS). (2010). *District Level Household and Facility Survey (DLHS-3), 2007-08: India. West Bengal*. Mumbai: IIPS.
- International Institute for Population Sciences (IIPS). (2010). *District Level Household and Facility Survey (DLHS-3), 2007-2008: India*. Mumbai: IIPS.
- Jewkes, R., Morrell, R., Hearn, J., Lundqvist, E., Blackbeard, D., Lindegger, G., et al. (2015). Hegemonic masculinity: combining theory and practice in gender interventions. *Culture, Health & Sexuality*, 17(S2), S112–S127.
- Johnson, K. M., & Fledderjohann, J. (2012). Revisiting "her" infertility: Medicalized embodiment, self-identification and distress. *Social Science & Medicine*, 883-891.
- Johnson, K. M., Greil, A. L., McQuillan, J., Leyser-Whalen, O., & Shreffler, K. M. (2020). Infertility and Self-identification: The Indeterminacy of the Illness-self Relationship. *Sociological Perspectives*, 63(3), 388-405.
- Kalra, S., Baruah, M. P., & Kalra, B. (2016). Endocrinology in the Ramayana. *Indian Journal of Endocrinology and Metabolism*, 20(5), 716-719.
- Kashyap, P. (2011, October 20). Test-tube babies no real option in Patna. *Times of India*.
- Kleinman, A. (1988). *The illness narratives: Suffering, healing & the human condition*. New York: Basic Books.
- Kleinman, A. (1992). Local Worlds of Suffering: An Interpersonal Focus for Ethnographies of Illness Experience. *Qualitative Health Research*, 2(2), 127-134.

- Krishnakumar, A. (2003, September). The science of ART. *Frontline*, 20(19).
- Kumar, R. (1993). *The History of Doing. An Illustrated Account of Women's Rights and Feminism in India, 1800-1990*. New Delhi: Zubaan.
- Lane, S. D. (1994). From Population Control to Reproductive Health: An Emerging Policy Agenda. *Social Science & Medicine*, 39, 1303 - 1314.
- Larsen, U. (2000). Primary and secondary infertility in sub-Saharan Africa. *Internal Journal of Epidemiology*, 29(2), 285-291.
- Layne, L. L. (2003). Unhappy endings: a feminist reappraisal of the women's health movement from the vantage of pregnancy loss. *Social Science & Medicine*, 56, 1881-1891.
- Leonard, L. (2002). Problematizing Fertility, "Scientific" Accounts and Chadian Women's Narratives. In M. C. Inhorn, & F. V. Balen (Eds.), *Infertility Around the Globe. New Thinking on Childlessness, Gender, and Reproductive Technologies*. (pp. 193-214). California: University of California Press.
- Loraine, K., Duggal, R., & Lama-Rewal, S. (2009). Assessing Urban Governance through the Prism of Healthcare Services in Delhi, Hyderabad and Mumbai. In J. Ruet, & S. Lama-Rewal (Eds.), *Governing India's Metropolises* (pp. 161-182). New Delhi: Routledge.
- Majumdar, A. (2014). Nurturing an Alien Pregnancy: Surrogate Mothers, Intended Parents and Disembodied Relationships. *Indian Journal of Gender Studies*, 21(2), 199-224.
- Majumdar, A. (2015). Outsourcing Reproduction. *Economic and Political Weekly*, L(1), 29-31.
- Majumdar, A. (2015). Waiting for the Womb: Representing Assisted Reproduction in the Infertility Clinic Waiting Room. *India International Centre Quarterly*, 42(2), 87-97.
- Majumdar, A. (2018). ARTs and the problematic conceptualisation of declining reproduction. *Indian Journal of Medical Ethics*, 3(2), 119-24.
- Malin, M., Hemminki, E., Raikkonen, O., Sihvo, S., & Perala, M.-L. (2001). What do women want? Women's experiences of infertility treatment. *Social Science & Medicine*, 53, 123-133.
- Marks, G. (2019, June 06). 'Femtech' startups on the rise as investors scent profits in women's health. Retrieved December 07, 2019, from The Guardian: <https://www.theguardian.com/business/2019/jun/06/femtech-startups-womens-health-investors>

- Martin, E. (1987). *The Woman in the Body. A Cultural Analysis of Reproduction*. Boston: Beacon Press.
- Martin, L. J. (2010). Anticipating Infertility. Egg Freezing, Genetic Preservation, and Risk. *Gender & Society*, 24(4), 526-545.
- Mascarenhas, M. N., Flaxman, S. R., Boerma, T., Vanderpoel, S., & Stevens, G. A. (2012). National, Regional, and Global Trends in Infertility Prevalence Since 1990: A Systematic Analysis of 277 Health Surveys. *PLOS Medicine*, 9(12), 1-12.
- Massey, D. (1994). *Space, place and gender*. Cambridge: Polity Press.
- McHugh, M. (2019, March 18). *Does Femtech Give Users Control of Their Health or Take It Away?* Retrieved December 07, 2019, from The Ringer: <https://www.theringer.com/tech/2019/3/18/18267094/femtech-female-health-apps-menstruation-fertility-trackers-clue-glow-ava>
- Menning, B. E. (1980). The emotional needs of infertile couples. *Fertility and Sterility*, 34(4), 313-319.
- Menon, N. (2014). Cooking up Nature: Science in the World of Politics. In N. Menon, A. Nigam, & S. Palshikar (Eds.), *Critical Studies in Politics. Exploring Sites, Selves, Power*. (pp. 448-481). Delhi: Orient BlackSwan.
- Miall, C. E. (1985). Perceptions of Informal Sanctioning and the Stigma of Involuntary Childlessness. *Deviant Behaviour*, 6(4), 383-403.
- Miall, C. E. (1986). The stigma of involuntary childlessness. *Social Problems*, 33(4), 268-282.
- Mishler, E. G. (1986). *Research Interviewing: Context and Narrative*. Cambridge: Harvard University Press.
- Mohapatra, S. (2012). Achieving Reproductive Justice in the International Surrogacy Market. *Annals of Health Law*, 21(1), 190-200.
- Mukhopadhyay, M. (Ed.). (2016). *Feminist Subversion and Complicity. Governmentalities and Gender Knowledge in South Asia*. New Delhi: Zubaan.
- Mulkay, M. (1993). Rhetorics of Hope and Fear in the Great Embryo Debate. *Social Studies of Science*, 23(4), 721-742.
- Mullin, E. (2016, December 26). *Technology Trends to Watch in Women's Health*. Retrieved May 17, 2020, from MIT Technology Review: <https://www.technologyreview.com/2016/12/26/243918/technology-trends-to-watch-in-womens-health/>

- Murphy, M. (2012). *Seizing the Means of Reproduction: Entanglements of Feminism, Health and Technoscience*. Durham: Duke University Press.
- Nachtigall, R. D., Becker, G., & Wozny, M. (1992). The effects of gender specific diagnosis on men's and women's response to infertility. *Fertility and Sterility*, 57(1), 113-121.
- Nachtigall, R. D., Becker, G., & Wozny, M. (1992). The effects of gender-specific diagnosis on mwn's and women's response to infertility. *Fertility and Sterility*, 57(1), 113-121.
- Nadimpally, S. (2014). Unravelling the Fertility Industry. ARTs in the Indian Context. In S. N, & V. Marwah (Eds.), *Reconfiguring Reproduction. Feminist Health Perspectives on Assisted Reproductive Technologies*. (pp. 92-121). New Delhi: Zubaan and SAMA-Resource Group for Women and Health.
- Nadimpally, S., & Marwah, V. (Eds.). (2014). *Reconfiguring Reproduction. Feminist Health Perspectives on Assisted Reproductive Technologies*. New Delhi: Zubaan.
- Nahar, P. (2012). Invisible women in Bangladesh: Stakeholders' views on infertility services. *Facts, Views & Vision in ObGyn*, 4(3), 149-156.
- Nandy, A. (2017). *Motherhood and Choice. Uncommon Mothers, Childfree Women*. New Delhi: Zubaan and New Text Publications.
- Nash, M. (Ed.). (2014). *Reframing Reproduction. Conceiving Gendered Experiences*. New York: Palgrave Macmillan.
- National Family Health Survey (NFHS-3). (2008). *National Family Health Survey (NFHS-3), India 2005-2006*. Mumbai: International Institute for Population Sciences (IIPS).
- Ocejo, R. E. (Ed.). (2013). *Ethnography and the City. Readings on Doing Urban Fieldwork*. New York: Routledge.
- Okonofua, F. E., Harris, D., Odebiyi, A., Kane, T., & Snow, R. C. (1997). The social meaning of infertility in Southwest Nigeria. *Health Transition Review*, 7, 205-220.
- Olshansky, E. F. (1987). Identity of self as infertile: an example of theory-generating research. *Advances in Nursing Science*, 9(2), 54-63.
- Pande, A. (2009). 'Not an "Angel", Not a "Whore": Surrogates as "Dirty" Workers in India. *Indian Journal of Gender Studies*, 16(2), 141-173.
- Pande, A. (2010a). Commercial Surrogacy in India: Manufacturing a Perfect Mother-Worker. *Signs*, 35(4), 969-992.

- Pande, A. (2010b). "At Least I Am Not Sleeping with Anyone": Resisting the Stigma of Commercial Surrogacy in India. *Feminist Studies*, 36(2), 292-312.
- Pande, A. (2013). The "Sweat and Blood" of Womb Mothers. Commercial Surrogates Redefining Motherhood in India. In J. K. Sangha (Ed.), *South Asian Mothering* (pp. 135-149). Toronto: Demeter Press.
- Pande, A. (2014). This Birth and That: Surrogacy and Stratified Motherhood in India. *philoSOPHIA*, 4(1), 50-64.
- Pande, A. (2016). Global reproductive inequalities, neo-eugenics and commercial surrogacy in India. *Current Sociology*, 64(2), 244-258.
- Parrenas, R. S. (2017). Introduction: Special Issue on Technologies of Intimate Labour. *Sexualities*, 20(4), 407-411.
- Parrenas, R. S., Thai, H. C., & Silvey, R. (2016). Restructuring (Im)Material Labor in Asia. *positions: east asia cultures critique*, 24(1), 1-15.
- Parsons, T. (1951). *The Social System* (1991 ed.). London: Routledge.
- Petersen, A. (2015). *Hope in Health. The Socio-Politics of Optimism*. New York: Palgrave Macmillan.
- Petersen, A., & Seear, K. (2011). Technologies of hope: Techniques of the online advertising of stem cell treatments. *New Genetics and Society*, 30(4), 329-346.
- Petersen, A., & Wilkinson, I. (2015). Editorial Introduction: The sociology of hope in contexts of health, medicine and healthcare. *Health*, 19(2), 113-118.
- Petersen, A., Munsie, M., Tanner, C., Macgregor, M., & Brophy, J. (2017). *Stem Cell Tourism and the Political Economy of Hope*. London: Palgrave Macmillan.
- Petok, W. D. (2006). The psychology of gender-specific infertility diagnosis. In S. N. Covington, & L. H. Burns (Eds.), *Infertility Counselling a Comprehensive Handbook*. (pp. 37-60). New York: Cambridge University Press.
- Pierret, J. (2003). The Illness Experience: State of Knowledge and Perspectives for Research. *Sociology of Health & Illness*, 25, 4 - 22.
- Poel, S. Z. (2012). Historical walk: The HRP Special Programme and Infertility. *Gynecologic and Obstetric Investigation*, 74, 218-227.
- Pujari, S., & Unisa, S. (2014). Failing Fatherhood: A study of Childless Men in Rural Andhra Pradesh. *Sociological Bulletin*, 63(1), 21-40.
- Qadeer, I. (2010). New Reproductive Technologies and Health Care in Neo-Liberal India: Essays. *Research Monograph*. New Delhi: Centre for Women's Development Studies.

- Qadeer, I., & John, M. E. (2009). The Business and Ethics of Surrogacy. *Economic and Political Weekly*, 10-12.
- Rajagopal, R. S. (2021). *What's a lemon squeezer doing in my vagina? A Memoir of Infertility*. New Delhi: Ebury Press by Penguin Random House India.
- Reinharz, S. (1992). *Feminist Methods in Social Research*. New York: Oxford University Press.
- Richards, S. C. (2002). "Spoiling the Womb": Definitions, Aetologies and Responses to Infertility in North West Province, Cameroon. *African Journal of Reproductive Health*, 6(1), 84-94.
- Riessman, C. K. (1983). Women and Medicalization: A new perspective. *Social Policy*, 14, 3-18.
- Riessman, C. K. (1993). *Narrative Analysis*. New Delhi: Sage Publications.
- Riessman, C. K. (2000). Stigma and Everyday Resistance Practices Childless Women in South India. *Gender & Society*, 14(1), 111-135.
- Riska, E. (2003). Gendering the Medicalization thesis. *Advances in Gender Research*, 7, 61-89.
- Rose, N., & Novas, C. (2005). Biological Citizenship. In A. Ong, & S. J. Collier, *Global assemblages: Technology, politics and ethics as anthropological problems* (pp. 439-463). Oxford: Blackwell.
- Rothman, B. K. (1988). Reproductive Technology and the Commodification of Life. In E. H. Baruch, A. F. D'Adamo, & J. Seager (Eds.), *Embryos, Ethics, and Women's Rights. Exploring the New Reproductive Technologies* (pp. 95-100). London: Harrington Park Press.
- Rothman, B. K. (1989). *Recreating Motherhood: Ideology and Technology in a Patriarchal Society*. New York: W W Norton.
- Roudsari, R. L., Allan, H. T., & Smith, P. A. (2007). Looking at infertility through the lens of religion and spirituality: a review of the literature. *Human Fertility*, 10(3), 141-149.
- Roy, B., & Gupta, S. (2011). Public-Private Partnership and User Fees in Healthcare: Evidence from West Bengal. *Economic and Political Weekly*, 46(38), 74-78.
- Rudrappa, S. (2012). India's reproductive assembly line. *Contexts*, 11(2), 22-27.
- Rudrappa, S. (2016). *Discounted Life. The Price of Global Surrogacy in India*. New Delhi: Orient BlackSwan.

- Rudrappa, S. (2016). What to Expect When You're Expecting: The Affective Economies of Consuming Surrogacy in India. *positions*, 24(1), 281-302.
- Rudrappa, S., & Collins, C. (2015). Altruistic Agencies and Compassionate Consumers: Moral Framing of Transnational Surrogacy. *Gender & Society*, 29(6), 937-959.
- Rukmini, S. (2014, December 23). India to reach replacement levels of fertility by 2020. *The Hindu*.
- Salvesberg, F. (1999). *Plundered kitchens and empty wombs*. Ann Arbor: University of Michigan Press.
- SAMA. (2006). *ARTs and Women. Assistance in Reproduction or Subjugation?* New Delhi: SAMA.
- SAMA. (2010). *Constructing Conceptions. The Mapping of Assisted Reproductive Technologies in India*. Delhi: SAMA - Resource group for Women and Health.
- SAMA (Ed.). (2012). *Birthing A Market. A Study on Commercial Surrogacy*. New Delhi: SAMA - Resource Group for Women and Health.
- Sandelowski, M. (1991). Compelled to Try: The Never Enough Quality of Conceptive Technology. *Medical Anthropology Quarterly*, 5(1), 29-47.
- Sandelowski, M. (1993). *With Child in Mind: Studies of the Personl Encounter with Infertility*. Philadelphia: University of Pennsylvania Press.
- Sassen, S. (2002). Global Cities and Survival Circuits. In B. Ehrenreich, & A. R. Hochschild, *Global Woman: Nannies, Maids and Sex Workers in the New Economy* (pp. 254-274). New York: A Metropolitan/Owl Book.
- Savelsberg, P. F. (2002). Is Infertility an Unrecognized Public Health and population Problem? The View from the Cameroon Grassfields. In M. C. Inhorn, & F. V. Balen (Eds.), *Infertility Around the Globe. New Thinking on Childlessness, Gender, and Reproductive Technologies* (pp. 215-232). London: University of California Press.
- Scott, R. (1978). *The Making of Blind Men*. New York: Russell Sage.
- Sengupta, A. (2010). The Commerce in Assisted Reproductive Technologies. In S. Srinivasan (Ed.), *Making Babies. Birth Markets and Assisted Reproductive Technologies in India* (pp. 44-55). New Delhi: Zubaan.
- Sewpaul, V. (1999). Culture Religion and Infertility: A South African Perspective. *British Journal of Social Work*, 29, 741-754.
- Singer, M. (1986). Developing a Critical Perspective in Medical Anthropology. *Medical Anthropology Quarterly*, 17(5), 128-129.

- Spar, D. L. (2006). *The Baby Business. How Money, Science, and Politics Drive the Commerce of Conception*. Boston: Harvard Business School Press.
- Srinivasan, S. (2010). *Making Babies. Birth Markets and Assisted Reproductive Technologies in India*. New Delhi: Zubaan.
- Stanworth, M. (Ed.). (1987). *Reproductive Technologies: Gender, Motherhood and Medicine*. Cambridge: Polity Press.
- Steinberg, D. L. (1997). A most selective practice: The eugenic logics of IVF. *Women's Studies International Forum*, 20(1), 33-48.
- Strathern, M. (1992). *Reproducing the Future: Antropology, Kinship, and the New Reproductive Technologies*. Manchester: Manchester University Press.
- Strathern, M. (1995). Displacing Knowledge: Technology and the Consequences for Kinship. In F. D. Ginsburg, & R. Rapp (Eds.), *Conceiving the New World Order. The Global Politics of Reproduction*. (pp. 346-368). London: University of California Press.
- Strauss, A. L. (1987). *Qualitative analysis for social scientists* (2003 ed.). New York: Cambridge University Press.
- Sullivan, F. &. (2018, January 31). *Femtech - Time for a Digital Revolution in the Women's Health Market*. Retrieved May 15, 2020, from <https://www.frost.com/frost-perspectives/femtechtime-digital-revolution-womens-health-market/>
- Syal, M. (2015). *The House of Hidden Mothers*. New Delhi: Black Swan.
- Tahmassebi, N. (2019, December 07). *The Rise of Femtech*. Retrieved May 17, 2020, from PlugAndPlay: <https://www.pluginandplaytechcenter.com/resources/rise-femtech/>
- Taylor, S. J., Bogdan, R., & DeVault, M. L. (2016). *Introduction to Qualitative Research Methods: A Guidebook and Resource* (Fourth ed.). New Jersey: Wiley.
- The ESHRE Capri Workshop Group. (2010). Europe the continent with the lowest fertility. *Human Reproduction Update*, 16(6), 590-602.
- Thompson, C. (2005). *Making Parents: The Ontological Choreography of Reproductive Technologies*. Cambridge, MA: MIT Press.
- Throsby, K., & Gill, R. (2004). "It's different for men": Masculinity and IVF. *men and Masculinities*, 6(4), 330-338.
- Times News Network. (2013, August 13). Kolkata turning into global fertility hub. *The Times of India*.

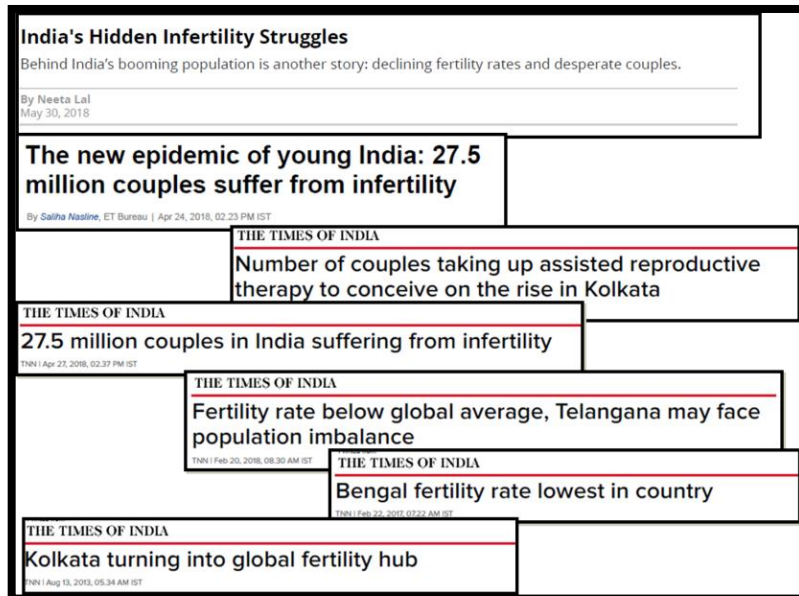
- Times News Network. (2015, June 04). Infertility in married couples up to 25%: Doctors. *The Economic Times*.
- Times News Network. (2017, February 22). Bengal fertility rate lowest in country. *The Times of India*.
- Times News Network. (2018, February 20). Fertility rate below global average, Telangana may face population imbalance. *The Times of India*.
- Tyagi, N. (2019, December 26). Infertility is rising in India's populace. *Deccan Herald*.
- Ulrich, M., & Weatherall, A. (2000). Motherhood and Infertility: Viewing Motherhood through the Lens of Infertility. *Feminism & Psychology*, 10(3), 323-336.
- Unisa, S. (2010). Infertility and treatment seeking in India: Findings from District Level Household Survey. *Facts Views & Vision in ObGyn: Issues on Obstetrics, Gynaecology and Reproductive Health (Monograph)*, 59-65.
- Ussher, J. M. (1989). *The Psychology of the Female Body*. London: Routledge.
- Veevers, J. E. (1980). *Childless by Choice*. Toronto: Butterworth.
- Virani, P. (2016). *Politics Of The Womb. The Perils of IVF, Surrogacy & Modified Babies*. Viking: Penguin Random House India.
- Volgsten, H., Svanberg, A., Ekselius, L., Lundkvist, O., & Sundstrom Poromaa, I. (2008). Prevalence of psychiatric disorders in infertile women and men undergoing in vitro fertilization treatment. *Human Reproduction*, 23(9), 2056-2063.
- Waite, M. (Ed.). (2013). *Pocket Oxford English Dictionary*. New Delhi: Oxford University Press.
- Walters, M. (2005). *Feminism. A very short introduction*. New York: Oxford.
- Wang, C. C., & Geale, S. K. (2015). The power of story: Narrative inquiry as a methodology in nursing research. *International Journal of Nursing Sciences* 2, 195-198.
- Weiss, G. (1999). *Body Images. Embodiment as Intercorporeality*. London: Routledge.
- Whiteford, L. M., & Gonzalez, L. (1995). Stigma: The Hidden Burden of Infertility. *Social Science & Medicine*, 40(1), 27-36.
- Williams, A. (2017). The therapeutic landscapes concept as a mobilizing tool for liberation. *Medicine Anthropology Theory*, 4(1), 10-19.
- Wischmann, T., & Thorn, P. (2013). (Male) infertility: what does it mean to men? New evidence from quantitative and qualitative studies. *Reproductive BioMedicine Online*, 27(3), 236-243.

- World Bank Open Data. (2020). *Fertility rate, total (births per woman) data Tables (2019)*. Retrieved July 25, 2021, from World Bank website: <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?locations=IN>
- World Health Organization. (2004). *Infecundity, Infertility and Childlessness in Developing Countries. Demographic and Health Surveys (DHS) Comparative report no. 9*.
- World Health Organization. (2009). *International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) revised glossary of ART terminology, 2009*. WHO-ICMART.
- World Health Organization. (2010). Mother or Nothing: The agony of infertility. 88, 881-882. Bulletin of the World Health Organization.
- World Health Organization (WHO). (2018). *International Classification of Diseases, 11th Revision (ICD-11)*. Geneva: WHO.
- Zachariah, P. (2021, May 10). *Why we need femtech*. Retrieved June 11, 2021, from Mintlounge: <https://lifestyle.livemint.com/health/wellness/why-we-need-femtech-111620649640927.html>
- Zegers-Hochschild, F., Adamson, G. D., Mouzon, J. d., Ishihara, O., Mansour, R., Nygren, K., et al. (2009). International Committee for Monitoring Assisted Reproductive Technology (ICMART) and the World Health Organization (WHO) revised glossary of ART terminology. *Fertility and Sterility*, 92(5), 1520-1524.
- Zelizer, V. A. (2005). *The Purchase of Intimacy*. Princeton: Princeton University Press.
- Zola, I. K. (1972). Medicine as an Institution of Social Control. *The Sociological Review*, 20(4), 487-504.

APPENDIX

APPENDIX – A

Fig. 1: Newspaper Headings about Decreasing Fertility Rate



Source: Compiled by the researcher

Fig. 2: Advertisement of a Free Fertility camp



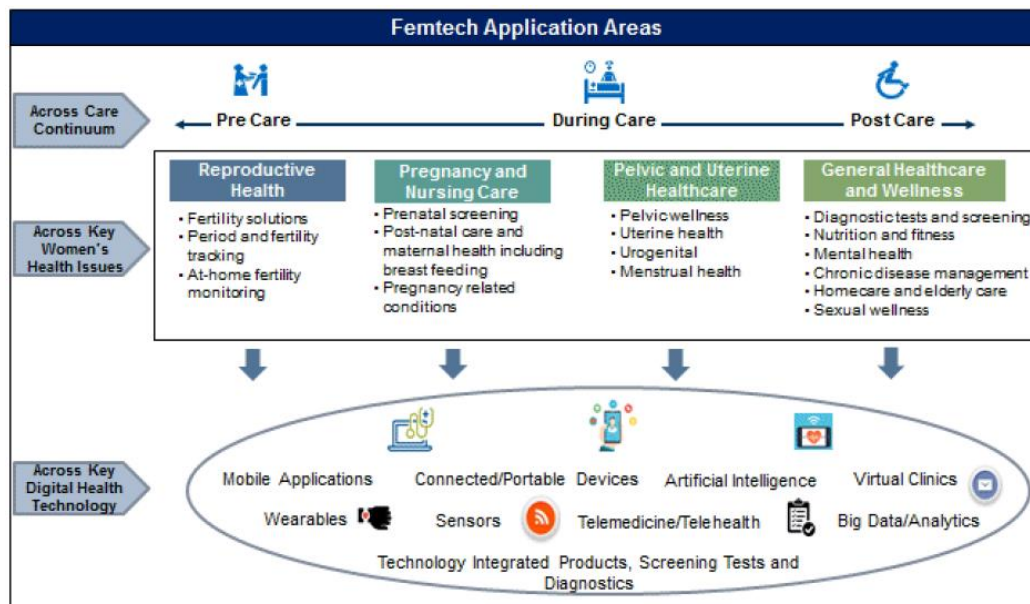
Source: Instagram

Fig. 3: Advertising of a fertility clinic highlighting biological clock



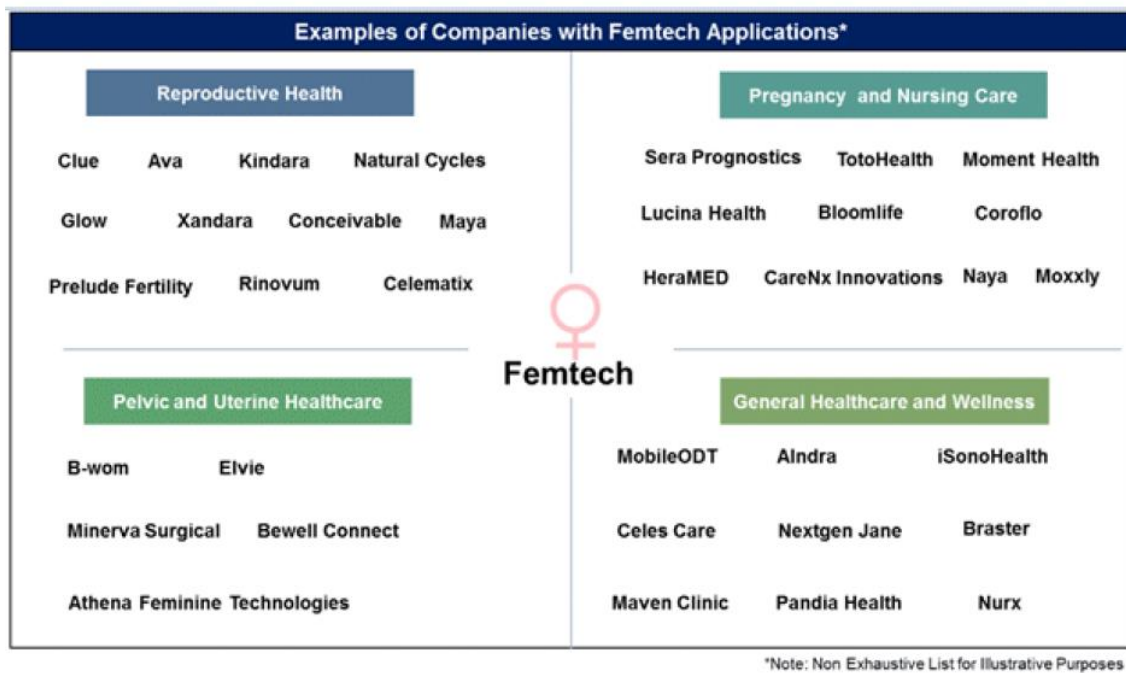
Source: Instagram

Fig. 4: Femtech Application Areas



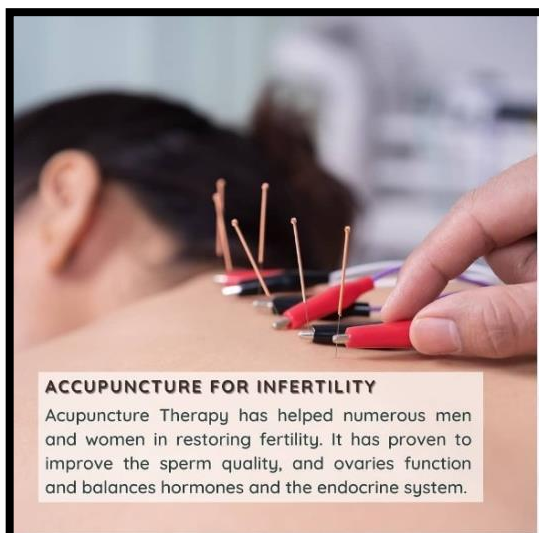
Source: (Sullivan, 2018)

Fig. 5: Few examples of companies with Femtech applications



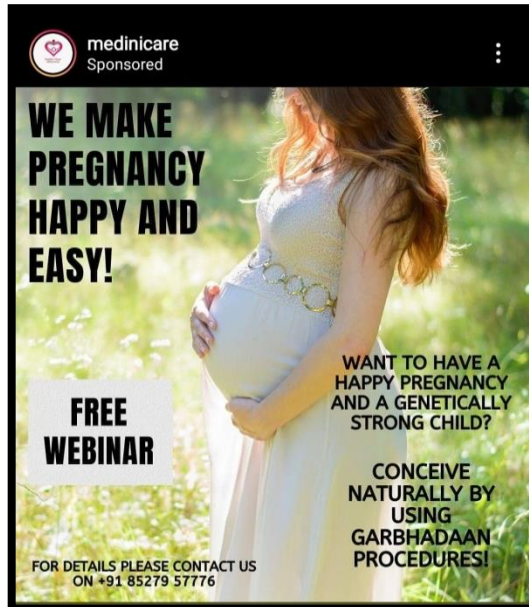
Source: (Sullivan, 2018)

Fig.6: Advertisement of acupuncture for infertility



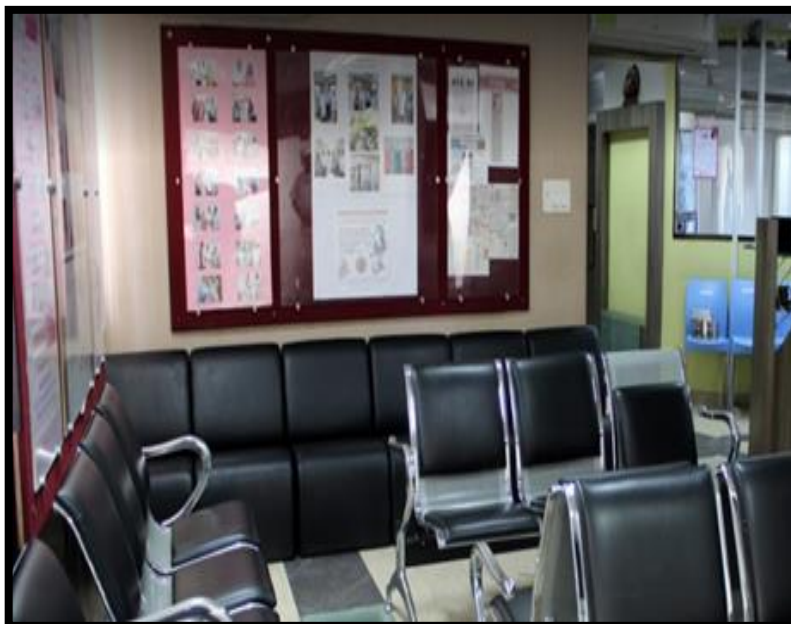
Source: Instagram

Fig. 7: Advertisement for alternate ways of conception



Source: Instagram

Fig. 8: Waiting lounge of a fertility clinic



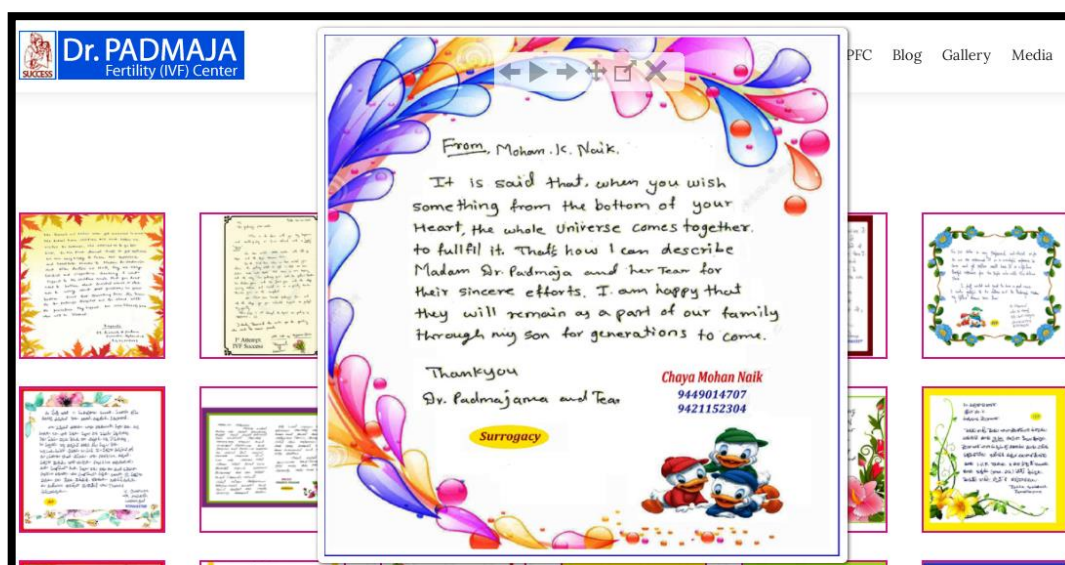
Source: Google photo

Fig. 9: Gratitude letter written by couples



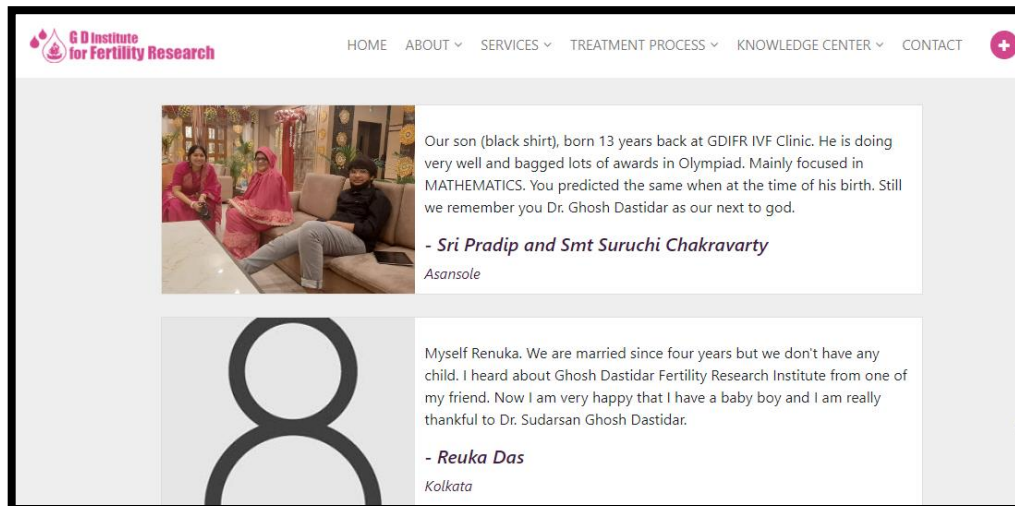
Source: Website of Padmaja Fertility Clinic, Hyderabad

Fig. 10: Scanned image of a thank you letter written by a couple



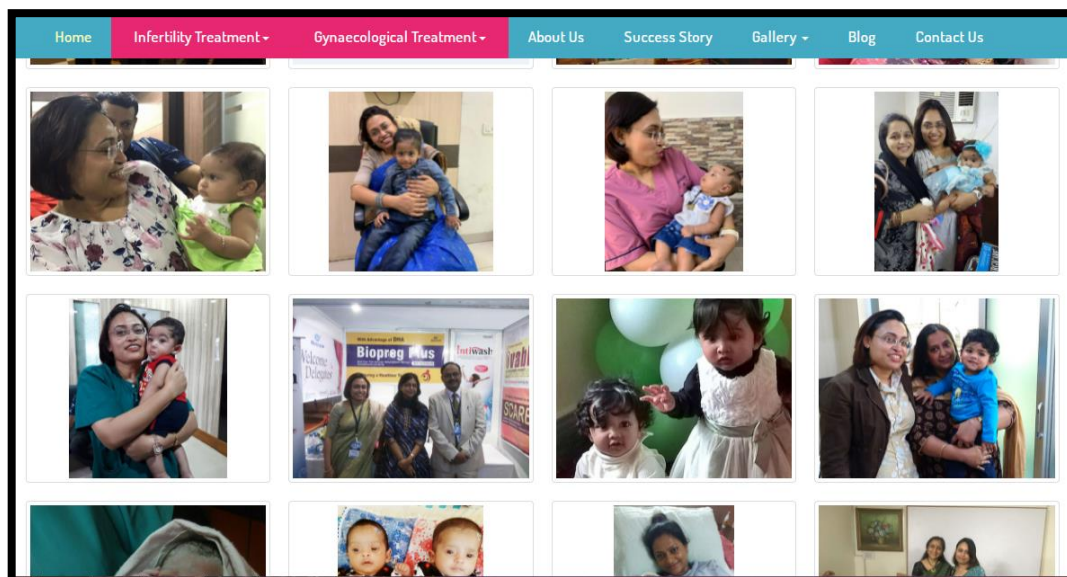
Source: Website of Padmaja Fertility Clinic, Hyderabad

Fig. 11: Gratitude letter of couples for a clinic in Kolkata



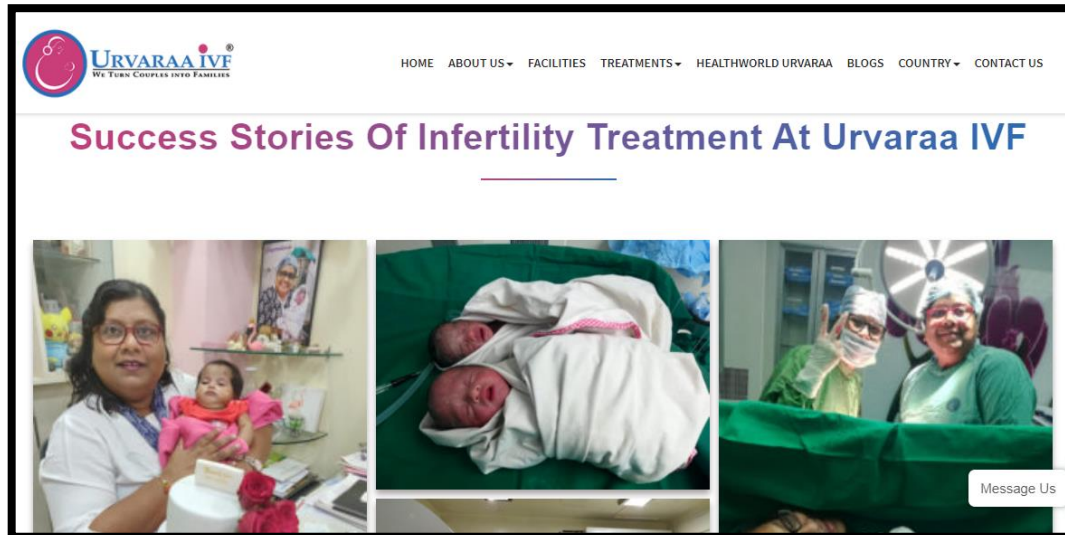
Source: Website of the fertility clinic

Fig. 12: Photographs of successful couple of a fertility clinic in Kolkata



Source: Website of the fertility clinic.

Fig. 13: Success stories of Couples at a fertility clinic in Kolkata



Source: Website of the fertility clinic

Fig. 14: Discount offers of a fertility clinic



Source: Google photos

Fig. 15: Advertisement of a fertility clinic



Source: Instagram

Fig. 16: Street hoarding of a fertility clinic in Kolkata



Source: Google photos

Fig. 17: Advertisement of a fertility clinic depicting the joy of being a mother

REPEATED IVF FAILURES. YET NOW A MOTHER.

Over the years, the doctors at Nova IVI Fertility have treated many patients with repeated IVF failures and helped them become pregnant.

There are many steps needed to overcome repeated IVF failures.	We offer the most advanced tests (PGS, PGD, ERA) to diagnose the cause.
It could be something as basic as the clinic taking optimum care in the lab during formation of the embryo or replacing it at the appropriate time.	And then we carry out the most appropriate treatment and take embryology care at every step to help you on your journey to motherhood.
It could be advanced diagnostics and treatment to tackle a complex genetic issue.	And that's one of the reasons why Nova IVI Fertility is India's No. 1 fertility chain.

For more information on pricing and other details, call 1800 102 9417
20 CLINICS IN 15 CITIES

NOVA IVI FERTILITY
Science. Pregnancy. Happiness.

DEPARTMENT OF CONCEPTION
• GOVERNMENT OF INDIA, PGCO AND SPC RECOGNISED •
• NOVA IVI FERTILITY'S EXCELLENCE IN MEDICAL VALUE TRAVEL SPECIALIST HOSPITAL IN THE IVF CATEGORY •

www.novafertility.com

Source: Instagram

Fig. 18: Webpage of a fertility clinic

Secure | <https://www.rainbowhospitals.in/fertility-care/treatments>

Apps | Period-tracking app | Parliamentary panel | Watch full episodes | 1800 2122 OR GET A CALL | Publications | Human | Infertility on the Rise | Managing Infertility | Top Of The Heap

BirthRight
FOR FERTILITY CARE
1800 2122 OR GET A CALL

Our Treatments

We let the hope alive

Couples having difficulty conceiving a child can look to BirthRight Centre for Infertility for one of the most comprehensive and progressive treatment. We recognize that no two patients are similar and hence treatment plan varies widely based on many parameters like patient's medical history, age, physical condition, diagnosis, duration of infertility history, etc.

IUI IVF Embryo Donor Programme Fertility Care ICSI IMSI

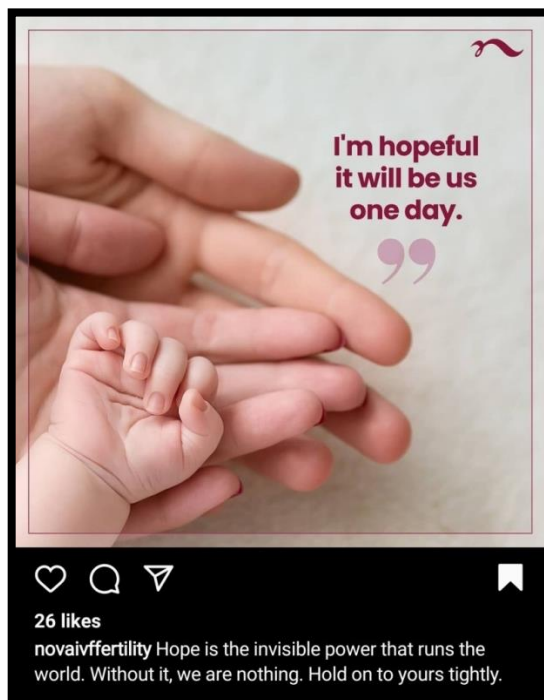
Find a doctor / Book an appointment | Our Centres / Specialities

FEEDBACK CHAT

ENQUIRE NOW

Source: Website of a fertility clinic

Fig. 19: Advertisement of a fertility clinic



Source: Instagram

APPENDIX – B

Table 1: Regions Categorised into three different types based on the study by Mascarenhas et al 2012 estimating prevalence of primary infertility among child-seeking women in 2010.

High Primary Infertility Regions	Afghanistan, Bangladesh, Bhutan, India, Nepal, Pakistan, Egypt, Iran, Iraq, Algeria, Lebanon, Georgia, Azerbaijan, Uzbekistan, Croatia, Czech Republic, Russian Federation, Ukraine, Kuwait.
Medium Primary Infertility Regions	Australia, New Zealand, Canada, United States of America, Austria, Finland, United Kingdom, Netherlands, Norway, Italy, Germany, France, Switzerland, Greece, Iceland, Belgium, Angola, Congo, Madagascar, Mauritius, Sudan, Zambia, Namibia, South Africa, Zimbabwe, Ghana, Gambia, Nigeria, Cameroon.
Low Primary Infertility Regions	Peru, Bolivia, Ecuador, Costa Rica, Guatemala, Panama, Colombia, Argentina, Chile, Brazil, Bahamas, Cuba, Haiti, Jamaica, Paraguay, Uruguay, Barbados, Trinidad and Tobago, Hong Kong (SAR), Taiwan, Democratic People's Republic of Korea, Cambodia, Indonesia, Sri Lanka, Thailand, Viet Nam, Maldives, Malaysia.

Source: (Mascarenhas, Flaxman, Boerma, Vanderpoel, & Stevens, 2012)

APPENDIX – C

Fig. 1: Master Price Chart of Clinic 1, in Hyderabad

Display Of Rates		
S.No	Appendix - III	
	Consultation Charges	600/-
1.	Follow Up Discussion	400/-
2.	Single Scan (For Follicular Study)	300/-
3.	Ovulation Study Scan	1,000/-
4.	Pregnancy Scan	1,000/-
5.	Semen Analysis	500/-
6.	TET	1,000/-
7.	IUI (H) 1st Day	4,000/-
8.	IUI (H) 2nd Day	4,000/-
9.	IUI (D) 1st Day	4,500/-
10.	IUI (D) 2nd Day	4,500/-
11.	IUI Under GA (H) 1st Day	4,500/- + 800/- (Anaes)
12.	IUI Under GA (H) 2nd Day	4,500/- + 800/- (Anaes)
13.	IUI Under GA (D) 1st Day	5,000/- + 800/- (Anaes)
14.	IUI Under GA (D) 2nd Day	5,000/- + 800/- (Anaes)
15.	DIPI (H) 1st Day	6,000/- + 800/- (Anaes)
16.	DIPI (H) 2nd Day	6,000/- + 800/- (Anaes)
17.	DIPI (D) 1st Day	6,500/- + 800/- (Anaes)
18.	DIPI (D) 2nd Day	6,500/- + 800/- (Anaes)
19.	Cyst Aspiration	4,000/- + 1,000/- (Anaes)
20.	Dilatation	4,000/- + 1,000/- (Anaes)
21.	Dilatation + Cyst Aspiration	6,000/- + 1,000/- (Anaes)
22.	Fluid Aspiration	3,000/- + 1,200/- (Anaes)
23.	IVF	70,000/-
24.	IVF With ICSI	85,000/-
25.	Blastocyst Transfer	+ 10,000/-
26.	Embryo Freezing	20,000/-
27.	Semen Sample Freezing	6,000/-
28.	TESA (With Sperm Retrieval)	16,000/- + 4,000/-
29.	(Urologist)	+ 1,000 (Anaes)
30.	TESA (Without Sperm Retrieval)	10,000/- + 4,000/-
31.	(Urologist)	+ 1,000/- (Anaes)
	FET	30,000/-

Source: Researcher

APPENDIX – D

Mapping Reproductive Loss and Hope : A Study of Infertility in Hyderabad and Kolkata

by Anu Gupta

Submission date: 26-Oct-2021 09:40AM (UTC+0530)

Submission ID: 1684347338

File name: Anu_Gupta_Mapping_Reproductive_Loss_and_hope_thesis.pdf (3.45M)

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Mapping Reproductive Loss and Hope : A Study of Infertility in Hyderabad and Kolkata

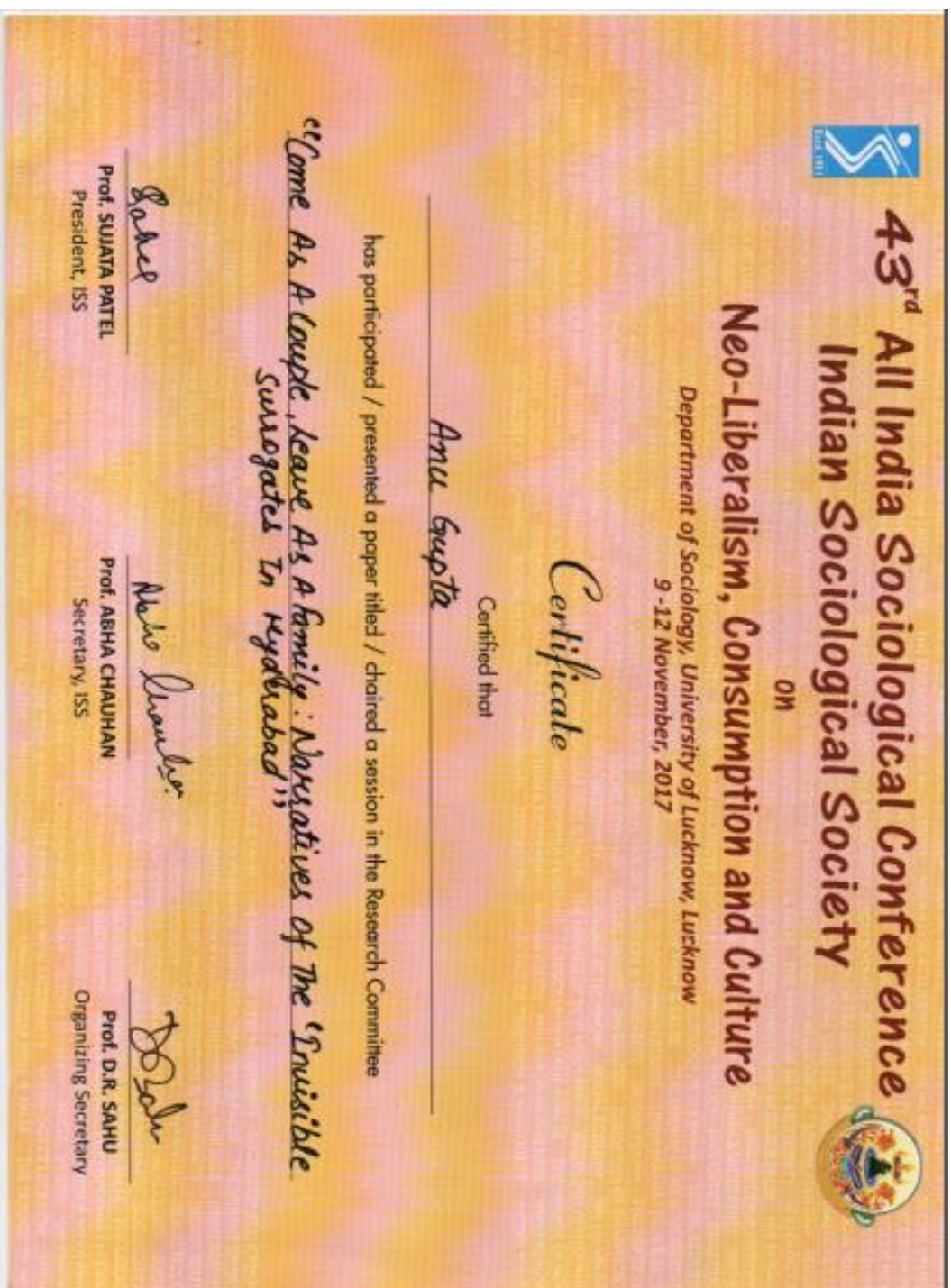
ORIGINALITY REPORT

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SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	epdf.pub Internet Source	<1 %
2	www.karger.com Internet Source	<1 %
3	www.communityhealth.in Internet Source	<1 %
4	www.ncbi.nlm.nih.gov Internet Source	<1 %
5	journals.sagepub.com Internet Source	<1 %
6	cgkd.anu.edu.au Internet Source	<1 %
7	ethos.bl.uk Internet Source	<1 %
8	coek.info Internet Source	<1 %
9	Johnson, Katherine M., and Jasmine Fledderjohann. "Revisiting â€œherâ€"	<1 %

APPENDIX - E



Indian Institute of Technology Guwahati
Department of Humanities and Social Sciences



This is to certify that
Anu Gupta
of **University of Hyderabad**
presented a paper titled

Hope and the 'Baby Business': Insights from Infertility Clinics in Kolkata and Hyderabad.

at **Graduate Research Meet 2018**
Emerging Trends in Humanities and Social Sciences
held on October 26 & 27, 2018.

Mr. A.K. Hazarika
Student Convener

Dr. K. Keshavamurthy
Faculty Convener

Dr. A. Mahanta
Faculty Convener

Prof. M.K. Dutta
HoD, Dept. of HSS, IITG

To Whom It May Concern,

This is to certify that Miss Anu Gupta, Centre for Regional Studies, University of Hyderabad has participated at the conference on *Love's Labour's Cost? Asian Migration, Intimate Labour and the Politics of Gender* (3-4 Dec 2018, Singapore). She presented her paper "*Mother for Others: Migration, Intimate Labour and Commercial Surrogacy in Hyderabad, India*" in the panel on Mediated Intimacies. The conference was organised by Asia Research Institute, National University of Singapore, and supported by Gender, Migration and the Work of Care Project at Center for Global Social Policy, University of Toronto, Canada. It was held at AS8 Seminar Room 04-04, 10 Kent Ridge Crescent, Singapore 119260. More information about the event can be found on ARI website at <https://ari.nus.edu.sg>

If you have any questions, please do not hesitate to contact me at arips@nus.edu.sg

Warm regards,



Sharon Ong (Ms)
Conference Secretariat
Asia Research Institute, National University of Singapore



To
Anu Gupta
University of Hyderabad
Centre for Regional Studies
Prof. C R Rao Road
Gachibowli, Hyderabad
500046, India

CERTIFICATE

To whom it may concern

On behalf of the Research Committee 21 – Sociology of Urban and Regional Development of the International Sociological Association and the Local Organizing Team in Delhi, India, I am delighted to confirm that Anu Gupta participated at our RC 21 annual conference “In and Beyond the City: Emerging Ontologies, Persistent Challenges and Hopeful Futures” in New Delhi, India from the 18th to the 21st of September 2019.

Anu Gupta has been author of the following accepted contribution:

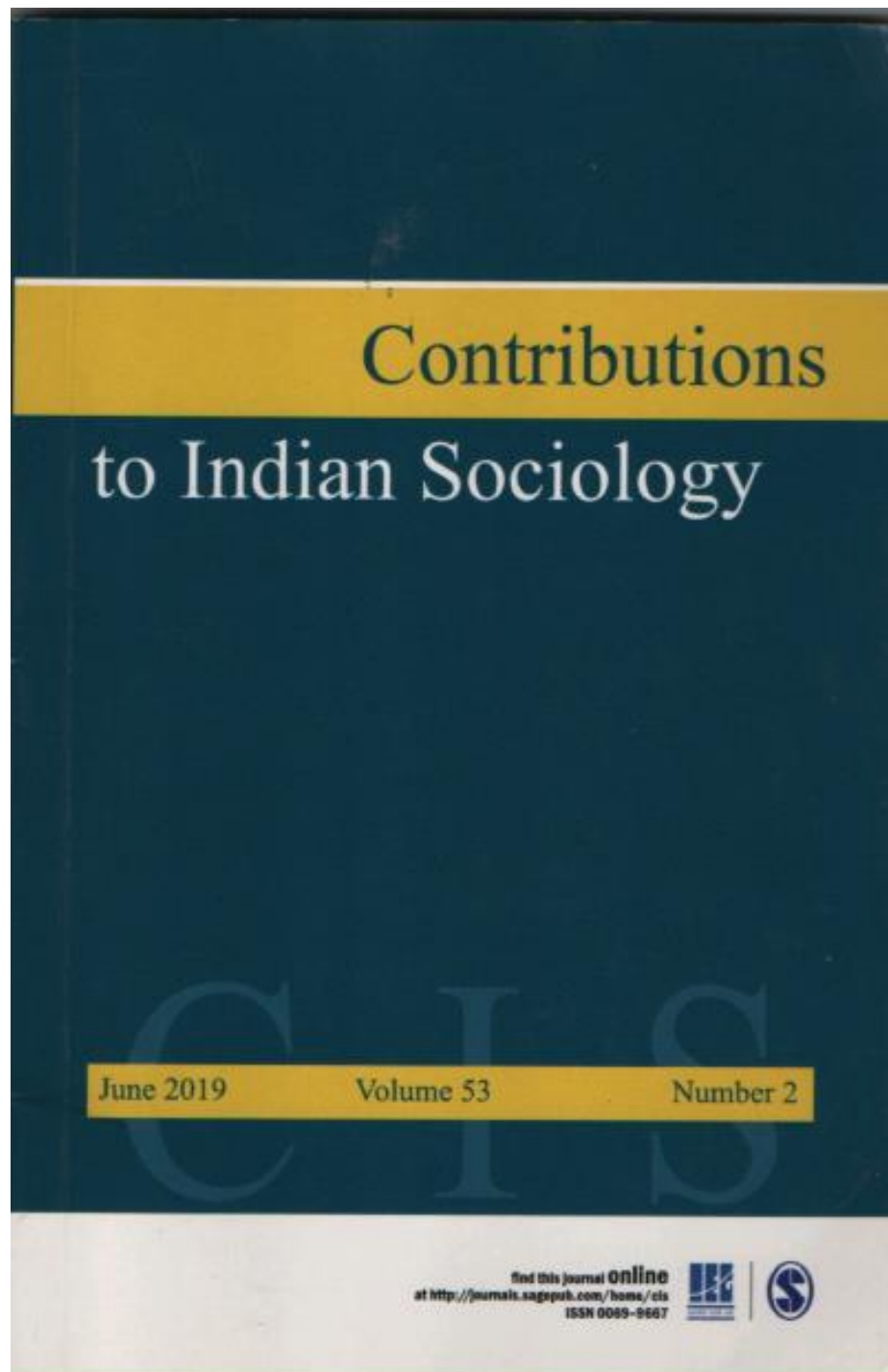
Paper: “Invisible mothers’: City, Intimate Labour and Commercial Surrogacy in Hyderabad, India”, presented in stream “542 City as Employer: Re-Imagining Urban Work and Belonging”.

With best regards,



Professor Talja Blokland
RC21 President

APPENDIX - F



Contributions to Indian Sociology

Volume 53

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June 2019

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'Outsourced pregnancy': Surrogate narratives from Hyderabad

Anu Gupta and Sheela Prasad

Surrogacy has always been contested and much debated in India since its legalisation in 2002, and the recent Surrogacy (Regulation) Bill, 2016, has led to a renewed engagement with it. The advent of assisted reproductive technologies (ART) provided an opportunity for the medical establishment, market and infertile couples to come together in a mutually beneficial arrangement, which is made possible by a surrogate. ART, while medicalising the reproductive capacity of women, also calls for a redefining of the concepts of 'motherhood', family and reproductive choice. This article primarily documents the experiences of surrogates through their narratives about the continuous struggle with themselves, their families and the medical establishment. In this matrix of unequal power relations that surrogacy epitomises, the surrogate has a precarious voice. The article argues that while surrogacy extracts a physiological and emotional price that the surrogates pay, it is empowering in a limited way. It offers women economic opportunities of a scale otherwise denied to them, enabling them to fight a life of poverty.

Keywords: surrogacy, commodification, reproductive labour, stratified motherhood, surrogates, agents

A woman can be a 'surrogate' mother only because her womanhood is deemed irrelevant and she is declared an 'individual' performing a service. At the same time, she can be a 'surrogate' mother only because she is a woman (Pateman 1988: 217).

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Contributions to Indian Sociology 52, 3 (2019): 299–327
SAGE Publications Los Angeles/London/New Delhi/Singapore/Washington DC/
Melbourne
DOI: 10.1177/0069966719836883

APPENDIX - G



UNIVERSITY OF HYDERABAD INSTITUTIONAL ETHICS COMMITTEE DECISION LETTER



IEC No.	UH/IEC/2021/27	Date of review	09-03-2021
Application No:			
Project Title:	Mapping reproductive loss and politics of hope: A study of infertility in Hyderabad and Kolkata		
Principal Investigator/ Co-PI:	PI: Anu Gupta CI: NIL		
Participating Institutes if any	----	Approval from Participating Institute	---
Documents received and reviewed	Application, proposal, consent form and CV submitted		
In case of renewal submission of update	----		
Decision of the IEC:	Approved Duration: One year from date of approval		
Any other Comments Requirements for conditional Approval	----		
Members Present	Dr. A.S.Sreedhar, Prof. B. R. Shamanna, Dr. M. Varalakshmi, Sri.A. Madhava Rao, Dr. M. Srinivas, Dr. Deepa Srinivas, Dr. M.K. Arunasree and Ms. A. D. Shobhavathi		

Please note:

- Any amendments in the protocol must be informed to the Ethics committee and fresh approval taken.
- Any serious adverse event must be reported to the Ethics Committee within 48 hours in writing (mentioning the protocol No. or the study ID)
- Any advertisement placed in the newspapers, magazines must be submitted for approval.
- If the conduct of the study is to be continued beyond the approved period, an application for the same must be forwarded to the Ethics Committee.
- It is hereby confirmed that neither you nor any of the members of the study team participated in the decision making/voting procedures and declared conflict of interest.

A S Sreedhar
09/03/2021

Chairman

(Dr. A S Sreedhar)

B.R. Shamanna
9/3/21

Member Secretary

(Prof. B.R.Shamanna)

M. Varalakshmi
09/03/2021

Convenor

(Dr. M. Varalakshmi)

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