

# **Psychological Well-Being, Maternal-Foetal Bonding and Experiences of Indian Surrogates**



**Nishtha Lamba**

Department of Psychology  
Centre for Family Research  
University of Cambridge

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## **Abstract**

Over the past two decades, India has become an international hub of cross-border surrogacy. The extreme economic and cultural differences between international couples seeking surrogacy and the surrogates themselves, clinics compromising health of surrogates for profit, the stigmatisation of surrogacy in India, and the constant surveillance of these women living in a 'surrogate house', have raised concerns regarding the potentially negative psychological impact of surrogacy on Indian surrogates. The primary aims of the thesis were (i) to conduct a longitudinal assessment of surrogates' psychological problems (anxiety, depression and stress) from pregnancy until several months after relinquishing the baby to the intended parents, (ii) to examine the nature of the bond formed between surrogates and the unborn baby and establish whether this prenatal bond contributes to their psychological problems, and (iii) to explore the experiences of surrogates during and post-surrogacy. Fifty surrogates were compared with a matched group of 69 expectant mothers during pregnancy. Of these, 45 surrogates and 49 comparison group of mothers were followed up 4-6 months after the birth. All surrogates were hosting pregnancies for international intended parents and had at least one child of their own. Data were obtained using standardised questionnaires and in-depth interviews and were analysed using quantitative and qualitative methods.

Indian surrogates were found to be more depressed than the comparison group of mothers, both during pregnancy and after the birth. However, giving up the newborn did not appear to add to surrogates' levels of depression. There were no differences between the surrogates and the expectant mothers in anxiety or stress during either phase of the study. The examination of risk factors for psychological problems among the surrogates showed that anticipation of stigma, experiences of social humiliation and receiving insufficient support during pregnancy were associated with higher levels of depression following the birth. With respect to bonding with the unborn child, surrogates experienced lower levels of emotional bonding (e.g. they interacted less, and wondered less about, the foetus), but exhibited higher levels of instrumental bonding (e.g. they adopted better eating habits and avoided unhealthy practices during pregnancy), than women who were carrying their own babies. Contrary to concerns, greater bonding with the unborn child was not associated with increased psychological problems post-relinquishment. All surrogates were able to give up the child. Meeting the intended parents after the birth positively contributed towards surrogates' satisfaction with relinquishment whereas meeting the baby did not. The qualitative findings on surrogates' experiences showed that the majority lacked basic medical information regarding surrogacy pregnancy; hid surrogacy from most people; felt positive and supported at the surrogate house; lived in uncertainty regarding whether or not they would be allowed to meet the intended parents and the baby; and did not actually get to meet them. These findings have important implications for policy and practice on surrogacy in the Global South.

*To my parents and my brother...*

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## **Preface**

This dissertation is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the Preface and specified in the text. It is not substantially the same as any that I have submitted, or, is being concurrently submitted for a degree or diploma or other qualification at the University of Cambridge or any other University or similar institution except as declared in the Preface and specified in the text. I further state that no substantial part of my dissertation has already been submitted, or, is being concurrently submitted for any such degree, diploma or other qualification at the University of Cambridge or any other University of similar institution except as declared in the Preface and specified in the text. It does not exceed the prescribed word limit for the relevant Degree Committee.

Nishtha Lamba

September, 2017

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# **Chapter 1**

## **Introduction and literature review**

There is no global consensus on the ideal surrogacy arrangement. In the practice of surrogacy, one woman (the surrogate) bears a child for another with the intention of giving the child (relinquishing) after the birth. It is believed that, during gestation, women bond with their unborn child; therefore, relinquishing a newborn may cause the surrogate long-term psychological harm. A surrogate may have a genetic or a gestational link with the resultant child and may or may not be compensated. Due to restrictions in their home country or individual preferences, an infertile couple may choose to travel to another country to hire the services of a surrogate. In today's globalised market, many intended parents (IPs) travel to low-income countries for this purpose, primarily due to such countries' convenient surrogacy policies and lower costs. This practice is often described as 'cross-border compensated surrogacy'.

Over the past two decades, India – with its access to modern technology and the availability of low-income women who 'choose' to become surrogates due to financial necessity – had quickly become an international hub of surrogacy. However, India's unregulated market for surrogacy has been highly criticised for compromising surrogates' health and emotional well-being, for profit. Factors that have raised ethical concerns and distinguish surrogacy arrangements in India from those in the West include: the extreme power differential (between the intended parents (couple seeking surrogacy) and the surrogate), the absence of a relationship between them, the requirement that surrogates live in a surrogate house during pregnancy, and surrogates' experience of intense criticism and social humiliation from family and neighbours. Critics of surrogacy in India often argue that the arrangement causes 'long-term physical or psychological harm' in return for 'short-term financial gain'. While the present study was based in India, similar concerns have been raised regarding compensated surrogacy in other low-income countries.

To date, there is no information regarding the psychological health of Indian surrogates, especially post-relinquishment. Neither is there information on the nature of the bond an Indian surrogate develops with the unborn child and the impact this may have on her psychological health. Furthermore, due to a lack of empirical research on Indian surrogates, very little is known about their experiences of the surrogacy arrangement. This thesis is based on data from both Indian surrogates and a comparison group of non-surrogate expectant mothers, during pregnancy and post-birth. The broad aim of the research was to assess Indian surrogates' psychological well-being, bonding with the unborn child and experiences. The specific aims were to (i) to establish whether surrogates and a comparison group of expectant mothers differ in prenatal and postnatal anxiety, depression and stress (ii) to determine whether surrogates and a comparison group of expectant mothers differ in their bond with the unborn child, (iii) to examine factors associated with surrogates' prenatal and postnatal anxiety, depression and stress, (iv) to identify factors associated with surrogates' bonding with the foetus, and (v) to explore the personal experiences of surrogates.

*Chapter 1* primarily reviews the literature relating to surrogacy arrangements in India, surrogates' psychological well-being, and surrogates' maternal-foetal bonding. It is important to note that very little is known about how surrogacy is legislated and practiced in India. Therefore in order to provide a cultural context to the thesis, the socio-cultural context is discussed before reviewing the literature on surrogates' psychological well-being and maternal-foetal bonding. Second, where possible an attempt has been made to draw from both the 'normal' pregnancy and surrogacy pregnancy literature. Third, the introductory section reviews the literature on both Indian surrogacy and surrogacy in the West and, where necessary, draws parallels between the two systems. *Chapter 2* expands on the research design, recruitment and characteristics of the participants, procedure for collecting data, ethical approval, and the measures used for data collection. *Chapters 3, 4 and 5* report the results of the study, including surrogates' psychological well-being and bonding with the unborn child, factors associated with surrogates' psychological health and maternal-foetal bonding, and their experiences of the surrogacy arrangement. In *Chapter 6*, findings from Chapters 3, 4, and 5 are discussed, including the study's strengths and limitations, its policy implications and potential directions for future research.

The following literature review begins with an introduction to surrogacy (section 1.1) and concerns relating to the use of surrogacy (Section 1.1.1). This is followed by a description of



key aspects of surrogacy arrangements in India (Section 1.2), including the legal context, the business of cross-border reproductive care, the emergence of fertility clinics, intended parents' preferences and experiences in India, general attributes of Indian surrogates, surrogacy contracts, surrogate houses, the relationship dynamics between the clinic, the intended parents and the surrogate, and surrogates' experiences of stigmatisation regarding the surrogacy arrangement (Sections 1.2.1–1.2.8). In the following sections, psychological well-being and maternal–foetal bonding in pregnancy generally and surrogacy pregnancies in particular are outlined (Sections 1.3–1.4). Finally, rationale of the study (Section 1.5) and aims and hypotheses are presented (Section 1.6).

## **1.1 Introduction to surrogacy**

The origin of the word 'surrogate' is the Latin word *surrogatus*, meaning 'substitute'. Surrogacy arrangements fall into one of two categories: traditional (genetic, complete or straight) surrogacy, whereby the surrogate uses her egg to achieve pregnancy; and gestational (full, in vitro fertilisation [IVF] or host) surrogacy, whereby the surrogate uses the intended mother's eggs or donor eggs to achieve pregnancy. In the form of collaborative reproduction, surrogacy offers parenthood to infertile heterosexual couples, gay couples and single men, and its use has rapidly increased over the last few years (Richards, Pennings & Appleby, 2012).

The technology of egg donation, which was first introduced in 1983, carved a path for gestational surrogacy (Golombok, 2015), in which the child lacks a gestational link to the social (intended) mother but shares a genetic link with her (unless an egg donor had been used to conceive the child). The present research focuses gestational surrogates. Gestational surrogacy arrangements may be entered into with either a known surrogate (e.g., a friend or family member) or an unknown surrogate (Koert & Daniluk, 2016). Parent(s) who hire the services of a gestational surrogate may be referred to as 'genetic parents', 'commissioning parents', 'intended parents' or 'recipient parents' (Brinsden, 2016; Goslinga-Roy, 2000). In this thesis, the term 'intended parents' has been used, which reflects their desire to become parents (Braverman, Casey & Jadv, 2012).

A surrogacy arrangement may be categorised as an altruistic or a commercial (or compensated) surrogacy. Generally, the ‘commercial model’ refers to the entire market that is set up around the surrogacy industry, whereas the ‘compensated model’ specifically emphasises the payment made to surrogates. In this thesis, the term ‘compensated surrogacy’ is used. Unlike altruistic surrogacy, compensated surrogacy involves financial incentives for the surrogate above and beyond the actual expenses of bearing a child. In comparison to compensated surrogacy, in altruistic surrogacy, a surrogate is more likely to have a genetic and a gestational link with the unborn child. She is previously ‘known’ to the intended parent(s) and gives a ‘gift’ to them and she takes no (or less) monetary compensation relating to her ‘reproductive labour’ or infertility treatments. ‘Compensated gestational surrogacy’, on the other hand, has been defined as ‘the practice of carrying an artificially fertilised embryo in the uterus in exchange for compensation’ (Majumdar, 2014, p. 276). In this case, the surrogate – usually a woman who was previously unknown to the intended parents – is paid for gestating, giving birth and relinquishing parental rights to the intended parents (Wilkinson, 2003). Under these conditions, market forces and socio-political structures determine the total amount of payment made to the surrogate, the infertility clinic, the lawyers and other involved parties by the intended parent(s).

In the UK and other European nations that permit surrogacy, legislation sanctions altruistic surrogacy. In these arrangements, compensation for ‘reasonable expenses’ is permitted and further payment is not forbidden, but needs to be approved by a court of law (Brinsden, 2016; Gamble, 2016). Conversely, payments to the surrogate are legal in some states in the USA (e.g., Oregon, California and Nevada) and, until the 1990s, most intended couples from other parts of the world who were seeking compensated surrogacy went to the USA for this purpose. It is estimated that approximately 25,000 surrogacy children were born in the USA between 1976 and 2007 (Keen, 2014). Throughout this time, demand for surrogacy options has risen. The desire for a genetically related child, along with the preferable economic, legal and social arrangements in some regions of the globalised world, enabled the emergence of cross-border compensated surrogacy in low-income countries. Many countries in the Global South (e.g., Nepal, Thailand, India and Cambodia) have entered this ‘business’ of reproductive tourism. India became the largest hub for compensated surrogacy, competing with the Western compensated surrogacy ‘market’. Concerns arising from the emergence of this market relate to the well-being of surrogates, new family structures, adoption and surrogacy laws, medical technology and other factors. These concerns are reviewed in

Section 1.2.8. The next section describes the concerns that have been raised regards to the use of surrogacy, in general.

### **1.1.1 Concerns regarding the use of surrogacy**

Of all the assisted reproductive treatments (ARTs), ‘surrogacy remains the most controversial form [...] raising a number of ethical concerns’ (Golombok, 2015, p. 120). Such concerns include the medicalisation of birth, the challenge to normative understandings of motherhood, apprehension regarding prenatal bonding and giving up the child (relinquishment), uncertainty regarding the successful completion of a surrogacy arrangement, the commodification of women’s bodies, financial incentives in surrogacy and much more.

Normalisation of the use of medical technologies in childbirth has long been controversial (McDonald, 1994). Some feminist researchers have argued that ARTs reduce women’s control over their own bodies (Shiva, 1993; Woliver, 1996) and that the medicalisation and manipulation of women’s bodies is another aspect of patriarchal control (Doyal, 1994; McDonald, 1994; Nayak, 2014; Tanderup, Reddy, Patel, & Nielsen, 2015; Teman, 2010). As a result, ARTs have been said to contribute to gender inequalities, support traditional female gendered expectations and exploit poor ethnic minority women (Anleu, 1992; Kleinpeter & Hohman, 2000; Schwartz, 2000).

Surrogacy has drawn considerable attention due to its de-linking of pregnancy and motherhood. Both pregnancy without the intention of motherhood and motherhood without the experience of pregnancy continue to be frowned upon. Teman (2008) discussed that the sanctity of ‘maternal wholeness’ is distorted by the possibility of a child having three mothers: a genetic, a gestational and a social mother. Such an arrangement threatens the ‘natural’ order of things, with the birth mother defying the commitment to lifelong mothering. In this way it challenges the moral conception of the ‘ideology of motherhood’ (Wearing, 1984). Even the term ‘surrogate mother’ has been questioned, as it considers pregnancy as an ‘act of mothering’ (Stanworth, 1987). In fact, some surrogates insist on not being called ‘mothers’ (Henry, 2017), and recently there has been a shift to referring to them as ‘gestational carriers’ or ‘surrogates’, instead (Braverman & Corson, 2002).

In terms of bonding with the unborn child in surrogacy, the disruption of the assumption that ‘normal’ women ‘naturally’ bond with their children creates a ‘cultural anomaly’ (Teman, 2008; Teman, 2010; van den Akker, 2007b). In relation to this, Anderson (1990) warned against surrogacy, deeming it ‘alienated labour’ whereby the surrogate is forced to feel alienated and to oppose her intrinsic impulse to bond with the foetus. Therefore, most ethical arguments originate from the assumption that surrogates establish a natural bond with their unborn child.

Concerns relating to surrogacy also arise from the inherent uncertainty (from the time of conception until delivery) about whether the surrogate will relinquish the baby (Braverman et al., 2012). Highlighting the assumption that the surrogate may wish to keep the baby, Warnock (2002, p. 90), in her book *Making Babies*, states that ‘there is no doubt that surrogacy is an extremely risky enterprise, and liable to end in tears’. Uncertainties may also arise from change of mind of intended parents due to their disturbed relationship or developmental issues in the infant. The media not only presents distressed images of surrogates, but also feeds on rare selective and sensational stories of surrogacy arrangements gone wrong (Teman, 2008; Warnock, 2002). The following are examples of such stories: (i) Baby M, USA, 1986: Mary Beth Whitehead, a surrogate, refused to relinquish the surrogate baby she had carried for William and Elizabeth Stern, for \$10,000. The arrangement was a traditional surrogacy. Although Miss Whitehead had signed a contract, she could not let go of the child after delivery. This resulted in one of the earliest high-profile media stories on surrogacy. After a long legal battle, the intending parents were given the child; (ii) Baby Manji, India, 2008: A Japanese couple had hired the services of a surrogate mother in India, but the couple separated a month before the baby was born. The wife no longer wanted the child. The father travelled to India to take the baby daughter back to Japan. However, he was not allowed to take the girl back home, as the Guardian Wards Act (1890) in India bans single men from adopting a child. This led to Baby Manji being labelled the first ‘surrogate orphan’. Baby Manji’s grandmother came to India to help her son persuade the authorities. The Supreme Court intervened and allowed Baby Manji to be taken home to her father by her grandmother; and (iii) Baby Gammy, Thailand, 2015: Baby Gammy and his twin sister were born to a 21-year-old surrogate mother in Thailand, to Australian intended parents. After delivery, the parents left Baby Gammy (who had Down’s syndrome) in Thailand and took his twin sister with them. The surrogate offered to take care of Baby Gammy. Some believe that the surrogate was told by the clinic to abort one foetus when it was diagnosed with Down’s

syndrome, but she refused to do so. The case fuelled much discussion on the unregulated market of cross-border surrogacy, as it continued to unfold over time. The Australian government offered the surrogate money to care for Baby Gammy. It was later revealed that the intended father was a convicted sex offender who had been imprisoned for three years in 1997 for molesting two young girls.

Building on the organised aspect of control over women's bodies, Nayak (2014) suggested that the 'virtual separation of biology and reproduction has resulted in commercialisation of surrogacy', through the commodification of reproductive parts (p. 2). Radical feminists here argued that reproductive technologies reduce surrogates to 'uterine environments', 'living laboratories', 'foetal containers' and 'vessels' (Teman, 2010, p. 32). Furthermore, the idea of building familial relationships in a marketplace, making such relationships a 'matter of choice than fate', generates collective unease in society (Rao, 2003; Teman, 2008, p. 1105). Such that, a surrogate choosing to relinquish the child for payment is counter-intuitive to the expectations society has built around family building.

From a legal perspective, it has been questioned whether compensated surrogacy should be criminalised or if it is already a criminal act to 'sell a baby' (Coleman, 1996; Field, 1991; Klienpeter & Hohman, 2000). Most people find it more acceptable to view surrogacy as an act of kindness or altruism than a market-based transaction. For example, when it was reported in 1985 that Kim Cotton, a surrogate in the UK, had been paid £6,500 for a surrogacy arrangement, the state intervened and took the baby into its care. In response, the *Guardian* newspaper posed the following question: 'How will baby Cotton feel when she learns that her unknown mother did not give her up sadly, out of necessity, but gladly, for money?' Eventually, the court decided to give the intended parents custody of 'Baby Cotton' (Golombok, 2015).

Concerns vary with respect to the different types of surrogacy. As observed in the Baby M case in the USA, genetic surrogacy tends to raise more legal and ethical concerns than does gestational surrogacy (DasGupta & Dasgupta, 2014; Blatt, 2009). As a result after that case, almost all clinics and intended parents in the USA preferred that surrogates lacked a genetic link with the baby. Gestational surrogacy is believed to offer less risk to intended parents, with reduced familial complexities and ambiguities (Jadva, 2016; Spar, 2006); hence, gestational surrogacy arrangements are more prevalent.

However, when the practice of gestational surrogacy began, it also opened a Pandora's box of ethical questions: As discussed above, such arrangements limited the role of a 'woman' or 'mother' to only a womb, separating pregnancy from motherhood. Second, collective unease regarding surrogacy increased when gestational surrogacy became transactional in nature, dictated by market forces. The idea of 'selling' a baby as a product, or paying a surrogate for her 'priceless' service was viewed as deeply unethical. Third, additional challenges were seen with the emergence of <sup>1</sup>cross-border surrogacy with intended parent(s) visiting another developed country (for example, British parent(s) hiring services of an American surrogate in the USA). Concerns relating to the inter-country (or inter-continental) moral, cultural, religious, economic, legal and political expectations from all parties in the surrogacy arrangement (including the surrogate, the intended parents, the fertility clinic and the future surrogacy child) were raised. Finally, these concerns became more acute with the emergence of cross-border surrogacy whereby intended parent(s) visited a low-income developing country (for example, British parent(s) hiring the services of an Indian surrogate in India), where poor and uneducated women take up surrogacy as a survival strategy. While being dependent on financial incentives surrogates may feel helpless, lonely and disempowered during the process. In fact, some moral arguments have deemed surrogacy a form of racial slavery (Khader, 2013; Pande, 2010a). Such practices raised – and continue to raise – serious concerns that the arrangement might infringe on surrogates' autonomy and self-choice, further affecting their psychological well-being (Knoche, 2014; Braverman et al., 2012).

Apprehension around these arrangements have increased with the growing number of media stories about stateless and parentless surrogacy children in low-income countries. One recent news story revealed that in order to circumvent the law, intended parent(s) from developed countries signed surrogacy contracts dictating that the conception and delivery of the baby would occur in different countries. For example, a surrogacy child of Israeli gay fathers was conceived in India but delivered in Nepal by an Indian surrogate (Vaidehi, 2017). To conclude, cross-border gestational compensated surrogacy in developing countries produces several additional concerns to those of surrogacy more generally (Section 1.2.8 explores concerns related to surrogacy in low-income countries, specifically).

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<sup>1</sup> Gestational cross-border compensated surrogacy is referred as 'cross-border surrogacy' in the present study.

## **1.2 Surrogacy arrangements in India**

Owing to the predominance of Hinduism in India, a few of its parables linked to the possibility of surrogacy are commonly known (Pande, 2014; Kalra, Baruah & Kalra, 2016; Bhattacharya, 2006). Kams was informed by oracles that his sister's future son will be a reason for his demise. Therefore, the cruel king imprisoned his sister (Devaki) and her husband (Vasudev) and killed their children. Lord Vishnu intervened when the seventh child was conceived, and transferred the embryo to the womb of Rohini, Vasudev's second wife. Thus the baby was conceived in, and delivered from, different wombs. In another story in *Mahabharat*, a queen, Gandhari, was blessed with an ability to have 100 sons. She had a long-term pregnancy of 375 days, after which, she delivered a lump of flesh. This was divided into hundred pieces and incubated in artificial wombs, which lead to the birth of Gandhari's 101 children – 100 sons and 1 daughter. Importantly, these children were not viewed as outcast in these stories and the concept of procreation without sexual intercourse is demonstrated once again.

With regard to surrogacy in today's world, India is an 'exceptionally rich case study because of its unusual structure' (Pande, 2009a p. 381). This section first presents a timeline of legal and political changes associated with cross-border surrogacy in India. Following this, the foundation (reproductive medical tourism and fertility clinics), 'demand' (of international intended parents), and 'supply' (of surrogates) of Indian surrogacy arrangements is discussed. Thereafter, procedural aspects (relating to surrogacy contracts, surrogate houses and the power dynamics between clinics, intended parents and surrogates) and socio-cultural aspects (such as, social stigma) that are specific to surrogacy arrangements in India are considered.

### **1.2.1 Policy timeline of Indian surrogacy**

India's first IVF baby, Kanupriya (alias 'Durga'), was born in Kolkata just 77 days after Louise Brown, the world's first IVF baby, was born in the UK on 3 October 1978 (Bharadwaj, 2002). Other documented IVF babies were born in Mumbai in 1986 and Bangalore in 1998 (Rudrappa, 2014). Building on the success of IVF technology, compensated gestational surrogacy became legal in India in 2002 (DasGupta & Dasgupta, 2014; Harrison, 2016; Pande, 2011). The next year, it became a global phenomenon when Dr Nayna Patel of Anand, Gujarat, successfully enabled a surrogacy arrangement whereby a

woman, who lived in Gujarat, became a gestational surrogate for her daughter, who resided in the UK (DasGupta & Dasgupta, 2014). This case of ‘supergran surrogacy’ (*BioNews*, 2004) hit the headlines and made Anand the surrogacy capital of India. Since most developed countries either completely ban surrogacy (e.g., France, Iceland, Italy, Germany, Portugal and some states in the USA) or tightly regulate its use (e.g., the UK, Denmark, Belgium, Ireland and Canada), India quickly became an international hub of surrogacy. Estimates suggest that more than 25,000 surrogate children were born in India prior to 2015 (Söderström-Anttila et al., 2016), and terms such as ‘womb farm’ (Moorti, 2011), ‘baby factory’ (Roberts, 2012) and ‘market pregnancy’ (Rudrappa, 2015) became frequently used to refer to India’s surrogacy industry.

While the Indian Council of Medical Research (ICMR) estimated the surrogacy business in India to be worth \$450 million (Warner, 2008), the most widely used ‘mythical value’ for this unregulated market is \$2.3 billion (Deonandan, Green, & Beinum, 2012; Lamba, 2016a; Pande, 2016). Consequently, the Law Commission of India (2009) has referred to it as the ‘pot of gold’. Anil Malhotra and Ranjit Malhotra, in their book, *Surrogacy in India*, estimated that the industry amounts to Rs 25,000 crores (approximately 2 billion GBP), with 200,000 clinics providing artificial insemination, in vitro fertilisation and surrogacy. Outside of Anand, the cities with the highest number of fertility clinics are Mumbai, Delhi, Hyderabad and Bangalore – all of which are all well-connected and metropolitan (Rudrappa, 2012). India is a highly preferred market for surrogacy due to its minimal regulation. However, this lack of regulation has also led India to be criticised for enabling comparatively rich Westerners to exploit poor and vulnerable Indian women (DasGupta & Dasgupta, 2014; Warner, 2008).

In response to growing concerns about Indian surrogacy, India’s Home Ministry introduced restrictions and guidelines starting 2008. However, none of these guidelines bore surrogates’ rights and emotional well-being in mind (Rajalakshmi, 2016). Over the past decade, the surrogacy market in India has witnessed a gradual transition from unregulated client-friendly policies, to non-binding regulation, to strict regulation (Pande, 2016). The discussions formed the bases for this transition, further revealing the government’s reservations about the burgeoning business of surrogacy in India. Prior to 2010, all regulation was non-binding. In 2012, however, some restrictive guidelines were added to the Assisted Reproductive Technique Bill (ART): surrogates had to be between 21–35 years old and international intended parents had to have been married for a minimum of 2 years and were required to



have a letter from their country of residence to ensure that the child would be allowed to return with them. As same-sex marriages are not recognised in India, lesbian and gay couples became ineligible for surrogacy arrangements. Single mothers and single fathers were also banned from accessing surrogacy (DasGupta & Dasgupta, 2014; “India bans gay foreign”, 2013).

In 2013, the Directorate General of Health Services (DGHS) suggested that surrogacy in India should be accessible only to married, infertile Indian couples. In February 2015, an advocate on the Supreme Court, Jayashree Wad, petitioned against compensated surrogacy in India, stating that it leads to ‘exploitation of womanhood’ (Rajalakshmi, 2016). Following this, in October 2015, an affidavit was presented to the Supreme Court to issue a ban on compensated surrogacy in India, on the basis that surrogacy should be accessible to Indian infertile couples only (Pande, 2016). This did not come as a complete surprise, given the similar ban on compensated surrogacy that had come into force in the neighbouring countries of Thailand and Nepal. The media frenzy around high-profile cases of Baby Manji in India (2008) and Baby Gammy in Thailand (2015) added pressure on the government to make a decision.

The Indian government eventually banned compensated surrogacy, in August 2016, deeming it exploitative (Sibal, 2016). The Surrogacy (Regulation) Bill, 2016 allows: ‘altruistic surrogacy’ to Indian infertile couples who have been married for a minimum of 5 years. Neither intended parent can have a child, even from a previous marriage. The surrogate mother can be paid or reimbursed for basic expenses, only, and she must be a close family relative. Furthermore, she can serve as a surrogate only once. The new bill does not allow single parents, same-sex parents, cohabiting couples, foreigners or overseas Indian citizens to enter into a surrogacy arrangement in India. Individual cases are overseen by a surrogacy board at both central and state levels, and the law is effective in every state of the union, except Jammu and Kashmir (Lamba, 2016b).

One year later now, in August, 2017, the altruistic versus commercial surrogacy debate reopened when the parliamentary committee argued that a fixed compensation should be provided to the surrogates. The previous Bill has been criticised for being too ‘moralistic’ and not being aligned with new family forms. Consequently, the reformed Bill suggests that surrogacy should be accessible to live-in partners, widows, divorced women, non-resident

Indians and even overseas citizens of India. Single men and same-sex couples are still not allowed to access surrogacy. Despite often having freedom in their home country and having the strongest case for choosing surrogacy, they face difficulty and discrimination when accessing cross-border surrogacy in the Global South (NBC News, 2016; Sibal, 2016). The Bill further demarcates that since infertility can be diagnosed within a year, prospective parents should not have to wait for five years before becoming eligible to access surrogacy in India (Photopoulos, 2017). While parliamentary debates may take their course, it seems that the reformed Bill presents a more liberal form of surrogacy in India.

### **1.2.2 Cross-border reproductive care and fertility clinics**

Approximately 200,000 tourists visited India for medical treatments in 2008 (DasGupta & Dasgupta, 2014). Currently, India's medical tourism industry is estimated to comprise 18% of the global medical tourism market and is expected to be worth \$8 billion by 2020 (*Economic Times*, 2015; Pollard, 2017). Since the cost of private health care in developed countries is beyond the reach of most middle class persons, it is common for them to travel to developing nations for specific medical assistance (Pennings, 2004). Overall, medical tourism is the result of cheap airfares, open communication channels, modern yet affordable technology, international demand and local supply (SAMA, 2012).

Infertility treatment is one of the most common reasons for intended parents to travel abroad (Alleman et al., 2011), and cross-border compensated surrogacy has stemmed from this growing reproductive travel industry (DasGupta & Dasgupta, 2014). 'Cross-border reproductive care' is the preferred label for this phenomenon of travelling for reproductive treatment, rather than the previously used 'fertility tourism', as it highlights the fact that patients travel out of necessity and not for leisure, as tourists (Shenfield, 2009).

In response to the moral quandary of compensated surrogacy in the growing business of reproductive care, Spar (2006) suggests that the market exists because humans have an innate desire to procreate and that the 'market for babies' (p. 18) exists beyond ethical and legal uncertainties. She argued that, in this economic transaction, the 'product' sold is not just a baby, but also the 'hope and medicine to make babies'.

In the absence of legal constraints, India has become the ‘mother destination’ for commercial surrogacy (Rudrappa, 2010), with approximately 200 registered fertility clinics<sup>2</sup> and a total of 500 to 3,000 clinics across the country (Rudrappa, 2015). Fertility clinics are known to promote ‘packages’ with controversial incentives and discounts for treatment, local tourism and lodging. The range of incentives and marketing strategies used to advertise surrogacy services is evident on clinic websites. For example, one clinic website states: ‘See Taj Mahal by the moonlight while your embryo grows in [a] Petri-dish.’ Another claims: ‘Our pregnancy rates are very high, because we can transfer more embryos in difficult patients, unlike in [the] UK and Australia.’ One clinic website simply states: ‘With PlanetHospital, all you have to do is show up’.

These clinics function commercially, placing demand, supply and profit at the centre of their medical decisions (Nadimpally & Majumdar, 2017). Therefore, they not only mediate the relationship between the intended parent(s) and the surrogate (see Section 1.2.5 on issues related to informed consent), but they also control crucial decisions regarding surrogates’ pregnancies, which may or may not be communicated to the parties involved. It is common for doctors to choose a surrogate for the intended parents and to take autonomous medical decisions regarding the number of embryos transferred, foetal reductions and caesarean births (Tanderup et al., 2015).

### **1.2.3 Intended parents**

Before the ban, intended parents from around the globe visited India for surrogacy for a number of reasons. These included the possibility for the intended parents’ names to be on the birth certificate, cheaper medical costs and services, English-speaking doctors, shorter waiting times and an infrastructure that enabled surrogates to remain under constant supervision during the pregnancy, in a house with other surrogates (Mohapatra, 2012; SAMA, 2012; Smerdon, 2008).

It is common for cross-border ‘surrogacy users’ in India to be foreign, white, upper-middle class and educated. Very few studies have examined the preferences, motivations and experiences of intended parents who visit low-income countries for surrogacy. In terms of

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<sup>2</sup> These clinics are registered with the National Association for Assisted Reproduction in India.

intended parents' criteria for recruiting surrogates, Saravanan (2013) found that intended parents selected surrogates on the basis of their 'healthy appearance, willingness to relinquish the baby, family situation, husband's occupation, medical history, and family mortality history' (p. 8). In addition, according to the clinic staff, 30% of the intended parents preferred the surrogate to share a similar religious background. Rudrappa (2015) found that an Australian couple in her study chose a 'B-list' (instead of an 'A-list') surrogate, as the former had less education and needed money more desperately than the latter, who had received a high-school education and was thus in a better position to provide for her family.

Data from an anonymous online survey conducted in 2012 on 217 Australian intended parents revealed that most of the parents believed that surrogacy in India would reduce the risk of the surrogate keeping the baby (Everingham, 2012) – a concern that was expressed by gay men more than heterosexual couples. The study also reported that the parents' primary reason for choosing compensated surrogacy in India was their inability to find a surrogate with purely altruistic motivations in Australia. (In some parts of Australia, only altruistic surrogacy is permitted.) Other reasons for the parents pursuing surrogacy in India included their preference for an unknown surrogate (as a known surrogate might feel obligated to become a surrogate) and their difficulty finding an unknown surrogate in Australia due to restrictions on surrogacy advertising. Finally, the intended parents felt that asking a surrogate to carry their baby 'for love' (uncompensated surrogacy) would be unfair.

In her ethnographic research, Kalindi Vora (2013) elaborated on the thought process of a middle class white couple from the USA visiting India for surrogacy. Along with acknowledging the affordability of surrogacy in India, the parents mentioned that they preferred the 'spatial imagination of distance' between the surrogate and their future child. This distance re-assured them that, considering the surrogate's socio-economic and educational background, she would not be able to track them down, even in the event that the clinic failed to protect their contact information. Moreover, the intended parents preferred to think of the 'surrogate performing a role that is altruistic yet ultimately a service' (Vora, 2014, p. 71), and they expressed a vague hope that payment for the service would significantly improve the surrogate's life (Vora, 2013).

Førde (2016) conducted one of the most recent studies on the experiences of international intended parents visiting India for surrogacy. The study was an ethnographic account of

seven heterosexual couples, five same-sex couples and four single men who travelled to Mumbai for surrogacy. Førde (2016) reported that the intended parents felt morally unsure of being in a powerful position compared to the surrogates. They expressed that they did not find this power differential fully legitimate and faced moral dilemmas and unease about whether they were ‘exploiting’ the surrogates. For example, one intended parent said: ‘Here we come, relatively rich. And we do come to rent her womb. And... that means we are not equal... She is in a way a servant from whom we buy a service. And although it is by her own choice... Oh, this is really difficult... to know.’ Another intended parent said: ‘Take when we Skype, the way she behaves. She acts a bit suppressed... Or maybe it’s more she lets herself be suppressed, resulting in this difference in who takes the initiative and everything’ (full quotation p. 41). Overall, the intended parents expressed discomfort about the transaction not being on equal terms and felt that the ambiguity primarily existed because their surrogates’ ‘priceless’ contribution did not have a place in the ‘market’.

Other themes that emerged from the study were that some intended parents: (i) felt that the surrogacy arrangement was a ‘win-win’ situation, as the surrogates got the money they desperately needed; (ii) felt that the arrangement was a contract between ‘morally good motivations’; (iii) did not completely trust the clinics; (iv) had limited direct contact with the surrogates; and (v) had restricted access to important information. Lastly, in reference to the moral dilemmas faced by the intended parents, Førde argued that the individual ethical projects were not equipped to deal with structural power inequalities and that ‘these processes are beyond the scope of individual choices’ (p. 10). These studies, however should be interpreted with caution. While they provide an in-depth information on the preferences and experiences of intended parents, they lack generalisability as most are based on a few case studies.

#### **1.2.4 Indian surrogates**

Pande, who has carried out extensive anthropological research on Indian surrogates in Anand (2009a, 2009b, 2010a, 2010b, 2011), describes the women as ‘cheap, docile, selfless and nurturing’ (Pande, 2010b, p. 969). Due to lack of research on Indian surrogates, in this section, research on the motivations and personality traits of surrogates in the West is presented, and parallels are drawn with the research on surrogates in India. Thereafter, the

recruitment of surrogates via agents and the payment structure of surrogacy arrangements in India are described.

#### **1.2.4.1 Motivations**

Most research in the USA and UK has found that surrogates are primarily motivated by altruistic reasons involving empathy for childless couples (van den Akker, 2003; Blyth, 1994; Ciccarelli et al., 2005; Jadva, Murray, Lycett, MacCallum, Golombok, 2003). In addition, studies in the UK have found financial gain, enjoyment of pregnancy/childbirth, narcissistic needs and a greater sense of self-worth and value as key motivational factors for surrogates (Blyth, 1994; Braverman & Corson, 1992; Jadva et al., 2003). Uniquely, a rejection of norms has also been found to incentivise American surrogates (Ragone, 1994, 1996; described further in the next section on personality traits). Overall, studies in the USA and UK report either equal altruistic and financial motivations (Baslington, 2002; Blyth, 1994; Resnick, 1989) or mostly altruistic motivation (Klinepeter & Hohman, 2000; Hohman & Hagan, 2001; Imrie & Jadva, 2014; Jadva et al., 2003; van den Akker, 2003). Conversely, Teman (2010), in her fieldwork in Israel, found that surrogates' primary motivation was financial.

Ragone (1994, 1996) argues that self-report techniques are subject to socially desirable responses; therefore, surrogates are likely to report ideas about reproduction, motherhood and family that are deemed acceptable within their culture. For this reason, financial incentives and motivations related to a sense of achievement or self-worth are mentioned less often in the West. However, since Indian surrogates are mired in poverty, they may find it culturally acceptable to mention financial gain as a primary motivation. Surrogates in India are usually less educated (or uneducated) and belong to a low socio-economic class (Nayank, 2014); thus, their motivations are often purely financial in nature. Indian women commonly become surrogates to finance their children's education, rent/buy a house, compensate for their husband's inability to earn, pay debts or pay for a marriage in the family (DasGupta & Dasgupta, 2014; Karandikar, Gezinski, Carter, & Kaloga, 2014; Pande, 2011; Saravanan, 2013).

Social factors that may influence the decision making processes of Indian surrogates include a low level of education, a lack of jobs for unskilled and semi-skilled workers and India's patriarchal social system (Panitch, 2013). Karandikar et al. (2014) interviewed 15 women aged 21–30 regarding their motivations to become a surrogate in India, and found that

surrogacy was reported as *majburi* ('compelled' or 'helplessness'). The women had few means to provide for their families, and surrogacy was seen as a last resort. Due to India's inherently patriarchal culture, it was also common for the surrogates to report feeling grateful towards their husbands for allowing them to become surrogates. This made them appear 'dutiful' and 'selfless', whilst also justifying their temporary role as the family's primary breadwinner. Some de-emphasised the difficult decision they took to become a surrogate by expressing gratitude to God (Pande, 2009b).

The motivations of surrogates can also be understood via the rhetoric of 'gift giving'. In her study of 28 American surrogates, Ragone (1994) showed that even in compensated surrogacy arrangements, surrogates built narratives around their desire to give an 'ultimate gift of love' and presented this as their primary motivation. Teman (2010) expanded on this by suggesting that surrogates develop a rhetoric of 'being an angel', while also accepting that the surrogacy arrangement fulfils their financial needs and personal aspirations. Finally, the narratives of Indian surrogates were not devoid of altruistic motivations, as some reported surrogacy as a noble act (Karandikar et al., 2014; Vora, 2010; SAMA, 2012). Karandikar et al. (2014) described this as a 'moral justification for a decision already made for financial reasons' (p. 9).

While Vora (2010) encountered the themes of 'gift giving' and the 'power to give' in her research on Indian surrogates, Pande (2011) instead stated that, 'the gift-giving surrogate of Euro-American contexts, ironically, transforms into a needy gift-receiver in the clinic in India' (p. 619). She further drew from Cannell's (1990) analogy on 'pure' (altruistic) versus 'wicked' (compensated) surrogacy to explain the motivations of the women in her study, whereby a 'pure' surrogate was thought to show maternal love towards the baby during pregnancy and to give a sacrificial gift at the time of relinquishment and a 'wicked' surrogate was thought to 'prostitute her maternity' (p. 683). In her study, she found that it was common for the surrogate counsellor and the surrogate house matron to 'train' the surrogates to 'treat surrogacy like God's gift to them and to not be greedy or business-minded' (Pande, 2011, p. 621). For example, one of the surrogates in Pande's (2011) research said: 'Matron Madam is right. God has been generous this time. He has given me the biggest gift – the opportunity to help my family. I don't want to be greedy and try for the second time' (p. 621). Therefore, Pande argued that the Western idea of a surrogate as a 'gift giver' is reversed in India, where a surrogate is considered a 'gift receiver'.

#### **1.2.4.2 Personality characteristics**

To date, no empirical research has examined the personality traits of Indian surrogates. Resnick (1989) argues that personality characteristics and the social context play an important role in explaining why some women become surrogates and others do not. He further reasons that surrogates appear to be non-conformists who do not necessarily adhere to social norms and are less affected by communal sanctions. A handful of studies have examined the personality traits of surrogates in the USA to determine whether they are mentally stable and whether they show any dysfunctional characteristics, especially prior to entering the surrogacy arrangement. Previous research using the Minnesota Multiphasic Personality Inventory (MMPI) to identify psychopathology and unique personality traits showed that women who enter surrogacy arrangements are ‘independent thinkers and are less bound by traditional moral values’ (Ragone, 1994; Tieu, 2009, p. 171). In particular, a study conducted on surrogates by Kleinpeter and Hohman (2000) in the USA showed that surrogates scored higher on positive emotions compared with a normative population. They also found surrogates to be lower in Conscientiousness and Dutifulness on the Five Factor Test. However, out of 54 surrogates who were contacted, only 17 surrogates (2 traditional and 15 gestational surrogates) volunteered to take part in this study. It is possible that women who felt dissatisfied with the surrogacy arrangement did not volunteer to take part, indicating that this dataset was only inclusive of the voices of women who were happy with their surrogacy arrangement. Nevertheless, these studies suggest that the American surrogates had a flexible outlook on moral and ethical notions in society. There is no information, however on whether surrogates from the Global South would display similar traits.

Two other influential studies of the time conducted in the USA, by Braverman and Corson (1992) and Pizitz, McCullaugh and Rabin (2013), also examined the personality traits of gestational surrogates using the MMPI. In the earlier study, American surrogates displayed no overt psychopathology. However, they were found to have higher narcissistic needs and lower self-esteem and self-confidence, compared with traditional surrogates (Braverman & Corson, 1992). In the latter and more recent study conducted on a much larger sample of 43 surrogacy candidates, participants appeared to be ‘exceedingly capable of handling conflict’ (p. 19). They displayed higher self-worth and altruism along with lower levels of anxiety and tension, less frustration and more contentment as compared to the normative sample (Pizitz et al., 2013) (see Section 1.3.3 for a literature review on surrogates’ psychological health). This study further revealed that women opting for surrogacy were both tough-minded and



sensitive, and aware of the emotional boundaries surrounding maternal–foetal bonding. The concept of maternal–foetal bonding and its impact on relinquishment and the psychological well-being of surrogates is discussed in Section 1.4.2.

#### **1.2.4.3 Recruitment and payment**

Unlike in the West, where the Internet plays an important role in recruitment of surrogates, in India, surrogates are recruited primarily via word of mouth (Nadimpally & Majumdar, 2017; SAMA, 2012). Pande (2010a) describes the recruitment process of ‘bringing in a needy woman from a nearby village to the clinic’ as one of the first small steps in transforming ‘worker-mothers’ into surrogates (p. 976). Surrogates are mostly recruited from agents affiliated with fertility clinics. It is common for these agents to be women who have previously served as a surrogate or egg donor at the same clinic, and they are paid via commission from both the clinic (based on a pre-determined contract) (Jadva, Lamba, Kadam, & Golombok, 2016) and the surrogate (based often on verbal commitments) (SAMA, 2012).

Deomampo (2013), conducted a detailed thirteen month ethnographic research based on participant observation on the structure of surrogacy in India suggested that agents play a very important role in Indian surrogacy arrangements. She uses the term ‘agent-caretaker’, as they act as the surrogate’s primary voice at fertility clinics, playing the crucial role of enhancing or limiting the surrogate’s rights and opportunities. Furthermore, the agent-caretaker negotiates monetary transactions for the surrogate, explains surrogacy from a medical perspective, supervises the surrogate’s medical regimes, motivates the surrogate to conform on the expectations of the intended parents and encourages the surrogate to conform with clinic regulations. In addition, the agent usually supervises meetings between the intended parents and the surrogate (Deomampo, 2014; Jadva, 2016). Nadimpally and Majumdar (2017) interviewed two agents as part of their research on assisted conception and commercial surrogacy. The first person was a man who had started his career as an agent by ‘hiring’ his wife for surrogacy and used his personal story to convince other men with eligible wives to urge them towards surrogacy. The agent earned Rs 25,000 (£250) from each contract, and since his surrogates did not live in a surrogate house, he also watched their diets. The second agent was a woman who accompanied surrogates to their daily medical check-ups. This agent advised her clients that surrogates live at home and disclosed that she made ‘surprise visits’ to the surrogates’ homes to check on their dietary habits and hygiene.

Indian surrogates are usually paid \$2,800–\$9,000 of the intended parents’ total expenditure of \$20,000–\$45,000, amounting to 14–20% of the total cost. In comparison, surrogates in the USA are paid \$20,000–\$25,000 out of the intended parents’ total expenditure of \$80,000–\$100,000, amounting to 25% of the total cost. However, from the limited information available on the payment structure of Indian surrogates, it appears that surrogates’ fees are highly inconsistent, and negotiations over monetary compensation are rare (Nayak, 2014). Payment depends on various factors, such as clinic regulations, the profile of the surrogate, the location of the clinic, the goodwill of the intended parents, whether the pregnancy is singleton or twin and the commission charged by recruiting agents (DasGupta & Dasgupta, 2014; SAMA, 2012). As mentioned above, surrogates are unlikely to negotiate payments due to their inability to understand their rights and because of their difficult financial circumstances (SAMA, 2012).

Surrogacy payment also varies between states and clinics. Pande (2011), in her comprehensive study based on a single clinic, found that surrogates in Anand, Gujarat were paid a non-negotiable sum of \$500 every 3 months. Overall, however, research shows that surrogates are typically paid in three installments: (i) after the embryo transfer, (ii) after the first ultrasound that confirms conception and (iii) after the birth of the surrogacy child. Payments made before the birth are usually small fractions (20–40%) of the full amount (SAMA, 2012). Some clinics offer small monthly payments during the pregnancy and a big installment (75% of the total pay) following the birth. In addition, some intended parents give gifts or cash to the surrogate and her family (SAMA, 2012). In some cases, clinic staff supervise the way in which surrogates spend their money, as they feel that surrogates often ‘misuse’ their payments to hold religious ceremonies or to buy consumable goods (Vora, 2014).

There is minimal research on surrogates’ satisfaction with their financial compensation; however, a study conducted in multiple clinics in Delhi and Punjab reported that surrogates were dissatisfied with their compensation and suspected that agents took money from their payments (SAMA, 2012). Similar results were found in another study conducted in Gujarat (Saravanan, 2013). Whilst a surrogate’s payment is only a small proportion of the total amount received by the clinic for the surrogacy arrangement, it still amounts to approximately 10 years’ worth of income (Pande, 2009a), which may potentially change their

socio-economic status and quality of life. In fact, some surrogates report payment to be life changing (Tanderup et al., 2015). However, we do not know if surrogates feel the same after the surrogacy arrangement ends. Moreover, in the absence of regulation, surrogates are rarely given money from the clinic, agents or intended parents for post-pregnancy care (SAMA, 2012).

### **1.2.5 Surrogacy contracts and surrogate houses**

In India, surrogacy contracts and surrogate houses are highly controversial, as it is through these two entities that the clinic imposes intense scrutiny over the surrogate's life during pregnancy. In the 'market' of surrogacy, the contract is signed between the fertility clinic, the intended parent(s) and the surrogate. In addition to outlining payment, surrogacy contracts may include clauses related to relinquishment, consent, the interests and responsibilities of the parties involved and medical risks and decisions. While clauses relating to relinquishment are the most important in any surrogacy contract, the 'decision' to relinquish a child cannot be pre-determined (Nelson & Nelson, 1989). It is believed that surrogacy contracts in India are used as a 'disciplinary tool' to remind surrogates that they cannot go back on their commitment to relinquish the child (Deomampo, 2014).

The ART Bill of 2010 made it mandatory for a surrogate's husband to consent to the surrogacy arrangement (SAMA, 2012). Surrogates who lack a husband are required to have a close family member sign the contract. The contracts are in English – a language that many surrogates fail to understand; in these cases, the agent or a clinic staff member will verbally translate the contract for the surrogate (Wilkinson, 2015). Nelson and Nelson (1989) argue that, in general, surrogacy contracts do not safeguard the interests of the surrogacy children and the surrogates. They do not contain clauses regarding the surrogate's awareness or preferences about the number of embryos inserted, foetal abortions in the case of multiple pregnancies or contact with the intended parents or surrogacy child (Nayak, 2014). In some cases, an absence of a standard contract has been noted. For example, one of the surrogates in Pande's (2011) research said: 'We don't really have a contract. Will [the intended father] said, "You make us happy, and we'll make you happy."'

Deonandan & colleagues (2012) study contributed to the debate of informed consent in surrogacy arrangements. They recommend that communication regarding contracts following

informed consent is essential and can aid in creating an ethical framework for cross-border reproductive care. However, surrogates in India are highly susceptible to neo-colonial exploitation, whereby risks, impacts and basic information regarding pregnancy and surrogacy are (often deliberately) uncommunicated (Deonandan et al., 2012). As these surrogates are often illiterate, many fail to understand the details of the contract, and this raises serious issues around informed consent (Deomampo, 2014; Deonandan et al., 2012; Tanderup et al., 2015). In this process, social and emotional risks, in addition to biological risks, are completely disregarded.

For instance, it has been found that, in order to achieve pregnancy in the first attempt, some clinics disregard the medical risks related to multiple pregnancies by transferring several embryos (Lahl, 2017; Pande, 2009b; Tanderup et al., 2015). Of the 18 clinics Tanderup et al. (2015) visited in Delhi, all were found to transfer more than one embryo: three transferred two embryos, seven transferred three embryos, four transferred four embryos, three transferred five embryos and one transferred seven embryos. Only 4 of the 18 clinics spoke to the intended parents about medical decisions and only 1 clinic involved both the intended parents and the surrogate in these decisions. These results raise issues related to informed consent involving medical decision making. Researchers and journalists have further revealed that some clinics impregnate two surrogates with four embryos each, for a single client, in order to increase the likelihood of conception (Rudrappa, 2015; Taneja, 2013). Vora (2014), who conducted fieldwork between 2004 and 2006, further indicated that the clinic's profit motive makes patients (surrogates) 'dehumanized and anonymous' (p. 77).

Rudrappa (2015), who interviewed 70 surrogates in Bangalore, revealed that surrogates were not informed that they would have a caesarean birth until weeks 36–38 of their pregnancy, and none received medical assistance after delivery. Moreover, research has shown that surrogacy contract clauses that relate to the surrogacy arrangement centre on the surrogate's 'responsibilities'; very few focus on her 'rights' (Palattiyil, Blyth, Sidhva, & Balakrishnan, 2010). This indicates that the proposed policies on surrogacy in the Global South, are not focused on the surrogates' rights, agency and autonomy.

In India, surrogates often live away from their family and children in a house/hostel with several other surrogates, near the clinic, during their pregnancy, and these 'surrogate houses' play a very important role in their experiences. Surrogate houses have received much

negative media attention and made surrogacy arrangements in India highly controversial and unique. Pande (2011), who spent time with surrogates at a surrogate house in Gujarat, describes the situation as follows: ‘all the surrogates live together, in a room lined with iron beds and nothing else. The women have nothing to do except walk around the hostel and share their woes, experiences and gossip with the other surrogates while they wait for the next injection’ (p. 620). Image 1.1 is an example of one such surrogate house. The surrogates’ daily activities in the house involve eating food and taking medicine according to a prescribed schedule, watching television and talking to other surrogates. They rarely take walks and family members visit only infrequently. Vora (2014) states that, in surrogate houses, surrogates are discouraged from engaging in domestic work and manual jobs, but they are provided with healthy diets and medical supervision. Further, surrogate houses enable surrogates to be kept under constant surveillance by clinic staff (Pande, 2011).

Image 1.1 A surrogate house in India



Very few studies have explored surrogates’ feelings towards living in a surrogate house. Vora (2014) further reported that many participants in her study had never lived in such a feminine space and missed living in the house post-surrogacy. Additionally, surrogate houses have been described as places in which surrogates share stories and develop bonds, kinship and sisterhood (Pande, 2009a; Vora, 2014). While most studies showed surrogate houses in a positive light, Saravanan’s (2013) research found that surrogates felt bored and faced hygiene and sanitation problems due to overcrowding in the house. Some ethicists have claimed that the restrictions, strict regimes and constant surveillance of surrogates in a surrogate house are constraints on their autonomy (Nayak, 2014). It is important, however to note that whilst it is

common for clinics to have a surrogate house in India, it is not a requirement in all surrogacy arrangements.

### **1.2.6 Relationship dynamics between the clinic, the intended parents and the surrogate**

Researchers have explored the complex relationship dynamics between the surrogate, the fertility clinic (and agent) and the intended parents (Nayak, 2014; Rudrappa, 2014; Vora, 2013). Vora (2013, 2014), a sociologist who conducted an in-depth examination of social relationships developed in cross-border surrogacy programs, construes this relationship as one of power between middle class doctors, elite Indians or foreigners and poor surrogates. She argues that the relationship is reminiscent of India's colonial history, but mixed with privatisation and globalised commerce (this related concept is discussed in Section 1.2.8 on concerns related to surrogacy in low-income countries). She further describes this relationship as one in which 'the relationship between physical bodies and social meaning becomes oriented towards seemingly multiple future outcomes when surrogates use the continuous shift between economic and interpersonal registers in the clinic to imagine a long-term beneficial connection to commissioning parents' (Vora, 2013, p. 97).

Saravanan (2013), who also conducted her research in Gujarat, illustrates these relationships through a 'network of trust'. She argues that not only are surrogates the most vulnerable in this 'relationship of power', but the clinic actively seeks to recruit surrogates who are most vulnerable, and thus submissive (Saravanan, 2013, 2010). Intended parent(s) lack knowledge of the cultural values, legalities and structural hierarchies involved in the arrangement, and usually put their complete faith in the medical practitioners. Surrogates also trust the clinic staff with their care during pregnancy, and the clinic trusts surrogates to adhere to the rules. The clinic further trusts intended parent(s) to provide payment in full and to return to India to take their children home. However, noticeably, Saravanan's (2013) conception of this network of trust is devoid of any direct expectations (or trust) between the surrogate and the intended parents.

The clinic, as the mediator between the intended parents and the surrogate, depersonalises the surrogate (Pande, 2011; Vora, 2013) and discourages the intended parents from entering into a direct relationship with her (Mitra & Schicktanz, 2016). The narratives of surrogates and

intended parents suggest that they are aware of the clinic's intention to encourage this distance (Førde, 2016; Mitra & Schicktanz, 2016) (see Sections 1.2.3 & 1.2.4).

There is little information on whether Indian surrogates prefer or desire contact with the intended parents during and after pregnancy. Largely, these parties do not stay in touch with the surrogate after the baby is delivered (Mitra & Schicktanz, 2016). Most intended parents leave soon after the semen sample is collected and the egg is retrieved, and return only for the birth of their baby, to take the child back home (Vora, 2013). Saravanan (2013) found that some intended parents wanted the surrogate to attend to the baby for a few days post-birth. This could be due to delays in their arrival, their desire for the newborn to be breastfed or their wish for the surrogate to care for the baby as a nanny during the visa procedures. However, this finding appears to be an anomaly in the literature.

Research has further shown that intended parents fear that if they were to establish an independent relationship with the surrogate, they might be manipulated for money. On the other hand, surrogates report an expectation that intended parents will naturally feel a sense of duty, reciprocity and generosity towards them and their households, which they will express via gift giving (Pande, 2011; Vora, 2013). In relation to this, Vora (2014) drawing parallels from Brouwer's (1999) research on indigenous cultural ideologies of gift expectation in relationships suggested that it is natural for Indian surrogates to expect gifts from intended parents as an expression of gratitude, however it may be mistaken as greed by intended parents. Overall, in this context, there seems to be a conflict between the intended parents' fear and the surrogates' hope; this conflict is perhaps manipulated by the fertility clinic.

Ragone (1994) differentiates between 'open' and 'closed' surrogacy arrangements in the USA. Unlike 'closed programs', 'open surrogacy programs' involve contact between the surrogate and the intended parents. In India, surrogacy is 'closed', with no direct interaction between the couple and the surrogate; instead, this relationship is managed through a third party (the clinic). In the West, the level of contact the surrogate develops with the intended parent(s) before, during and after surrogacy has long been of interest in research. Despite the complex relationship dynamic, in the West intended parents and surrogates are expected to have a long-term relationship and remain in close contact during pregnancy and post-surrogacy, with the intended parents and the child an essential part of the surrogacy

arrangement (Braverman et al., 2012; Jadva et al., 2003; Jadva, Blake, Casey, & Golombok, 2012). Studies conducted in the UK and USA have revealed that surrogates often develop a harmonious relationship with the intended parents after the surrogacy arrangement ends. Most (but not all) surrogates stay in touch with the intended parents and often exchange letters/cards once or twice a year, make frequent phone calls or meet at respective family gatherings (Braverman, 2010; Imrie & Jadva, 2014; Jadva et al., 2003; Jadva et al., 2012). Imrie and Jadva (2014) found that – even years after the birth (mean 7 years) – most surrogates were in contact with the surrogacy child, intended mother and intended father. Additionally even 10 years after the birth, the majority of the surrogates felt positive about their relationship with the intended parent(s) and 60% of the surrogates were still in contact with the intended parents (Jadva, Imrie, & Golombok, 2014). However, it is not unusual for them to have conflicts regarding diet, travel, expenses and medicine during pregnancy (Greenfeld, 2014; Hanafin, 2006), as difficulties between ‘my baby, your body’ and ‘my body, your baby’ may arise (Hanafin, 2006).

### **1.2.7 Stigmatisation of surrogacy**

In India, surrogacy is frequently kept secret due to the social stigma attached to it. Even the surrogate’s family often considers the act immoral (Pande, 2009b, 2010b). Even after a decade of the practice of commercial surrogacy in India, a growing body of research continues to show that surrogates face social humiliation and criticism from family members and the wider community, and may be shunned by persons in these networks (Deonandan et al., 2012; Karandikar et al., 2014; SAMA, 2012). Family members who do not shun the surrogate will often strive to keep the arrangement confidential. A similar finding has been found amongst Indian egg donors, who also keep their donation a secret due to the stigma associated with this (Jadva et al., 2016).

Similar findings were reported in the UK in the 1990s. Blyth (1994), in one of the earliest researches on surrogates in the Global North, found that 10 out of 19 surrogates in his study had experienced negative responses from society. He further argued that, in surrogacy, women from lower socio-economic backgrounds might be targeted and exploited. Such women may be more likely to enter surrogacy arrangements without knowledge of the potential risks (Brazier, Campbell, & Golombok, 1998; Jadva et al., 2003). However, social norms about surrogacy in the UK and USA have changed in recent years, with surrogacy now



more visible and accepted (Markens, 2012). In a less open society such as that of India, social stigma relating to surrogacy is likely to be more severe.

Since surrogacy is the most ‘visible’ reproductive donation (labour), involving a pregnancy bump (Pande, 2009b), it is difficult to hide. Due to the ‘sexualised stigma’ associated with surrogacy, it is common for misinformed family or friends to accuse surrogates of sex-work or adultery (Deonandan et al., 2012; Hochschild, 2009; Nadimpally & Majumdar, 2017; Nayak, 2014). In India, reproduction and child bearing are considered part of the sacred institution of marriage; therefore, surrogacy challenges the linear understanding of pregnancy leading to family building and motherhood (Nayak, 2014). Pregnancy outside the realm of marriage is instantly compared to sex work, and this has led to parallels being drawn between prostitution and surrogacy (Niekerk & Zyl, 1995; Pande, 2009b, 2010b, Madge, 2014). Such associations can lead surrogates to feel even more stigmatised (Madge, 2014). Separated, divorced, abandoned and widowed surrogates may suffer from greater stigmatisation, as they lack a husband who could explain their pregnancy (SAMA, 2012).

A growing body of research suggests that the experience of stigma is psychologically distressing (Link, 1987; Maas, Wismeijer, Assen, & Aquarius, 2012; Markowitz, 1998). Thus, pervasive stigma is likely to cause intense psychological harm to the surrogate (Nayak, 2014). In particular, Markowitz (1998), in a highly influential study, based on a longitudinal study from 610 participants found that social stigma is likely to generate feelings of depression and anxiety (Markowitz, 1998). There are no empirical findings on the impact of stigma and secrecy on Indian surrogates, but research has been conducted on other vulnerable populations in India. For example, a study on HIV positive patients found that their act of keeping their HIV status secret due to stigma led to cognitive preoccupation with it and increased their levels of depression and anxiety (Maas et al., 2012). In addition, research on rape victims has shown that receiving negative and insensitive reactions or feeling blamed by family serves a ‘silencing function’ and causes intense psychological distress (Ahrens, 2006).

Given that Indian surrogates often hide surrogacy anticipating criticism, studies on the psychological impact of anticipated stigma were researched. It was found that anticipated and experienced stigma are correlated and even anticipated stigma has been found to be associated with ‘demoralization (a composite measure of low self-esteem and symptoms of sadness, anxiety, and confused thinking [Dohrenwend, Shrout, Egri, & Mendelsohn, 1980]),

lower income, unemployment, and restricted social networks (Link, 1987; Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Link, Mirotznik, & Cullen, 1991; Markowitz, 1998, p. 336). Overall, stigma is known to affect a range of social outcomes, such as self-concept (Rosenfield, 1997), life satisfaction (Link, 1987) and identity (Markowitz, 1998; Matsueda, 1992). In extreme cases, stigma – in addition to depression – can also lead to severe psychotic symptoms (Farina, Fisher, & Fischer, 1992; Markowitz, 1998). In stigma research, cross-sectional studies have often left researchers with tentative conclusions on causal directions (Markowitz, 1998; Wright & Gronfein, 1996). Markowitz (1998) argued that, in order to establish causal direction in stigma research, longitudinal study is needed. The present study, being longitudinal in nature, enables the examination of the stigma experienced by surrogates and its psychological impact at different time points of the surrogacy arrangement.

It is important to note that, in the context of secrecy in surrogacy, disclosure to surrogacy children regarding their birth may have negative psychological consequences for them. In the UK, the majority of families disclose surrogacy to their children from the age of 3, and early disclosure has been found to be associated with more positive family relationships (Golombok et al., 2006; Illoi, Blake, Jadvá, Roman and Golombok, 2017; Jadvá et al., 2012; Readings, Blake, Casey, Jadvá, & Golombok, 2011). To date, there has been no empirical research on children born via cross-border compensated surrogacy in low-income countries, and it is important that we learn whether, how and when the intended parents in these arrangements disclose the arrangement to their children and how these children cope with the disclosure. In the case of cross-border surrogacy, surrogacy children must cope with the additional fact that not only their birth was a monetary transaction (The Warnock Report, 1984), their surrogates (and perhaps also donor gametes) were from a different country, ethnicity and extremely low socio-economic background; this raises further concerns about how the children might feel about their birth (Braverman et al., 2012; Jadvá, 2016).

#### **1.2.7.1 Moral justifications to cope with stigmatisation**

Very few studies have described women's development of moral justifications for becoming a surrogate, amidst secrecy and stigma. In order to cope with the threat surrogacy poses to their identity, Indian surrogates have been found to build narratives that neutralise the stigma associated with it (Nayak, 2014; Pande, 2010b; Rudrappa, 2015). This section outlines surrogates' moral justifications and confusions relating to their decision to become a

surrogate, the medical procedures involved and the concepts of ‘labour work’ and ‘exploitation’.

As discussed above, Pande (2009b) draws a parallel between ‘surrogacy’ and ‘dirty work’. In her study, she observed that surrogates highlighted the moral difference between surrogacy and sex work. They resisted the stigma attached to surrogacy and preserved their self-worth by thinking of themselves as ‘more moral’ than sex workers. This provided them with a moral upper hand when compared with women having a similar circumstantial reality. For example, while morally justifying surrogacy, one of the surrogates in her study reported: ‘the important thing is that I am not doing anything wrong for the money – not stealing or killing anyone. And I am not sleeping with anyone’ (p. 157). Therefore, surrogates resisted stigma by establishing the moral superiority of surrogacy over ‘dirty work’. Pande (2010b) further argued that, while the ‘language of morality’ reduced the stigma associated with surrogacy, it also reinforced gender hierarchies. As men in India face stigma when they are unable to provide for their family, the surrogates defended their husbands’ moral worth by downplaying their breadwinner role and fostering their image as sacrificial, dutiful mothers.

Due to illiteracy amongst surrogates and the sexualised stigma attached to surrogacy, surrogates often feel confusion with respect to the medical procedures. Their husbands, whose consent is crucial and often mandatory, also express reluctance in the beginning, for similar reasons. At this point, either the agent or a member of staff at the clinic will intervene to explain that no sexual relations are involved and that pregnancy is achieved through ‘medicine’ and ‘injections’ (Pande, 2010a; Pande, 2010b; SAMA, 2012).

In Pande’s (2010a) study, surrogates’ narratives fell into the realm of discursive resistance, whereby they viewed surrogacy as a familial responsibility and obligation, and not necessarily as ‘labour work’. In contrast to Pande’s (2010a) work, some studies have shown that surrogates understand surrogacy as ‘work’ involving ‘efforts/labour’ (SAMA, 2012, p. 55). Rudrappa (2015), a sociologist who interviewed 70 surrogates, majority of whom worked in garment factories, argued that the participants in her study were not in denial regarding their stigmatisation and exploitation. However, the women believed that – relative to their regular jobs, which were often in the garment industry – surrogacy offered them ‘greater control over their emotional, financial, and sexual lives’ (p. 27). They found work as a surrogate more meaningful and felt that it upheld their moral worth more than other labour

positions in factories or at home. For example, one of the surrogates in her study reported: ‘Garments? You wear your shirt for a few months and you throw it away. But I make you a baby? You keep that for life. I have made something so much bigger than anything I could ever make in the factory’ (p. 27).

In summary, Pande (2010b) described four (moral) strategies used by surrogates in India to cope with stigma. First, as mentioned above, they created symbolic differentiation between prostitution and surrogacy and between giving up a child for adoption and surrogacy (‘we are not like that’). Second, in terms of motivation, they underplayed the concept of choice in their decision making process (‘this is *majboori*, a necessity’). Third, they resisted seeing themselves as ‘disposable labour’ (‘it’s a relationship made in heaven’) and, finally, they displayed a sense of distance and closeness with the unborn child, simultaneously (‘it’s my blood even if it’s their genes’). These justifications acted as coping mechanisms by reducing the emotional cost of being involved in stigmatised labour.

### **1.2.8 Concerns regarding the use of cross-border surrogacy**

Surrogacy in the Global South has long been caught in the ‘exploitation’ versus ‘empowerment’ debate, which is difficult to untangle. While some feminists perceive surrogacy as exploitative, others consider it to represent ‘financial independence’, ‘procreative liberty’ and ‘reproductive freedom’ (Golombok, 2015, p. 121; Panitch, 2013). The most common contrasting voices are between Western critics, who think of surrogacy in India as a ‘dehumanising process’, and Indian heads of clinics, who describe it as a ‘win-win’ situation (Dasgupta & Dasgupta, 2014).

Furthermore, surrogacy in India has been criticised for being a ‘reproductive outsourcing enterprise’ instead of an ‘altruistic arrangement’. With respect to cross-border compensated surrogacy in the Global South, race, class and cultural background have been central to oppositional arguments. The following are a few quotes from media articles that encapsulate the complexity of the issue: ‘the women having babies for rich Westerners have been pimped by their husbands and are powerless to resist’ (*Guardian* [Bindel, 2011]); ‘rules of decency seem to differ when the women in question are living in abject poverty half a world away’ (*New York Times* [Warner, 2008]); and one should worry as ‘women of color are easier to commodify’ (Smerdon, 2008, pp. 51–52). DasGupta and Dasgupta (2014, p. xiii) summarise

this criticism in their recent book, *Globalization and Transnational Surrogacy in India*, as one describing a ‘mutually beneficial exchange between women who have money but are infertile and women who are poor but can produce children, the barter effectively secretes the power differentials between the inhabitants of the First and Third Worlds to the detriment of Indian Surrogate’.

Similarly, Khader (2013), in his paper ‘Intersectionality and Ethics of Transnational Compensated Surrogacy’, draws parallels between cross-border surrogacy in low-income countries and slave women being discouraged from developing an attachment to their children, as they could be sold to white families. Pande (2010), in her feminist ethnography, draws a similar racial analogy, suggesting that cross-border surrogacy in South Asia, as ‘care work’, is similar to white upper class American women’s employment of women of colour for domestic labour. Such analogies put surrogacy in India, extremely difficult to morally comprehend, and raises concerns against its existence. To this, Pande (2014) interestingly points out that since surrogacy in India has evolved into a survival strategy for poor women, it makes little sense to rationalise the practice using moral concepts.

Moreover, as mentioned above, while Western scholars often deem surrogacy in India exploitative because surrogates in India lack a sense of ‘choice’ (Majumdar, 2014; Wilkinson, 2015), some Indian researchers refer to Indian surrogates’ belief that selling their womb is a ‘choice’ they make over selling their body (prostitution) (Pande, 2009a, 2009b). However, Dasgupta and Dasgupta (2014) argue that it is difficult to settle the debate regarding ‘choice’, as the concept of ‘exploitation’ is culturally and circumstantial relative. Commonly in South Asian countries, poor women find factory and domestic work lucrative options for earning a livelihood, and surrogates have been often found to have previously held such professions (Rudrappa, 2015; SAMA, 2012). Research and media reports have repeatedly shown that female factory workers in low-income countries often experience sexual or physical abuse, long hours, low wages, inhumane conditions and severe health issues (ABC News, 2016; Balakrishnan, 2002; Barry, 2016; Chamberlain, 2012; Gunnupuri, 2016). Moreover, research on female domestic workers has shown that domestic work is an intimate form of labour whereby – in addition to cleaning and cooking – workers are often required to care for their upper class employers’ children and elderly parents. Similar to surrogates, factory and domestic workers are usually uneducated and recruited via an agency; further, they typically enter into verbal contracts that risk abrupt dismissal and are unaware of

the details of these contracts (Palriwala & Neetha, 2010; Neetha & Palriwala, 2011). Therefore, while becoming a surrogate may be a new experience for many women in low-income countries, experiences relating to class, patriarchy and social hierarchy are not new to them – particularly those who have entered the work force (Bardhan, 1986).

### **1.3 Psychological well-being**

Surrogates in India, coming from vulnerable populations, are at risk of poor psychological health. In particular, they may experience anxiety, depression and stress, all of which are negative emotional states that are clinically pertinent indicators of psychological health (Lovibond & Lovibond, 1995). These occur due to an interaction between psychological, biological and social factors. The present study utilises these constructs to assess the psychological problems of surrogates. Anxiety is defined as an emotional state with feelings of excessive restlessness, nervousness and tiredness, increasing autonomic nervous system activity as well as a general lack of attention (Seignourel, Kunik, Snow, Wilson, & Stanley, 2008; Spielberger & Rickman, 1990). It serves as a response to fear or threat, especially when faced with ambiguity (Mathews, 1990). Anxiety has been shown to negatively impact quality of life, daily life activities, sleeping patterns, and neuropsychological performance, even after accounting for the effects of depression (Mathers and Loncar, 2006; Seignourel et al., 2008).

Depression is also an emotional state of mind that negatively affects perceptions, judgements and memories (Wenzlaff & Bates, 1998). The study of depression is deeply embedded in the field of cognitive psychology as distorted cognitions (or repetitive negative thoughts) have been shown to primarily explain depression (Hollon & Beck, 1994; Haaga, Dyck & Ernst, 1991). Elevated depression is most often associated with experiencing an irrevocable loss, for example, the death of a family member or losing one's job. Some factors associated with depression, such as helplessness and feeling lack of control (Rotter, 1966; Seligman, 1975; Lazarus, 1991) may act as either causes or consequences of depression (Price, Choi & Vinokur, 2002). Depression is symptomatically characterised by continuous sadness and a general loss of interest in daily activities. It deteriorates quality of life, intensifies physical health issues and may increase the chances of suicide. It is one of the leading causes of disability and mortality (Presse, 2017), especially in developing countries (Patel, Abas & Broadhead, 2001). According to the most recent update by the WHO (World Health

Organisation), depression has affected 300 million people across globe (WHO, 2017), making it the most widespread mental disorder.

Stress generally represents a digression from a steady state of mind (Lazarus, 1993). It makes individuals feel less in control, as a stressful situation results in demands exceeding the personal and social resources the individual is able to mobilize (Lazarus, 1966). In an optimum level, stress is believed to be ‘challenging and beneficial’, however severe acute or chronic stress can be ‘threatening and harmful’ (Lazarus, 1966; LePine, LePine & Jackson, 2004). The research literature on stress emphasises the bidirectional nature of the relationship between stress and life events. For example, marital disharmony may be viewed as a cause of stress or an outcome of feeling stressed (Dohrenwend, Dohrenwend, Dodson & Shrout, 1984). A large body of research has shown that in addition to major life events, minor everyday stressors may negatively affect physical and psychological health (DeLongis, Coyne, Dakof, Folkman & Lazarus, 1982; Bolger, DeLongis & Schilling, 1989).

In everyday life, intense experience of these emotional states give rise to feelings of helplessness and loneliness, whereby simple tasks may appear mentally exhausting (Green et al., 2005). Researchers believe that the symptoms of anxiety and depression overlap, as they share a common aetiology (Barker, Jaffee, Uher, & Maughan, 2011; Garber & Weersing, 2010; Glover, 2014; Hranov, 2007; Singh & Bhatnagar, 2016). As demonstrated by the high correlation between the two constructs that has been found in many studies, these emotional states often co-occur and lead to similar outcomes (Cole, Truglio, & Peeke, 1997; Glover, 2014; Stark & Laurent, 2001). However, despite the comorbidity, they can differ in course, diagnosis and treatment (Allen, Leonard, & Swedo, 1995). Stress often co-occurs with anxiety and depression, but it usually only leads to momentary feelings of depression (Dorman & Zapf, 2002; Terluin, Rhenen, Schaufeli, & Haan, 2004).

### **1.3.1 Psychological problems during pregnancy**

A large body of work suggests that women are highly vulnerable to psychological problems during pregnancy, which may also impact the growth of the foetus. The majority of these studies have studied the association between depression and pregnancy. Therefore, this section reviews some of the important findings on this issue, with a special focus on prenatal and postnatal depression. It is important to note that depression during pregnancy and post-

birth has been found to have a wider impact on pregnant women than prenatal and postnatal anxiety (Barker et al., 2011).

Every pregnancy requires the mother to make significant psychological adjustments to cope with pregnancy-related anxiety, depression and stress (Da Costa, Larouche, Dritsa, & Brender, 1999). Generally, a wide range of factors have been studied in relation to experiencing emotional difficulties during pregnancy, such as increased stress, daily life stress, symptoms of anxiety and depression, diagnosed depression, marital disharmony, domestic abuse or the experience of natural disasters. They may have a negative impact on foetal development, thus in consequence leading to cognitive and emotional developmental problems, such as attention deficit hyperactive disorder, in the infant (Austin, Pavlovic, & Leader, 2005; Glover, 2014; Huizink, Bartels, & Rose, 2008; Huizink, Medina, & Mulder, 2003). These effects may last up until early adulthood (Capron et al., 2015; Glover & Capron, 2017). Another study showed that high levels of prenatal anxiety regarding the outcome of the pregnancy may lead to alterations in the newborn (Hompeš et al., 2013). This research finding may apply to surrogates and is of clinical importance.

Regarding depression, 10% of women experience minor or major depression during pregnancy and 25% of women report experiencing mild depression during pregnancy (O'Hara, 1995; Cutrona, 1983). In particular, studies have shown that maternal depression during pregnancy may negatively affect the mother's self-care and medical practices (Leigh & Milgrom, 2008), such as taking alcohol or harmful drugs, not having a nutritious diet or not keeping a healthy weight, which in turn has an effect on the development of the infant (Patel, Rahman, Jacob, & Hughes, 2004).

Commonly, psychological problems experienced during pregnancy have been found to continue after the birth. For instance, depression during pregnancy is a strong predictor of depression post-birth (Glover, 2014). A majority of women experience baby blues, involving mood instability, irritability and depressive symptoms for about two weeks after childbirth. However, if these symptoms persist for longer, it is considered as postnatal depression. Postnatal depression is usually diagnosed 4-12 weeks after giving birth. Without clinical intervention, it may last up to 3 years (Patel et al., 2004; McNamee, 2015). Symptoms of postnatal depression include loss of appetite, sleep disturbances and a general loss of energy. In addition to prenatal depression, postnatal depression has been found to be



predicted by a history of psychopathology, low social support and stressful life events (O'Hara, 2009). A growing body of research has further shown that in addition to the infant, postnatal maternal depression may have an adverse effect on previous children, husbands and other family members of depressed mothers. It may negatively affect the mental health of the partner, cause marital disharmony, and lead to social and financial problems in the family (Boath, Pryce and Cox, 1998). These factors may be of concern in relation to surrogates who return to their families following the birth.

While there is a wide-ranging literature on depression and pregnancy, the following help put into perspective the findings on prenatal and postnatal depression. First, in a longitudinal study, Leigh and Milgrom (2008) assessed the risk factors for prenatal and postnatal depression in primipara and multipara women during pregnancy and post-birth. They found that 78% of the variance in prenatal depression was explained by low self-esteem, prenatal anxiety, low social support, major life events, low income, negative cognitive style and a history of abuse. Strikingly, most (66%) of the variance in postnatal depression was explained by prenatal depression, previous experience of depression and parenting stress. In another high quality longitudinal study on depression, Evans, Heron, Francomb, Oke and Golding (2001) found that mothers suffered from higher depression during pregnancy (at 32 weeks of gestation) than at eight weeks' post-pregnancy, as measured by the Edinburgh Postnatal Depression Scale. Thus, it was recommended that clinical efforts be directed towards prenatal depression in order to avoid postnatal depression.

Overall, higher levels of anxiety, depression or stress can lead to behavioural, cognitive and emotional problems during pregnancy, at the birth and after delivery, for both the mother and the foetus/newborn (Badr, Abdallah, & Mohmoud, 2005; Berle et al., 2005; Elsenbruch et al. 2006; Glover, 2014; Leigh & Milgrom, 2008). Also, pregnancy-related emotional problems interfere with the relationship pregnant women develop with their unborn children (Goecke et al., 2012; Lingdren, 2001) and this aspect has been further discussed in Section 1.4.1.

#### **1.3.1.1 Impact of poverty during pregnancy**

Association between poverty and psychological problems is an unquestioned and a widely studied phenomenon in psychiatric epidemiology (Belle, 1990). A growing body of research has shown that women from low socio-economic backgrounds in developing nations suffer from high levels of emotional problems, such as depression – especially postnatal depression

(Kahn, Wise, Kennedy, & Kawachi, 2000; Patel & Kleinman, 2003; Patel, Araya, de Lima, Ludermit, & Todd, 1999; Patel, Rodrigues, & De Souza, 2002; Pereira et al., 2007). Factors such as lower education, lower social support (Kane & Slade, 2002; Leigh & Milgrom, 2008; O'Hara, 1995) and a greater number of young children (McGrath, Keita, Strickland, & Russo, 1990; Belle, 1990) have been found to be associated with prenatal depression and these factors are more prevalent amongst surrogates in developing nations. Moreover, research has shown that it is more common for South Asian women, than women in the West, to have depression during pregnancy, which is predictive of low birth weight, premature delivery, child illness and mortality (Patel et al., 2004). Women in these populations often attribute the reasons for their emotional problems to economic difficulties (Patel et al., 1999; Pereira et al., 2007). Indeed, Indian surrogates often report economic difficulties and their inability to afford a good education for their children as primary reasons for becoming a surrogate (Karandikar et al., 2014; Pande, 2011).

#### **1.3.1.2 The role of social support during pregnancy**

Emotional or functional support is deeply associated with psychological outcomes, both during and after pregnancy (Elsenbruch et al., 2006; Sheehan, 1998). Social support has been found to be negatively related to emotional distress and positively related to life satisfaction and self-esteem during pregnancy and after the birth (Stevenson, Maton & Teti, 1999; Costa, Drista, Larouche & Brender, 2000). Studies have also shown that women who had a better support network during pregnancy had reduced labour difficulties (e.g. better progress and reduced length and complications) and experienced less postnatal depression (Collins, Schetter, Lobel & Scrimshaw, 1993; Kennel, Klaus, McGrath, Robertson & Hinkley, 1991).

From a considerable pool of studies available on social support and pregnancy, the following studies with large representative sample sizes were selected to study the impact of social support on the psychological health of pregnant women. In particular, to study the effect of social support on maternal depression, Elsenbruch et al. (2006) prospectively assessed social support, depressive symptoms and quality of life of 896 women in Berlin during pregnancy and after delivery. Women who had little support showed greater symptoms of depression and experienced a poorer quality of life, and were more likely to smoke or to suffer complications during pregnancy. In a Canadian study, Glazier and colleagues (2004) administered standardised questionnaires to assess indicators of social stress, perceived social support, emotional distress and depressive symptoms in a large community sample of 2,052

women during their second trimester of pregnancy. They found that stress (mediated by social support) and socio-economic status had an effect on the level of emotional distress experienced by women during pregnancy. Additionally it was revealed that while the presence of a strong support network did not necessarily relate to emotional coping, the absence of social support led to high levels of emotional distress (Glazier, Elgar, Goel, & Holzapfel, 2004). Other than psychological outcomes, social support has also been found to regulate health behaviours, such as eating habits and alcohol or tobacco consumption, during pregnancy (Harley & Eskenazi, 2006; Heaman, Gupton, & Moffatt, 2005), which in turn may affect the well-being of the pregnant woman and the infant. The concept of social support can vary with cultural contexts and socio-economic status. For example, a study conducted on 991 pregnant North Indian women from a lower socio-economic background, found that incidences of domestic violence and abuse were significantly higher in women who lacked social support. Interestingly, in this study social support was measured by asking women if they had a place other than home (e.g. living with friends or parents) where they could stay for at least a month (Khosla, Dua, Devi & Sud, 2005).

No empirical research yet has examined the availability or role of social support in surrogacy pregnancies in India. Blyth (1994) suggested that, in the UK, ‘host’ (gestational) surrogacy is usually closely regulated to include a clear support network; ‘straight’ (genetic) surrogacy, on the other hand, leaves the involved parties to their own devices. While Indian gestational surrogates must abide by the detailed regulations established by the clinic, they do not receive any visible form of social support. van den Akker (2007) assessed social support (as measured by the Perceived Social Support Scale) received from partners, parents, friends and family in British surrogates and intended mothers during their first, second and third trimesters of pregnancy. While the support experienced by surrogates was consistently low from all sources during each stage of pregnancy, surrogates received significantly less support from their parents than did the intended mothers. However, some of these differences lessened by the third trimester. In addition, Fischer and Gillman (1991) found that American surrogates turned to fewer people for help, as compared to non-surrogate mothers.

In Western countries, the psychological risks involved in surrogacy have been reduced by the provision of psychological counselling and support (Söderström-Anttila et al., 2016). However, in India, surrogates are not usually offered these services and they are thus more vulnerable to experiencing psychological problems (Karandikar et al., 2014). On the one

hand, those who decide to hide their surrogacy may find that the visible baby bump makes it impossible for them to meet close friends and family during the pregnancy; thus, they may experience a lack of support during pregnancy and after the birth. On the other hand, researchers have suggested that living in a surrogate house provides Indian women with a feeling of kinship and sisterhood, and this may translate into a feeling of greater support during surrogacy (Pande, 2011; Rudrappa, 2015; Vora, 2013) (related concept discussed in Section 1.2.5).

### **1.3.2 Psychological theories of anxiety, depression and stress**

This section draws from psychological theories that may be relevant in understanding psychological problems experienced by Indian surrogates. These include the negative impact of living in uncertainty, experiencing a critical life event, feeling a lack of control over one's life and experiencing loss.

Surrogacy arrangements are characterised by extreme uncertainties (Appleton, 2001; Braverman et al., 2012). In the West, these have primarily been discussed in relation to relinquishment and the relationship with the intended parents, in particular, whether the surrogate will eventually hand-over the child to the intended parents and whether there will be a mutually acceptable relationship between the intended parents and the surrogate throughout the pregnancy (Golombok, Murray, Jadv, MacCallum & Lycett, 2004). Moreover, throughout the pregnancy, a surrogate may feel worried about unanticipated medical complications during pregnancy or at birth and the subsequent shattering of intended parents' dreams. Indian surrogates may additionally feel extremely worried about losing the much-needed impending payment if unexpected pregnancy complications occur. Further, unpredictability may arise due to evolving social relationships with the intended parents, clinic staff, agents, other surrogates and even family members; ambiguous legal contracts; and confusion regarding disclosing or hiding the pregnancy due to anticipated social disapproval. All these factors may contribute to surrogates' experiences of uncertainty.

Within the cognitive domain, there is an extensive psychological literature since the 1970s on uncertainty, which is characterised by vague feelings and unanswered questions, such that we are unable to anticipate future events and thus feel powerless (Lazarus & Averill, 1972; Lazarus, 1991). Decades of research on this topic have shown that uncertainty takes away a

sense of order, control and predictability, creating an imbalance in equilibrium and reducing the ability to adapt to new environments (Mishel, 1990). Uncertainty is believed to enhance a sense of threat or danger, act as a psychological stressor, lead to an inability to act, and cause anxiety and worry (Strongman, 1995; Izard, 1977, 1991; Lazarus, 1991; Mishel, 1988; Afifi, 2009). More recent research on uncertainty and mental health (anxiety and stress) suggests that uncertainty is one of the leading psychological stressors for a patient dealing with a life-threatening illness (Koocher, 1984; Afifi, Felix & Afifi, 2012) and that it ‘intensifies affective reactions to negative events’ (Bar-Anon, Wilson & Gilbert, 2009, p. 123). Since uncertainty is a central feature of surrogacy, it may contribute to the surrogate’s level of anxiety and stress during the whole process of surrogacy.

Another theoretical approach that may explain surrogates’ psychological problems has been derived from one of the earliest works on stress by Holmes and Rahe (1967). Their research indicated that stress occurs when individuals are required to readjust themselves to new circumstances during critical life events. These life events can be positive (e.g. marriage) or negative (e.g. loss of a job). Most often a life event is considered stressful ‘if it causes changes in, and demands readjustment of, an average person’s normal routine’ (Kobasa, 1979; p. 2). By this definition, surrogacy can most definitely be viewed as a stressful life event for a surrogate. Indian surrogates uproot themselves from their family homes and move to a surrogate house where their daily routine (including surroundings, diet choices and choices of entertainment) is imposed by others.

Learned Helplessness Theory (Seligman & Maier, 1967; Seligman, 1975) – a cognitive psychological theory of depression – may be highly relevant to the circumstances of Indian surrogates. Learned helplessness refers to situations whereby people who are exposed to a series of uncontrollable events develop a bias that they do not have a control over subsequent events in their lives (Alloy & Abramson, 1982, p. 1115). There is an extensive literature on learned helplessness (from 1967 to the present) and its causes and effects have been studied in relation to several other psychological approaches including learning theory, attributional theory, biological implications, and social problems. etc. The following sections explain how the model of learned helplessness emerged, its key elements, how it explains depression, and its relevance for the study of possible depression among Indian surrogates.

Learned helplessness was introduced by Martin Seligman and colleagues, and like many other theoretical approaches in Psychology (e.g. Pavlov's theory of classical conditioning), this theory was first tested in animals (Seligman & Maier, 1967; Overmier & Seligman, 1967). 'An interference with escape-avoidance behaviours produced in dogs by prior inescapable shock' was termed as *learned helplessness* (Miller and Norman, 1979; p. 93). In other words, dogs who were given unavoidable or inescapable electric shocks failed to display escape-avoidance behaviour, such that they did not attempt to escape the shocks even when it was possible. Similar responses were observed in cats (Seward & Humphrey, 1967), mice (Braud, Wepman and Russo, 1969), fish (Padilla, Padilla, Ketterer & Giacalone, 1970) and rats (Looney & Cohen, 1972). Seligman replicated learned helplessness in humans in 1975 (Seligman, 1975). Humans were exposed to uncontrollable events, such as loud noise from which they couldn't escape. They were then found to be unable to escape from later loud noises. This demonstrated a 'quitting response' in subjects, whereby they felt convinced that they lacked control over their circumstances and that their future efforts would be futile.

In a more recent reformulation of learned helplessness, Peterson, Maier and Seligman (1993) explained its essential components: contingency (the random relationship between a person's actions and the outcome experienced inducing uncontrollability), cognition (how the uncontrollable situation is perceived, explained and inferred by the individual) and behaviour (passivity versus activity as an observable consequence of the uncontrollable event and the person's cognition about it). Thus this threefold theory constitutes, uncontrollable events, developing an expectation of helplessness and displaying passive behaviour (Peterson, Maier, Seligman, 1993; p. 9). In their book, *Learned Helplessness: A Theory for the Age of Personal Control*, Peterson, Maier and Seligman (1993) argued that a pure case of learned helplessness must justify all three components. It is noteworthy that most often non-laboratory settings or real settings represent incomplete cases of learned helplessness. Nevertheless, components of learned helplessness theory are still used to understand problematic behaviours relating to social issues, such as poverty, victimization and domestic abuse.

With regard to depression, Seligman (1975) successfully hypothesised that learned helplessness: '(1) reduces the motivation to control the outcome; (2) interferes with learning that responding controls the outcome; (3) produces fear for as long as the subject is uncertain of the uncontrollability of the outcome, and then produces depression' (p. 56). Thus, depression encompasses all three aspects of learned helplessness; people perceiving a

situation to be uncontrollable, developing ‘helpless’ cognitions and inducing passive behaviour. A large body of work has shown a causative connection between learned helplessness and depression (Seligman, 1975; Miller & Seligman, 1975; Klein, Fencil-Morse & Seligman, 1976). Seligman (1975) described the theory as a ‘laboratory model for naturally occurring depression in man’ (Miller & Seligman, 1975; p. 228).

Interestingly, Langer (1975) argued that in a real world setting (such as suffering from poverty or being an ethnic minority), people do not have to directly experience failure; even being labelled as helpless or inferior, may make them adopt helpless behaviour (Kane, 1987; Sue, 1977; Seligman, 1975). With respect to Indian surrogates, it is important to note that they have been repeatedly described as alienated or disposable labour, lonely, helpless, vulnerable and/or powerless existing in oppressive socio-political situations (Mies, 1988; Gupta, 2012; Banarjee, 2010; Majumdar, 2014), such that they may lack a sense of personal control, feel subordinate and display passive behaviour. In other words, surrogates’ narratives have repeatedly shown that they lack a sense of agency (Majumdar, 2014). Furthermore, feeling that they did not really have a sense of choice in becoming a surrogate could have further added to a history of uncontrollable events in their lives. These aspects of human behaviour are viewed as central to learned helplessness.

It may also be useful here to discuss the model of learned helplessness in relation to institutionalisation and crowding. Building on the literature on institutions, such as hospitals, Taylor (1979) suggested that they may induce helplessness in patients by perceiving them ‘not as active agents but as broken machines’ (Peterson, Maier, Seligman, 1993; p. 241). In relation to this, surrogates’ identities have been described as reduced to mere vessels (Teman, 2010). Indian surrogates, under the institutional supervision of fertility clinics, have also been viewed as passive agents, who lack information regarding the medical interventions involved, further displaying a lack of informed consent and knowledge of their basic rights (Pande, 2009a; Tanderup et al., 2015). Additionally, surrogate houses are considered overcrowded spaces (Saravanan 2013). The literature on chronic crowding suggests that it induces passive behaviour. For example, students living in crowded dormitories were found to report less control over life events and had reduced expectations of future control (Kuyukendall & Keating, 1984). Seeing people come and go repeatedly also induced learned helplessness in them (Baum & Davis, 1980). These aspects of Indian surrogacy arrangements may contribute towards learned helplessness and, consequently, depression in surrogates.

Another phenomenon that may explain possible depression in surrogates is loss. There is a large research literature showing an association between experiencing loss and depression. This has been demonstrated in varied settings, such as losing a mother-figure (Bowlby, 2008), losing one's job (Catalano, Aldrete, Vega, Kolody & Gaxiola, 2000), losing vision and hearing in the aged (McDonnall, 2008), and losing an unborn child due to miscarriage (Swanson, Chen, Graham, Wojnar and Petras, 2009). While relinquishing a baby may not strictly be considered as a loss given that surrogates set out to do this, feeling a sense of loss during relinquishment cannot be ruled out. In fact, feelings of loss, guilt, regret and extreme sadness have repeatedly been reported by birth mothers who had voluntarily relinquished their own children to adoptive parents (Henney, McRoy & Grotevant, 2007). In addition to relinquishment, the concept of loss has been studied in surrogates who couldn't give the intended parents their baby due to failed conception, miscarriage or still birth (Berend, 2010). Loss has also been examined in terms of losing the attention and care of the intended parents, especially after the birth (Ragone, 1994).

### **1.3.3 Psychological well-being of surrogates**

Concerns have been raised that hosting pregnancy, giving birth and relinquishing the child may cause long-term psychological harm to women (Brazier et al., 1998). A few studies in the 1980s revealed that some birth mothers, who relinquished their babies in closed adoptions, suffered from long-term emotional problems (Condon, 1986; Millen & Roll, 1985; Winkler & van Keppel, 1984). On the one hand, surrogates and birth mothers are not comparable as surrogates have planned pregnancies and get pregnant with the intention of giving up the child. On the other hand, women in both groups are comparable as they nurture the child in their womb and voluntarily relinquish the child post-birth. Thus findings on birth mothers also raised concerns regarding surrogates' psychological well-being.

Whilst research in the West has examined psychological health of surrogates, no empirical research has studied the psychological well-being of surrogates in low-income countries (Crockin, 2013; Jadvá, 2016; Söderström-Anttila et al., 2016). Therefore, this section reviews the literature relating to psychological outcomes for surrogates in the West. These outcomes have been measured and discussed in the context of either the psychological screening women undergo before becoming a surrogate (or surrogates' psychopathology) or surrogates' psychological well-being over-time. In particular, the impact of relinquishment, prenatal



bonding with the foetus and the lack of contact (or a relationship) with the intended parent(s) have been discussed in relation to the emotional difficulties they might cause for a surrogate (Braverman, Casey & Jadv, 2012; Ciccarelli, 1997; Jadv, 2016).

In the USA, surrogates are usually screened for psychopathology, and this screening might decrease the chances of psychological trauma, especially post-relinquishment (Schwartz, 1991; ASRM, 2015). The screening includes examination of mental health records for depression, trauma or other psychological issues that could jeopardise a successful surrogacy arrangement. Examples of other psychological difficulties include domestic violence, reproductive losses and legal issues (ASRM, 2015; Koert & Daniluk, 2016). Furthermore, surrogates undergo detailed evaluation of their social support network, relationship with their partner, their beliefs about surrogacy, the acceptance and support of their community and their acceptance of the sexual orientation of the potential intended parents. If the surrogate fails this psychological testing, then the arrangement is not taken forward. (Greenfeld, 2014; Hanafin, 2006; Koert & Daniluk, 2016).

Most psychologists and researchers used MMPI (Minnesota Multiphasic Personality Inventory) to administer psychological screening by studying surrogates' personality and emotions, and majority of these studies found no psychopathology in prospective surrogates (Franks, 1981; Schwartz, 1991; Braverman & Corson, 1992). In a more recent study, MMPI-2 was administered to 43 women who were planning to become surrogates and 40 comparison group women (non-patients) who were randomly drawn from MMPI-2 researcher's (Dr. Roger Greene's) archival database. The women who aspired to become surrogates were found to have lower levels of anxiety and to be more content than the comparison group – attributes that may make them more capable of managing the surrogate role (Pizitz et al., 2013). In India, however there is a lack of strict regulation and awareness regarding psychological screening based on maternal well-being (Palattiyil et al., 2010).

Even in the West, there is little research on the psychological health of surrogates. Soderstrom-Antilla et al. (2016), in their systematic review, reported from only 16 studies – eight cohort studies, six case series and two qualitative studies, with sample size varying from 8 to 61 participants – on surrogates' psychological outcomes. The studies conducted in the USA found that, whilst the majority of surrogates did not suffer from severe long-term psychological harm, a few faced emotional difficulties post-relinquishment (Ciccarelli,

1997; Soderstrom-Antilla et al., 2016). One of the earliest studies, assessing the psychological well-being of 14 American surrogates, found that six surrogates experienced emotional discomfort due to their role as a surrogate; however, only one attributed this discomfort to relinquishing the baby (Ciccarelli, 1997). In fact, some surrogates in the West have reported that the surrogacy experience had a positive effect on their close family and children (Ciccarelli, 1997). In contrast, in 1998, Reame, Kalfoglou & Hanafin interviewed 10 surrogates, 11 years after their surrogacy, and found that half of them felt dissatisfied with their experience. Most of them reported feeling sad about losing contact with the intended parents, who had not kept their promise of staying in touch. These surrogates further discussed fantasies of being reunited with the surrogacy children. Another qualitative study administered on 15 surrogates (2 genetic and 13 gestational surrogacies) based in California, USA, found that surrogates generally displayed more positive emotions than the normative sample as measured by NEO Personality Inventory-Revised (Kleinpeter & Hohman, 2000).

Studies conducted in the UK overall found that the large majority of surrogates did not suffer from significant psychological harm, though a few suffered from emotional difficulties immediately after the birth of the surrogacy child. Blyth (1994) conducted one of the earliest studies on surrogate mothers in the UK and, of the 18 surrogates interviewed, one did not relinquish the newborn. He observed that most surrogates reported mixed feelings of sorrow and distress related to their separation from the child, and happiness and satisfaction related to their important role in building a family for someone else. Of the five surrogates who spoke only about feeling distress upon relinquishment, two surrogates reported this to be the ‘worst part’. However, it is important to note that in this study, no information was provided regarding the type of surrogacy, and the findings were based on only interviews. However, these studies had small sample sizes and did not have a comparison group, therefore replications may be needed to make robust claims.

A longitudinal study of 34 surrogates in the UK found that 35% faced minor psychological difficulties a few weeks post-birth, though this proportion was reduced to 6% 1 year later (Jadva et al., 2003). Twenty of these surrogates were assessed 7 and 10 years later using mixed-methods approach; they were found to be within the normal range for self-esteem and showed no signs of depression, as assessed by Rosenberg Self-Esteem Scale (RSES) and Beck Depression Inventory – II (BDI-ii), respectively (Imrie & Jadva, 2014; Jadva et al., 2014). Twenty-nine percent of these surrogates had a history of psychological problems and

23% of them displayed psychological issues after surrogacy. Studies have also shown that generally psychological outcomes do not differ between ‘traditional and gestational’ and ‘known and unknown’ surrogates (Imrie & Jadva, 2014; Jadva et al., 2003; Jadva et al., 2014).

Additionally, van den Akker (2003) administered the General Health Questionnaire to 24 British surrogates (11 gestational and 13 genetic surrogates) to test for psychopathology. She found that only one surrogate had clinical anxiety. A few years later in a detailed longitudinal psychological study van den Akker (2007), assessed surrogates and intended mothers at seven different time points: pre-surrogacy, during 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> trimester of pregnancy and 6 days, 6 weeks and 6 months post-birth. A total of 61 surrogate mothers and 20 intended mothers took part in this study. She found that first, surrogates and intended mothers who were genetically linked to the child were more anxious pre-pregnancy as they may have felt that they had invested more in the surrogacy arrangement. Second, surprisingly during the final stage of surrogacy pregnancy, intended mothers were found to be more anxious than surrogates, which might have been symptomatic of their concern towards the well-being of the foetus and safe arrival of the baby. Finally, no differences were found between groups after the birth. Also, surrogates did not suffer from depression 6 days, 6 weeks or 6 months post-birth. However it is important to note that while the sample size of the study is impressive, it had a low response rate, not all participants completed all assessments and interviews were conducted via postal surveys. Moreover, since retrospective studies are prone to recall bias, it is important that more research is conducted on surrogates during pregnancy, especially on their psychological health.

Research conducted in the USA and the UK has repeatedly shown that most surrogates relinquish the baby (Jadva et al., 2003; Ragone, 1994; Taub, 1992; van den Akker, 2003) and that this relinquishment does not appear to lead to long-term psychological difficulties for the surrogate (Imrie & Jadva, 2014; Jadva et al., 2015; van den Akker, 2007). Similar to research conducted in the West, recent studies of the experiences of 15 and 8 Iranian surrogates, respectively (Pashmi, Tabatabaie, & Ahmadi, 2010; Tehran, Tashi, Mehran, Eskandari & Tehrani, 2014), revealed that only one surrogate faced problems associated with relinquishment, as she was unhappy to have been prevented from seeing the newborn post-birth. Other surrogates did not report any psychological issues. However, yet again like

many other research studies in the field, the sample sizes were quite small and may not have been representative of Iranian surrogates.

Despite concerns raised about the welfare of surrogates in India, their psychological well-being has not yet been assessed (Karandikar et al., 2014; Soderstrom-Antilla et al., 2016). As discussed previously in the introduction, given that surrogates in India have very different experiences from surrogates in the West, it is possible that their psychological well-being may also differ. The majority of surrogates in India enter surrogacy arrangements due to economic desperation (Karandikar et al., 2014) and few receive professional counselling (Karandikar et al., 2014). Additionally, Pande's (2014) research showed that being surrounded by pro-natal technologies in an anti-natal state (where government policies focus on lowering the birth rate by campaigning about contraception and family planning) can be anxiety provoking for surrogates in India. This suggests that Indian surrogates, being from a low socio-economic background in an anti-natal state, are not accustomed to being in a hyper-medicalised and pro-natal technological space. Such circumstances, which are unique to cross-border surrogacy arrangements in low-income countries, may leave surrogates even more vulnerable to psychological problems than those in developed countries.

To date, the psychological health of surrogates in low-income countries has only been discussed in reference to the adverse effects of medical interventions involved. For instance, Nayak (2014) argued that one could not disregard the long-term effects of drugs and medication. The side effects of the drugs and injected hormones involved in surrogacy include mood swings, bloating, vaginal irritation, hair loss, weight gain and uterine cramping (Teman, 2010). In fact, two Indian surrogates lost their lives in 2009 and 2012 due to last-minute birth-related complications (Majumdar, 2014; Pande, 2016). Moreover, in order to accommodate the travel plans of international commissioning parents, surrogates in India usually undergo a caesarean section – a procedure that poses additional risks. Other concerns relate to multiple embryo transfers and selective abortions (Nayak, 2014).

Madge (2014), who examined Indian surrogacy in the context of poverty and health, argued that poor women's reproductive health becomes a soft target for technological innovation. While such innovations increase money earning opportunities in the short-term, they may be harmful to women's physical and psychological health in the long-term. This argument may

relate to the debate over whether using women's bodies for a noble cause represents 'short-term empowerment' or 'long-term exploitation'.

Overall, it has been argued that cross-border surrogacy, with its legal, political, ethical, religious and procedural challenges, puts the well-being of surrogates at serious risk (Crockin, 2013; ESHRE Taskforce on CBRC, 2010; Pennings et al., 2009; Söderström-Anttila et al., 2016). As mentioned in the previous section, large income gaps and extreme power differentials between intended parents and surrogates (DasGupta & Dasgupta, 2014; Harrison, 2016), the commodification of women's bodies in highly vulnerable poverty stricken populations (Baumhofer, 2012) and a lack of alternative choices for surrogates (Pande, 2009a; Wilkinson, 2015), in particular, may place surrogates in India at risk for psychological distress.

## **1.4 Maternal-foetal bonding**

Deutsch (1945) was the first scholar who presented the idea that mothers start building a relationship with the child not after the birth, but during pregnancy. This maternal relationship with the unborn child was later termed as maternal-foetal attachment and has been well documented in the literature (Alhusen, 2008; Cranley, 1981; Slade, Belsky, Aber, & Phelps, 1999). Cranley (1981), one of the first few researchers who invented a questionnaire to measure maternal-foetal attachment, defined it as 'the extent to which women engage in behaviours that represent an affiliation and interaction with their unborn child' (Cranley, 1981, p. 282).

It is important to note here that the psychological literature refers to 'attachment' as a reciprocal connection between a mother and her child (Bowlby, 1982). However, during pregnancy, the mother's relationship with the unborn child is a non-dyadic – one-way relationship (Jadva, 2016). Thus, drawing from a theoretical perspective, Walsh (2010) argued that using the term 'attachment' to describe maternal-foetal relationships is misleading as while 'attachment' constitutes both *caregiving* and *careseeking* systems, a mother's relationship with the unborn child, is based only on a *caregiving* system, whereby she protects, comforts and cares for the foetus (Solomon, 1996). Commonly, in the literature, 'bonding' and 'attachment' is now being used interchangeably to describe the maternal-foetal

relationship. On a related note, Ji and colleagues (2005) claimed that while ‘attachment’ refers to the feeling the infant develops towards the mother after the birth and ‘bonding’ refers to the feelings the expectant mother develops towards the developing foetus (Ji et al., 2005). Based on these evolving semantics, in this thesis, the maternal-foetal attachment/relationship is referred to as ‘maternal-foetal bonding’.

#### **1.4.1 Bonding with the unborn baby**

In a ‘normal’ pregnancy, marital satisfaction, age, ambivalence, social support, household income and the mother’s personality and attachment style have been found to be significant factors in prenatal bonding (Alhusen, 2008; Alhusen, Gross, Hayat, Rose, & Sharps, 2012a; Condon & Corkindale, 1997; Kane & Slade, 2002; Priel & Besser, 2000; Sjogren, Edman, Widstrom, Mathiesen & Uvnas-Moberg, 2004; Wilson et al., 2000). Research indicates that mothers experience greater prenatal bonding during their first pregnancy than in subsequent pregnancies (Lorensen, Wilson, & White, 2004), and it has been found to increase as pregnancy progresses and distinct factors have been identified that predict bonding at different stages of the pregnancy. For example, while greater bonding at week 26 of gestation has been found to be associated with greater marital satisfaction, greater bonding at week 36 has been found to be associated with lower detachment as per personality trait scores, lower ambivalence about the pregnancy and the mother’s younger age (Hjelmstedt, Widstrom & Collins, 2006; Alhusen, 2008). Cognitive factors also appear to play a role in prenatal bonding. Imagining, fantasising and attributing personality characteristics to the foetus are all based on the mother’s cognitive skills (Doan & Zimmerman, 2003).

Only one study has compared prenatal bonding between surrogates and expectant mothers (discussed in the next section). However, a large body of research has compared prenatal bond in different types of pregnancies. For example, research conducted in Sweden compared prenatal bonding between IVF mothers and women who conceived naturally (Hjelmstedt et al., 2006). The study found that, in both scenarios, mothers bonded equally to the unborn baby. Other researchers also found no differences in prenatal bonding in singleton versus twin pregnancies (Damato, 2004), miscarriage versus successful pregnancies (Tsartsara & Johnson 2006), marijuana use versus cocaine/heroin use pregnancies (Shieh & Kravtitz, 2006), high-risk (gestational diabetes) versus regular pregnancies (Chazotte, Freda, Elovitz & Youchah, 1995) and the pregnancies of African-American and Hispanic-American mothers

(Ahern & Ruland, 2003). This may be indicative of the fact that regardless of the type of pregnancy and ethnicity of the mother, women tend to bond equally with the unborn child.

#### **1.4.1.1 Maternal-foetal bonding and psychological health during pregnancy and post-birth**

Another important question is whether the level (or nature) of maternal-foetal bonding has an effect on the psychological health of the mother in a 'normal' pregnancy; this relationship is of clinical importance (Walsh, Hepper, Bagge, Wadephul & Jomeen, 2013). A large body of work has examined the association between maternal-foetal bonding and mothers' anxiety and depression levels in non-surrogate pregnancies (Alhusen, 2008; Condon & Corkindale, 1997; Doan & Zimmerman, 2003; Glover & Capron, 2017; Hart & McMahon, 2006; Lindgren, 2001, 2003). During pregnancy, relationships between maternal-foetal bonding and prenatal depression have been found in Australian (Condon & Corkindale, 1997), American (Lindgren, 2001) and Chilean (Ossa, Bustos & Fernandez, 2012) expectant mothers. It has also been reported in both low and high risk pregnancies (Alhusen et al., 2012; Brandon et al., 2008). Early trauma has been found to be a risk factor for depression during pregnancy (Blackmore et al., 2013).

A few studies used Maternal Fetal Attachment Scale (Cranley, 1981), and found similar results, suggesting an association between lower levels of maternal-foetal attachment and higher levels of depression in traditional pregnancies (Alhusen, 2008; Glover & Capron, 2017; Lindgren, 2003). In particular, McFarland and colleagues (2011) in a recent study found clinical depression in pregnant women to be negatively associated with maternal-foetal bonding across second and third trimester. Finally, as discussed in relation to psychological problems in pregnancy, symptoms of depression such as feelings of sadness, irritability and worthlessness, can interfere with the developing relationship with the foetus. Therefore surrogates with emotional problems during pregnancy are less likely to have higher levels of prenatal bonding (Goecke et al., 2012). It may further decrease positive health practices during pregnancy (Lindgren, 2001) as depression can lead to dietary changes, fatigue and a general loss of interest in adopting a healthy lifestyle (American Psychiatric Association, 1994). As mentioned previously, these factors are known to have a detrimental effect on the growth of the foetus (Glover & Capron, 2017). For instance, the newborn may be premature and may have a low birth weight.

Generally, a similar relationship has been found between (lower) maternal-foetal bonding and (greater) postnatal psychological problems in the mother (Alhusen et al., 2013; Glover & Capron, 2017; Walsh et al., 2013). While most of these studies have focused on postnatal depression, a few have also looked at both postnatal depression and anxiety. For example, Hart and McMahon (2006) found that Australian first-time mothers who had less affective experiences towards the foetus (such as feeling distant from the unborn child), faced negative attitudes towards themselves as a mother and showed high levels of depression and anxiety. However, results should be interpreted with caution due to a sample size and lack of homogeneity in the sample (Alhusen, 2008). In a longitudinal study, one hundred and six women administered Maternal Antenatal Scale (MAAS) during the 6<sup>th</sup> month of the pregnancy and Edinburgh Postnatal Depression Scale (EPDS) and State-Trait Anxiety Inventory (STAI) one month post-birth. It was found that maternal-foetal bond significantly predicted postnatal symptoms of depression and anxiety (Petri et al., 2017).

In some studies, along with psychological health, social support has also been found to be a predictor of maternal-foetal bonding (Condon & Corkindale, 1997; Alhusen et al., 2012; Walsh et al., 2013). Specifically, Condon and Corkindale (1997) argued that, instead of number of people providing support, satisfaction with available support was more important as a predictor. In summary, a maternal-foetal bonding may vary in relation to demographic factors, circumstantial factors, type of pregnancy and psychological health. Given that different expectations are involved in a surrogacy pregnancy, it would be interesting to know whether the relationship between these variables would show a similar trend in comparison to a traditional pregnancy.

#### **1.4.2 Surrogates' bonding with the unborn baby and relinquishment**

Maternal-foetal bonding is viewed as an important foundation of establishing the mother's attachment to the resultant infant (Alhusen, 2008; Cranley, 1981). Thus prenatal bonding has been found to affect postnatal bonding (Alhusen, 2008; Fleming, Ruble, Gordon, & Shaul, 1988) and optimal maternal-infant adjustment post-birth (Alhusen, 2008; Bryan, 2000). In the context of surrogacy, this may add further concerns, as, on the one hand, the woman who develops prenatal bonding and gives birth does not develop a nurturing relationship with the child and, on the other hand, the intended mother, who does not experience the pregnancy and feels no (or diminished) prenatal bonding, provides immediate postnatal nurturance



(Golombok, 2015). However due to little evidence in the field, it is unclear how the ‘misplaced’ maternal-foetal bonding may psychologically affect the surrogate, the intended mother and the resultant child.

Critics who believe that surrogates form a deep bond with the unborn child deem surrogacy unethical and exploitative, as they believe it to be emotionally tormenting for a woman to give up the child that has been nurtured in her womb (British Medical Association, 1996; Warnock Report, 1984). In non-surrogate pregnancies, maternal–foetal bonding is considered important to both the mother and the child, as it reflects the mother’s willingness to care for her baby (Agnafors, 2014; Lindgren, 2001). In surrogacy however, this bond is broken abruptly and immediately post-birth, and this may lead the surrogate to experience psychological distress (British Medical Association, 1996; Jadva, 2014; Ragone, 1994; Teman, 2010). While a strong bond with the foetus may make it difficult for the surrogate to relinquish the baby, a lack of bonding may also be problematic, as the surrogate may put the unborn child’s health at risk by engaging in risky behaviours such as smoking or not eating or resting well (British Medical Association, 1996; Jadva, 2016; Richardson, Ryan, Willford, Day & Goldschmidt, 2002).

In reference to surrogates’ psychological well-being, a surrogate’s bond with the foetus or lack thereof have both received scrutiny. It is argued that, while a high level of maternal–foetal attachment in the surrogate may negatively affect the surrogate’s psychological well-being after relinquishment, ‘detachment’ might also increase her psychological risks, as it could lead to anger, guilt and self-blame post-birth (British Medical Association, 1996). For example, one surrogate in Ciccarelli’s (1997) study said: ‘I almost felt guilty for not feeling bad about giving up the baby’ (Ciccarelli, 1997, p. 56).

To date, only three studies have examined maternal–foetal bonding or attitudes towards the foetus in the context of surrogacy (Fischer & Gillman, 1991; Lorenceau, Mazzucca, Tisseron, & Pizitz, 2014; van den Akker, 2007), and these were all conducted in the USA or Europe. The first and most influential study was by Fischer and Gillman (1991) in the USA, whereby they assessed whether surrogates experienced a similar level of bonding to the foetus as did non-surrogate expectant mothers. They administered the Maternal Fetal Attachment Scale (Cranley, 1981) to 21 surrogates and 21 non-surrogates and found that surrogates were significantly less attached to the unborn child than non-surrogates. In contrast, in France,

Lorencean et al. (2014), using the Maternal Antenatal Attachment Scale (Condon, 1993), found surrogates to score similarly to expected norms, suggesting comparable levels of attachment to the foetus as non-surrogate pregnant women. However, only 11 surrogates participated in the study and there was no comparison group. van den Akker (2007) administered the Attitudes to Pregnancy the Foetus and Baby Scale (Marteau, Johnston, Shaw, Kidd, & New, 1989) to surrogates (N = 17, 18, 18) and intended mothers (N = 9, 8 and 7) during 1<sup>st</sup> and 2<sup>nd</sup> and 3<sup>rd</sup> trimester of the pregnancy and found surrogates were significantly less concerned about the health and well-being of the foetus and less positive about the foetus than were the intended mothers. She further claimed that results from her study are indicative of surrogates' constructive coping mechanism, whereby they start detachment process early and maintain it throughout the pregnancy. These findings suggest that surrogates show lower levels of bonding to the unborn baby than the prospective or intended mothers. However, more research with a larger sample size may be helpful in determining the role of maternal-foetal bonding in surrogate pregnancies.

While Bowlby (1958), a pioneer in the field argued that maternal attachment is intrinsic to humans and other primates; some researchers note that many expectant mothers (non-surrogates) do not bond with their unborn babies and others fail to bond with their children even post-delivery (Satz, 1992). For example, Satz (1992, p. 22) states: 'not all women bond with their foetuses. Some women abort them'. In relation to this, Baslington (2002) argued that maternal instinct is the result of cultural and societal ideologies, not innate biological urges (Beauvoir, 1953).

A few researchers have argued that since surrogates are mentally prepared to relinquish the child, they may not experience a similar level of bonding as non-surrogate expecting mothers. It is believed that humans have the capacity to regulate their need to attach (Baslington, 2002; Ciccarelli, 1997). Thus, surrogates may 'cognitively restructure' their desire to bond like a 'real' mother, as it may lead to suffering during and post relinquishment (Snowdon, 1994). In support with these arguments, Ciccarelli (1997) found that 11 of the 14 surrogates interviewed reported that they had not bonded with the child because, from the onset, they were aware that the child was not their own. Herein the *intention* of not being a parent and separation after the birth may facilitate the emotional distance from the unborn baby (Berend, 2012; Braverman et al., 2012; Jadv, 2016).

In particular, surrogate's bond with the unborn child has been discussed in reference to the following aspects of surrogacy arrangements: (i) role of compensated surrogacy, (ii) the genetic connection with the foetus (or lack thereof) and (iii) the surrogate's satisfactory (or not) relationship with the intended parents. First, from a societal perspective surrogates' bond with the foetus is negatively perceived when compensation is involved. It is uncomfortable for the society to accept that 'not only can women have babies and give them away, but they can also enter into a contract that actually rewards them for having babies' (Roach Anleu, 1990, p. 72). Researchers however have discussed the impact of compensation on surrogate-foetus bond in a different light as it has been suggested that payment in compensated surrogacy arrangements appear to assist the surrogate in creating an emotional distance from the developing foetus (Baslington, 2002; Ramskold & Posner, 2012; Smietana, 2017). Baslington (2002) further indicated that the surrogate's attitude towards the payment is incorporated into the psychological detachment process. Along similar lines, in a recent study conducted in the USA on 37 gay fathers and 20 surrogates, Smietana (2017) argued that the payment in compensated surrogacy arrangements led to the 'de-kinning' of the surrogate's parental status and the reinforcement of the intended fathers' parental rights. While the thematic analysis administered in these studies provide an insight into the impact of payment in commercial surrogacy on prenatal bonding, the findings should be interpreted with caution due to small sample sizes.

Second, it is commonly believed that due to the genetic link with the child, traditional surrogates might bond more with the unborn child and be less likely to relinquish the child (Baslington, 2002; Bernstein, 2012; Trowse, 2011). While there is no research which has empirically compared prenatal bonding in genetic and gestational surrogates, Imrie and Jadvá (2014) did not find them to differ in their patterns of relinquishment or their long-term psychological well-being. Third, Baslington (2002) discussed prenatal bonding in reference to the relationship between surrogates and intended parents. She described the ease surrogates felt with respect to separation when they knew where the child was going, suggesting that attachment could develop with the intending parents rather than the child. Of the 19 women she interviewed, 4 women viewed problems with the intended parents as the 'worst part' of the surrogacy arrangement. Three of these four women suffered from long-term emotional troubles. One of these three surrogates felt that her financial compensation had played a role in the intended father's disrespectful behaviour towards her. In the Indian context however, a relationship between the intended parents and the surrogate is usually absent. It may be of

interest to know if surrogates still have expectations from intended parents, what they might be and whether unfulfilled expectations affect their feelings towards the unborn baby.

In order to successfully relinquish the child, surrogates are expected to be both bold and tender, and inclined to a sense of duty, such that they understand the importance of setting an emotional boundary in their prenatal bonding (Pizitz et al., 2013). Cases of a surrogate refusing to give up a baby are very rare in the West and unheard of in India. Research in the West has shown that surrogate mothers see themselves as carrying someone else's child (Jadva et al., 2003; Söderström-Anttila et al., 2016) and that surrogates are generally able to relinquish the baby they carry (Jadva et al., 2003; Jadva et al., 2012; Ragone, 1994; Taub, 1992; van den Akker, 2003).

#### **1.4.2.1 Cultural perspectives of the surrogate-foetus bond**

Studies conducted in the West cannot be generalised to other cultures (Crockin, 2013; Pande, 2009a; Söderström-Anttila et al., 2016; Teman, 2010). Pande (2010a, 2014) pointed out that maternal bonding and affection is often determined socially or culturally. She found that Indian surrogates viewed kinship as arising from blood ties (shared substance) and sweat (the labour of gestation), rather than the genetic connections that are emphasised in Western countries. Teman (2010) found that the Israeli surrogates in her study also spoke about blood in relation to bonding. However, they believed that maternal instinct arose from shared genes and blood, and mentioned that in the absence of genetic ties, they did not share anything with the foetus – even blood. They further reported that they shared familial blood with their own children and not the surrogacy children. One surrogate in her study insisted that she was connected to the baby only through the placenta and the umbilical cord, and nothing else.

No empirical research has been conducted on Indian surrogates' bonding with the unborn child in the Global South. Khader (2013) argued that while bonding is conceived of as transient in all surrogacy arrangements, surrogacy industries that engage in cross-border arrangements have greater capacity to manipulate surrogates' thoughts and behaviours (Pande, 2009a, 2010a). For instance, research has shown that some surrogates were 'trained' to keep an emotional distance from the foetus. They felt a conflict between their 'worker identity' and their 'mother identity'. Hence, through 'training', they were made aware of the 'disposability' of their services (as workers), but they were expected to care for the baby, as if it was theirs (as mothers). Through this 'disciplinary process', surrogates were expected to be

perfect ‘worker-mothers’ (Pande, 2010a). Building on Pande’s (2010a) work on ‘disposable labour’, Khader (2013) further suggested that the surrogacy industry expects surrogates ‘to have strong but disposable attachment’ (p. 73) to the baby, whereby they are expected to dispose of their bond with the foetus after childbirth.

## **1.5 Rationale for the study**

This thesis addresses the concerns that have been raised regarding the psychological well-being of Indian surrogates. It also studies the surrogate-foetus bond and surrogates’ experiences, and assesses how these may relate to the psychological problems experienced by them. Over the last decade, the commercial nature of surrogacy in low-income countries has gained much media attention – largely negative. Studies have also highlighted specific concerns regarding the well-being of women practicing cross-border compensated surrogacy in low-income countries. These primarily emerge from the fact that, unlike surrogates in the West, surrogates in the Global South are usually uneducated, belong to a very low socio-economic background, unaware of their basic rights and choose surrogacy as a survival strategy. Such factors not only puts them at a risk of being exploited by members of the fertility clinic but also automatically places them in a subordinate position to the international intended parents. Needless to say, in addition to all of these issues, the fact that surrogacy involves a high-risk pregnancy involving medicalised interventions and relinquishment, further adds risk factors for the development of psychological problems. This section summarises concerns regarding the well-being of Indian surrogates reported in past research and also notes gaps in the present literature, and outlines the research questions this study attempts to answer.

Very few long-term studies have assessed the psychological well-being of surrogates (Blyth, 1994; Fischer & Gillman, 1991; Golombok et al., 2004; Imrie & Jadva, 2014; Jadva et al., 2003; Jadva et al., 2014). Although these studies show reassuring and positive outcomes for surrogates, these studies were conducted in the UK and USA, cannot and should not be generalised to the Global South, mainly due to the large socio-cultural differences in the practice and legislation of surrogacy across these regions (Jadva, 2016).

Additional risk factors are drawn from in-depth research on Indian surrogates' experiences and from psychological theories which identify potential causes of psychological problems. Previous research has shown that surrogates in India may not be psychologically screened prior to surrogacy, face stigmatisation, live away from family during pregnancy, do not develop a relationship with intended parents, lack a support network and rarely receive psychological counselling. Sociologists, anthropologists, and ethnographers have discussed the possible impact of these circumstances but there has been no empirical research on surrogates' psychological well-being and factors that may impact their mental health.

Specific theoretical approaches from cognitive psychology suggest how certain experiences related to being an Indian surrogate may act as risk factors for psychological problems. For example, surrogates experience uncertainty at every stage of their pregnancy; the psychological literature on uncertainty suggests that this can lead to greater anxiety and stress. Second, surrogates uproot their daily lives and move into a surrogate house which may lead to high levels of stress; an extensive literature on stress suggests that life events, which require immense readjustment to one's daily routine, can be highly stress provoking. Third, Indian surrogates are viewed as passive agents with a lack of control over their lives. These factors are essential components in developing learned helplessness and depression. Fourth, undergoing relinquishment in surrogacy may be reflective of experiencing a sense of loss, which in turn is also associated with symptoms of depression. Finally, the extensive literature on psychological problems related to pregnancy has shown that prenatal depression is predictive of postnatal depression. To the extent that surrogates experience depression during pregnancy, this may interfere with surrogates' attempt to move on in life after the surrogacy arrangement ends.

This is the first study to assess the psychological health of surrogates in a low-income country. A longitudinal design was adopted, as it enables the examination of surrogates' psychological well-being during the most crucial time of their surrogacy journey, i.e. from pregnancy to the months after relinquishment. Additionally, including a comparison group of non-surrogate (Indian) women allows the question of whether surrogates experience higher levels of psychological problems than pregnant women from a similar socio-economic and cultural background. Therefore, this thesis examines the questions of whether surrogates' psychological health differs from that of expectant mothers during pregnancy and whether it improves or deteriorates post-surrogacy compared to expectant mothers. Furthermore, the

research examines factors that might negatively impact surrogates' psychological health, such as satisfaction with payment and experiencing stigmatisation.

In order to gain a holistic view of surrogates' subjective psychological well-being, positive emotional states (health and economic satisfaction, and women's desire for social freedom) were also assessed. Much of the debate regarding the 'exploitation' versus 'empowerment' of surrogates centres on the argument of 'long-term physical harm' versus 'short-term financial gain'. Much attention has been paid to Indian surrogates' health being compromised by the fertility clinic and questions have been raised regarding whether the money they earn fundamentally improves their lifestyle and emotional well-being. However, these aspects have not been empirically studied before. This study investigates surrogates' health and economic satisfaction during surrogacy in comparison to expectant mothers.

Furthermore, little is known about surrogates' personality characteristics. Previous research in the West has shown surrogates to be independent thinkers who do not blindly conform to societal norms. The present research examines whether this is applicable to surrogates in India where the socio-cultural context of women's freedom is different from that of the West. Despite being from a patriarchal society, Indian surrogates take on the role of primary breadwinner in the family. They also dare to become surrogates in a society where surrogacy is highly stigmatised. Therefore, it is of interest whether surrogates tend to display a greater desire for freedom from social taboos, patriarchy and gender inequality than other women in their community.

Importantly, this is also the first empirical study to assess the maternal-foetal bonding of surrogates in the Global South. Generally scholars have argued either that surrogates would bond with the unborn baby (like any other expectant mother) and experience long-term psychological harm following relinquishment or that surrogates would maintain an emotional distance from the unborn baby and would not experience psychological harm post-relinquishment. From both perspectives, greater prenatal bonding with the foetus is expected to have a negative impact on surrogates' psychological well-being, especially post-birth. This relationship between maternal bond and mental health in surrogates has not yet been empirically tested.

There is also much speculation regarding how the nature of the bond a surrogate develops with the unborn child would differ from that of a woman giving birth to her own child in a traditional pregnancy. Only one study has previously assessed this issue in the US (Fischer & Gillman, 1991), however since prenatal bonding may vary between cultures, these findings may not be generalisable to South Asian women. Moreover, questions have been raised regarding factors that may influence the nature and strength of the bond that surrogates develop with the unborn baby during pregnancy, such as payment and the quality of the relationship with the intended parents. This study investigates whether such factors influence surrogates' feelings towards the foetus.

While Indian surrogacy arrangements differ from those in the West in various ways, four aspects can be considered to be central: (i) the unique role of the *surrogate house*, with detailed surveillance of the surrogate pregnancy; (ii) the role of the *fertility clinic*, dictating all aspects of the surrogacy arrangement (such as accommodation, diet, health care, payment and contact with the intended parents); (iii) the *abrupt relinquishment* experience, which is not discussed with the surrogate ahead of time; and (iv) the lack of any relationship (or meeting) with the *intended parents*. Since these aspects are unique to Indian surrogacy arrangements, factors that may contribute to surrogates' satisfaction with these four aspects are explored.

Finally, as a multi-method approach to data collection is utilised in this study, the research questions have the benefit of being examined both quantitatively and qualitatively. While much previous research has conducted in-depth qualitative analysis of surrogates' experiences in various regions of India, this is the first study that has recruited surrogates from Mumbai, the city with the highest cost of living in India. The financial pressures and lived experiences of these surrogates may therefore differ from those living in other regions. Surrogates' experiences – from the onset of their pregnancy, through delivery, relinquishment, to the months post-delivery – were explored using their own narratives. This qualitative approach incorporates the feminist methodology of securing the voices of women who are otherwise not heard (Devault, 1990), thus giving a unique insight in to the nature of surrogates' experiences. The following section outlines the aims and hypotheses of the thesis.



## 1.6 Aims and hypotheses

The aims of this thesis are to assess the psychological well-being, maternal-foetal bonding and experiences of Indian surrogates. It consists of five primary aims and three secondary aims. The aims and their corresponding hypotheses are described below.

### 1.6.1 Primary aims

The primary aims are (i) to establish whether surrogates and a comparison group of expectant mothers differ in anxiety, depression and stress during pregnancy and post-birth (ii) to determine whether surrogates and a comparison group of expectant mothers differ in their bond with the unborn child, (iii) to examine factors associated with surrogates' prenatal and postnatal anxiety, depression and stress, (iv) to identify factors associated with surrogates' bonding with the foetus, and (v) to explore the personal experiences of surrogates.

#### 1.6.1.1 Aim I - Psychological problems

##### *Hypotheses*

H.1 It is hypothesised that, *during pregnancy*, surrogates will experience higher levels of anxiety, depression and stress compared to expectant mothers.

Surrogacy is characterised by extreme uncertainties and unlike expectant mothers, surrogates live away from their husbands and children and undergo regular medicalised interventions during surrogacy pregnancy. Thus it is predicted that during pregnancy they will experience higher *anxiety* than expectant mothers.

Based on learned helplessness theory (feeling a lack of control over one's life), experiencing stigmatisation and insufficient support during pregnancy may be risk factors for depression, it is hypothesised that surrogates will experience higher *depression* than expectant mothers.

Surrogacy can be a stressful life event for surrogates as it requires surrogates to completely readjust their daily routine and it is characterised by extreme uncertainties. Based on theoretical approaches on stress, it is hypothesised that surrogates will experience higher *stress* during pregnancy than expectant mothers.

H.2 It is hypothesised that, *post-birth*, surrogates will experience higher depression but lower anxiety and stress than the comparison group of mothers.

Following the birth of the baby, surrogates reunite with their family and no longer live in a hyper-medicalised setting. Expectant mothers who also belong to a low socio-economic background, on the other hand, may face emotional difficulties as they attend to their newborn. Thus, it is hypothesised that surrogates will experience lower *anxiety* a few months after the birth than the comparison group of mothers.

Surrogates may experience a sense of loss following relinquishment. Moreover, prenatal depression and lack of support during pregnancy have been shown to be predictors of postnatal depression. Experiencing stigma may also place surrogates at risk for depression. Thus, it is hypothesised that surrogates will experience higher *depression* after the birth than the comparison group of mothers.

Since surrogates, unlike the comparison group of mothers, receive money to improve their lives and do not have a newborn to raise at home, it is expected that they will experience lower *stress* post-birth than the comparison group.

#### **1.6.1.2 Aim II - Maternal-foetal bonding**

##### *Hypothesis*

Based on research indicating that surrogates in the West maintain emotional distance from the unborn child and that Indian surrogates are ‘trained’ to maintain a ‘disposable bond’ with the foetus, it is hypothesised that surrogates will bond less with the foetus, compared to expectant mothers.

#### **1.6.1.3 Aim III - Factors associated with surrogates’ psychological problems**

##### *Hypotheses*

H.1 Drawing on the literature on the risk factors for psychological problems in pregnant women and among the general population, it is hypothesised that lower satisfaction with

health, lower support during pregnancy and experiencing stigma will influence surrogates' anxiety, depression and stress *during pregnancy*. Based on research indicating that surrogates' feelings towards the payment and the surrogate house are fundamental to their satisfaction with surrogacy, it is further hypothesised that lower satisfaction with payment and lower satisfaction with the surrogate house will negatively influence their anxiety, depression and stress during pregnancy.

H.2 Given the literature on risk factors for psychological problems in the general population and in pregnant women, it is hypothesised that lower support during pregnancy and experiencing stigma will influence surrogates' anxiety, depression and stress *after the birth*. Additionally, drawing on concerns reported in studies conducted in the West suggesting that surrogates may suffer from psychological harm after relinquishing the child, it is predicted that greater satisfaction with relinquishment will influence surrogates' anxiety, depression and stress levels *post-birth*.

#### **1.6.1.4 Aim IV - Factors associated with surrogates' maternal-foetal bonding**

##### *Hypotheses*

H.1 In the light of previous research in the West suggesting that the surrogate-foetus bond may be influenced by surrogates' relationship with the intended parents and payment, such that bond with the unborn child is displaced by bond with the couple and that payment in compensated surrogacy arrangements may assist the surrogate in creating an emotional distance from the developing foetus, it is hypothesised that these factors will influence surrogates' bond with the unborn child. Since Indian surrogates living at the surrogate house tend to share feelings about their surrogacy pregnancy and the baby with each other, it may influence their surrogate-foetus bond positively. Also, in past research lack of a genetic link has been described as a justification for surrogates to display less affection towards the unborn baby. Similarly, Indian surrogates who have medical knowledge and understand absence of genetic link in their surrogacy pregnancy, may display less affection towards the foetus.

H.2 Based on concerns that bonding with the unborn child may cause psychological harm in surrogates and literature suggesting a link between maternal bond and mental health in 'normal' pregnancies, it is hypothesised that greater maternal-foetal bonding will be

associated with greater psychological problems in surrogates, both *during pregnancy* and *post-birth*.

#### **1.6.1.5 Aim V – Experiences of surrogates**

With respect to *pregnancy*, the study will explore surrogates’: (i) motivations for becoming a surrogate, (ii) level of medical information, (iii) decision making regarding surrogacy, (iv) experiences with the intended parents, (v) experiences of stigma, (vi) experiences at the surrogate house, and (vii) feelings towards the unborn child.

With respect to the *post-birth* period, the study will explore surrogates’: (i) feelings about life after surrogacy, (ii) retrospective feelings about the surrogate house, (iii) delivery experiences, (iv) experiences with the newborn, (v) experiences with the intended parents, (vi) experience of relinquishment, and (vii) role of financial compensation post-birth.

#### **1.6.2 Secondary aims**

The secondary aims are (i) to explore whether surrogates and the comparison group of expectant mothers differ in their health and economic satisfaction (ii) to explore whether surrogates and the comparison group of mothers differ in their desire for social freedom (freedom from patriarchy, social taboos and gender inequality), and (iii) to identify factors associated with surrogates’ satisfaction with the surrogate house, the clinic, relinquishment and the intended parents.

##### **1.6.2.1 Aim VI - Health and economic satisfaction**

###### *Hypotheses*

H.1 Based on physical health issues (e.g., the possible side effects of drugs in surrogacy, multiple pregnancies, foetal abortions and forced caesarean births) that have been discussed in the literature on surrogacy and that the fertility clinic may compromise the surrogate’s health for profit in India, it is hypothesised that surrogates will experience less *health satisfaction* than expectant mothers *during pregnancy*.

H.2 In light of the research suggesting that women are financially motivated to become surrogates, it is hypothesised that surrogates will experience greater *economic satisfaction* than the comparison group *during pregnancy*.

#### **1.6.2.2 Aim VII - Women's desire for social freedom**

##### *Hypothesis*

H.1. From the research suggesting that surrogates are more independent and non-conformist than the normative population, it is hypothesised that surrogates will score more highly on desire for social freedom than the comparison group of mothers.

#### **1.6.2.3 Aim VIII - Satisfaction with: the surrogate house, the clinic, relinquishment and the intended parents**

##### *Hypotheses*

H.1 In the light of research indicating that surrogate houses provide women with a sense of sisterhood and kinship during pregnancy, it is hypothesised that support during pregnancy will be positively associated with surrogates' *satisfaction with the surrogate house during pregnancy*.

H.2 Since the clinic holds the primary responsibility for surrogates' health and payment, it is hypothesised that health satisfaction during pregnancy and satisfaction with payment post-birth will positively influence surrogates' *satisfaction with the clinic post-birth*.

H.3 Similar to research on the surrogate-foetus bond, research in the West has shown that relationship with the intended parents and payment in surrogacy may have an impact on surrogates' experience of relinquishment. Additionally, media reports and research indicate that Indian surrogates may not meet the intended parents, do not develop a relationship with them and often do not get to meet the newborn. Therefore, it is hypothesised that meeting with the intended parents, satisfaction with payment and meeting the newborn will be predictive of surrogates' greater *satisfaction with relinquishment*.

H.4 Since the clinic mediates the relationship between the surrogate and the intended parents and surrogates are aware that intended parents are providing them with compensation, it is hypothesised that greater satisfaction with the clinic and with the payment will be predictive of surrogates feeling that their expectations from intended parents have been met, thus indicating greater *satisfaction with the intended parents*.

## **Chapter 2**

### **Methods**

In this chapter, research design is first described (Section 2.1). Thereafter, information on recruitment (Section 2.2.1) and sample characteristics of the participants (Section 2.2.2) is provided. The next two sections elaborate on the procedure for data collection (Section 2.3) and ethical approval (Section 2.4). Finally, measures utilised for collecting data are described (Section 2.5).

#### **2.1 Research design**

The study design has both a cross-sectional and a longitudinal component. Fifty Indian surrogates were compared with a demographically matched group of 69 expectant mothers. The women were assessed at two phases (a) Phase 1: during the 4<sup>th</sup>-9<sup>th</sup> month of pregnancy, and (b) Phase 2: 4-6 months after the birth of the baby. Forty-five surrogates and 49 expectant mothers were followed up during the second phase of the study. The study used a multi-method approach to data collection (semi-structured interviews and questionnaires). Participants were recruited over a two-year period, from February 2014 to November 2016.

#### **2.2 Participants**

##### **2.2.1 Recruitment**

Gestational surrogates who were hosting pregnancies for international intended parents were recruited from Corion Fertility Clinic, Mumbai. The clinic recruited surrogates via an agency, which acts as a broker and receives a fee from the clinic. Once the contract is signed between the clinic, the surrogate and the intended parents, the surrogate moves into the surrogacy house (close to the clinic) until a few days after delivery. The contract was in English and was explained to the surrogates by a member of the clinic or their agent. Married surrogates

were required to provide a consent from their husbands and surrogates who were separated, divorced or widowed were asked to provide a consent from a family member.

In line with the guidelines from the Indian Council of Medical Research (ICMR), all participants were gestational surrogates and had at least one child from a previous or present marriage. All surrogates who were in the second or third trimester of pregnancy were invited by the clinic administrator to take part in the study. In total, 51 surrogates were identified and contacted. One of the surrogates did not speak Hindi and was therefore not invited to take part in the study. All the other surrogates agreed to participate, yielding a response rate of 100%. The clinic administrator kept a record of all the surrogates' names and their responses. She ensured that the surrogates were made aware that it was not mandatory for them to take part in the study. For those who did take part, a compensation amount of ₹ 2000 (£23) was provided for both interviews. The interviews were scheduled, once the participants agreed to meet the interviewer<sup>3</sup>.

Approximately 4-6 months after the birth of the surrogacy child, the clinic administrator contacted the surrogates for a follow up interview. Out of the 50 surrogates who were contacted, 45 surrogates were available and agreed to take part, representing a response rate of 90%. Five surrogates had moved back to their villages, and were unreachable even via telephone. Of these 45 interviews, due to circumstantial constraints, three interviews were conducted over Skype. As online interviews were conducted at phase 2 of the study only, the prior meeting with the interviewer in person assisted in developing an instant rapport over Skype. A member of the clinic staff helped set up a Skype call between the two parties. However, after that privacy was ensured.

To recruit a group of matched expectant mothers (comparison group) who were from a similar socio-economic background, eight government hospitals were contacted to seek permission to recruit pregnant mothers attending routine hospital appointments. Government hospitals are ideal for recruiting expectant mothers from low socio-economic backgrounds in India (Patel et al., 2002). Out of the eight hospitals contacted, four hospitals (three in Mumbai and one in Delhi) granted permission to recruit participants. The interviews were conducted at the hospitals. The expectant mothers were matched as closely as possible to the surrogates

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<sup>3</sup> 1 NL travelled to India from the U.K. every 3-4 months for 2 years in order to conduct interviews.



according to age, the month of pregnancy, educational level, socio-economic background and religion. In addition, they were required to have had at least one child from a previous or present marriage. Due to a strict inclusion criteria, on any given day, only 2-3 mothers were interviewed out of a possible 50-70 pregnant women present in the hospital waiting rooms. The participants were informed that it was not mandatory for them to take part and that they would be compensated<sup>4</sup> for their time. Once the participant agreed to take part in the study, the interview was conducted and their contact information was collected for the follow up study. For Phase 2, these participants were contacted directly by the researcher and invited to take part in the follow up interview. The follow up interviews took place either at the hospital or at a nearby café (according to participants' convenience). It was estimated that of the 78 expectant mothers who fulfilled the inclusion criteria, 88% of them agreed to take part in the first phase of the study. Forty-nine mothers took part in Phase 2, representing a participation rate of 71%.

### **2.2.2 Sample Characteristics**

Demographic information, i.e. age, month of pregnancy, educational status, occupation, marital status and number of children, was obtained from all the participants. Sample characteristics are described for phase1 and phase 2 of the study and values are summarised in Table 2.1-2.2, respectively.

For group comparisons, interval data were analysed using analysis of variance (ANOVA) and categorical data were analysed using Chi square tests. Partial eta squared ( $\eta^2$ ) is reported as a measure of effect size. Following Cohen's (1988) recommendation, effect sizes below 0.06 are considered small, values between 0.06 and 0.14 are considered as medium, and values above 0.14 are considered as large effect sizes. Cramer's V represents the strength of relationship between variables in a study. Again, as per Cohen's (1988) recommendation, values below 0.10 indicate small strength of association, values between 0.10 and 0.30 represent a moderate association and values above 0.30 show large associations between the variables. In line with research analysis norms, statistical power was set at 0.80 and alpha significance level was set at 0.05 (Cohen, 1992).

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<sup>4</sup> Compensation at public hospitals depended on the permissions received from each hospital. If the public hospital did not allow a compensation in cash then a small gift was given to the participant.

As shown in Table 2.1, during phase 1 of the study, the average ages of surrogates and expectant mothers were 27.62 (range = 23-35) and 26.57 (range = 22-32) respectively, and there was no significant difference between groups,  $F(1, 118) = 3.35, p = 0.07$ . The month of pregnancy at the time of the interview was found to be significantly different between groups,  $F(1, 118) = 86.46, p < 0.001$ , with surrogates being more likely to have been interviewed earlier on in the pregnancy (mean = 6.24 months, range = 4-9 months) compared to expectant mothers (mean = 8.25 months, range = 5-9 months). Household income was calculated by combining the individual income of the husband and the wife in each household. Income levels were not found to be significantly different between groups,  $F(1, 110) = 0.49, p = 0.48$ . In terms of income, none of the surrogates were below the poverty line (Rs 1457 per month) for urban poor. There was a significant difference between the groups in the number of children the participants had, with surrogates having more children of their own than expectant mothers,  $\chi^2(1) = 21.7, p < 0.001$ . In terms of religion, the majority of the sample were Hindus (surrogates = 48%, expectant mothers = 61%) or Muslims (surrogates = 46%, expectant mothers = 38%). The religious affiliation of the participants did not differ between groups,  $\chi^2(1) = 1.01, p = 0.31$ . Surrogates were found to be significantly less educated than expectant mothers,  $\chi^2(2) = 14.1, p = 0.35$ . While most of the surrogates had never attended school and never learnt how to read and write (44%), only a few expectant mothers had never attended school (14%). Approximately a third of surrogates (34%) did not have a husband compared to only one of the expectant mothers. Marital status was found to be significantly different between groups,  $\chi^2(1) = 23.9, p < 0.001$ . Of the surrogates who did not have a husband, 12% were separated or abandoned, 14% were divorced and 8% were widowed. Whether the participant worked before becoming pregnant was significantly different between groups,  $\chi^2(1) = 88.4, p < 0.001$ , with the vast majority of surrogates (82%) having worked prior to pregnancy. The majority had worked as domestic helpers (61%); surrogates' occupations are described in Table 2.2.

Table 2.1: Sample Characteristics during Phase 1

	Surrogates (N= 50)		Expectant mothers (N = 69)		ANOVA			
	Mean	SD	Mean	SD	F	df	p	$\eta^2$
Age (years)	27.62	2.51	26.57	3.46	3.35	118	0.07	0.03
Month of pregnancy	6.24	1.18	8.25	1.14	86.46	118	<b>0.00</b>	0.42
Monthly Income (Rs)	8042	4005	7593	2718	0.49	110	0.48	0.00
	Chi-Square							
	n(%)		n(%)		$\chi^2$	df	p	V
Number of children*					21.7	1	<b>0.00</b>	0.44
1	18(36)		55(80)					
2	29(58)		13(18.6)					
3	3(6)		1(1.4)					
Religion*					1.01	1	0.31	0.09
Hindu	24(48)		43(61.4)					
Muslim	23(46)		26(37.7)					
Other	3(6)		0(0)					
Educational Status					14.1	2	<b>0.00</b>	0.35
No schooling	22(44)		10(14.3)					
1 <sup>st</sup> - 6 <sup>th</sup> grade	9(18)		18(25.7)					
7 <sup>th</sup> -12 <sup>th</sup> grade	17(34)		41(59.4)					
Marital Status*					23.9	1	<b>0.00</b>	0.44
Married	33(66)		68(98.6)					
Separated	6(12)		0(0)					
Divorced	7(14)		1(1.4)					
Widowed	4(8)		0(0)					
Work pre pregnancy					88.4	1	<b>0.00</b>	0.86
Yes	41(82)		0(0)					
No	9(18)		69(100)					

Note: \* For 'number of children', 'religion', and 'marital status' codes were collapsed into '1 and 2 children', 'Hindu and Muslim', 'having husband and not having husband' respectively for the Chi square analyses.

Table 2.2: Surrogates' occupations

<b>Occupation</b>	<b>n(%)</b>
Domestic helper	25(61)
Shops or factory workers	7(17)
Home worker	3(7)
Event workers	4(10)
Other	2(5)

For those who participated at phase 2, similar to phase 1, the groups did not differ in terms of age,  $F(1, 93) = 1.36, p = 0.24$ , monthly income,  $F(1, 85) = 1.67, p = 0.20$ , and religious affiliation,  $\chi^2(1) = 0.31, p = 0.09$ . However, surrogates were interviewed earlier in their pregnancy,  $F(1, 93) = 53.64, p < 0.001$ , had more children,  $\chi^2(1) = 12.01, p < 0.001$ , were less educated,  $\chi^2(2) = 14.1, p < 0.001$ , were less likely to have a husband,  $\chi^2(1) = 23.9, p < 0.001$ , were more likely to be employed before pregnancy,  $\chi^2(1) = 88.4, p < 0.001$ , and were more likely to have started working within 4-6 months post-delivery,  $\chi^2(1) = 12.31, p < 0.001$ , when compared with expectant mothers. Table 2.3 provides information on characteristics of surrogates and expectant mothers and findings on group differences.

For the main analysis of the study, if a significant correlation existed between any of the demographic variables and the outcome variable of interest, it was added as a covariate in the analysis (see Chapter 3 for more information on sample characteristics as covariates).

Table 2.3: Sample Characteristics during Phase 2

	Surrogates (N= 45)		Expectant mothers (N = 49)		ANOVA			
	Mean	SD	Mean	SD	F	df	p	$\eta^2$
Age (years)	27.62	2.57	26.88	3.49	1.36	93	0.24	0.01
Month of pregnancy	6.27	1.23	8.13	1.23	53.64	93	<b>0.00</b>	0.37
Monthly Income (₹)	8297	4145	7802	3485	1.67	85	0.20	0.02
	Chi-Square							
	n(%)		n(%)		$\chi^2$	df	p	V
Number of children*					12.01	1	<b>0.00</b>	0.36
1	17(38)		37(75)					
2	25(55)		11(22)					
3	3(6)		1(2)					
Religion*					1.01	1	0.31	0.09
Hindu	21(46.7)		28(57.1)					
Muslim	22(48.9)		21(42.9)					
Educational Status					14.1	2	<b>0.00</b>	0.35
No schooling	19(42.2)		7(14.3)					
1 <sup>st</sup> - 6 <sup>th</sup> grade	8(17.8)		15(30.6)					
7 <sup>th</sup> -12 <sup>th</sup> grade	17(34)		27(55.1)					
Marital Status*					23.9	1	<b>0.00</b>	0.44
Married	28(62.2)		49(100)					
Separated	6(13.3)		0(0)					
Divorced	7(15.6)		0(0)					
Widowed	4(9)		0(0)					
Work pre pregnancy					88.4	1	<b>0.00</b>	0.86
Yes	38(84.4)		0(0)					
No	7(15.5)		49(100)					
Work post delivery					12.31	1	<b>0.00</b>	0.36
Yes	17(34)		0(0)					
No	27(54)		49(100)					

Note: \* For 'number of children', 'religion', and 'marital status' codes were collapsed into '1 and 2 children', 'Hindu and Muslim', 'having husband and not having husband' respectively for the Chi square analyses.

## 2.3 Procedure

The interview was conducted in Hindi, in a private room at the Corion Fertility Clinic, Mumbai. This clinic was established in 2010, and provides a number of infertility services, including egg and sperm donation, embryo donation, IVF, and surrogacy. Before the ban on commercial surrogacy, couples from around the world visited Corion clinic for fertility treatment. The clinic had modern interiors, advanced medical technology and an english speaking staff. Images 2.1-2.2 show the reception of the clinic and the conference room where the interviews were conducted, respectively.

Image 2.1: Reception of the Fertility Clinic



Image 2.2: Room where the interview was conducted



At the time of the study, the clinic was accommodating around 50 surrogates in a surrogacy house (situated near the clinic). Unlike most of the other clinics in the country, Corion clinic allowed the surrogates to live with their children at the surrogate house, if they wished to do so. However, it was common for women not to bring their children along as they were worried that it could disrupt their schooling. After seeking permission from the clinic head,

several surrogates visited home for a few days during festivals, although most of them chose to do so before the pregnancy started to show. Their husbands, children and other family members sometimes visited them at the surrogate house.

Unlike other states in India, in Mumbai, all surrogacy pregnancy deliveries were administered in one hospital. Unlike the usual practice of surrogacy in the West, this hospital modified the process of a delivery involving a surrogate in significant ways, which are reported in the results section. For instance, the delivery date was predecided by the clinic according to the intended parents' travel preferences. Other aspects relate to the process of relinquishment, handing over the newborn to the intended parents, and issuing the birth certificate. After the birth, the surrogates either stayed in the hospital or returned to the surrogate house for immediate postnatal medical attention. However, they did not appear to be aware of the provisions for long-term postnatal care.

At the beginning of each interview, the information sheet was read out to the participants (Appendices I-II). It provided them with a description of what the study and interview process entailed. Written or verbal consent (recorded in cases where the participant did not know how to sign) was obtained before starting the interview (Appendix III). The participants were informed that they were under no obligation to take part, could withdraw from study at any point and that this would have no effect on their care. They were given the opportunity to not answer questions they were not comfortable with, and were also assured of confidentiality. All interviews were audio recorded and were translated into English by NL for analysis.

## **2.4 Ethics**

Ethical approval for the study was obtained from the University of Cambridge Psychology Research Ethics Committee and the Corion Fertility Clinic's Ethics Committee. The study was designed to adhere to the guidelines set out by the Indian Council of Medical Research (ICMR), which included the requirement of anonymity of the surrogate's identity. Prior to data collection, an ID number was assigned to each surrogate. These were used on the interview sheets and data files. During the interview, surrogates were addressed by their first names only. The interviewer did not keep the contact details of the surrogates. All data (audio

files and hardcopies) and the contact details of the women in the comparison group were stored in locked cabinets in the Centre for Family Research and data files were password protected.

## **2.5 Measures**

A mixed methods approach, combining both quantitative and qualitative measures was utilised. These two measures complement each other, neutralize biases and offer a rich source of data (Kaplan & Duchon, 1988; Jick, 1979). In the present study, quantitative measures enable an understanding of general longitudinal patterns and how the population of interest differs from either standardised norms or a normative group. Qualitative measures, not only supplement the quantitative data, they also provide an opportunity to explore perceptions on intricate, often hidden and sensitive issues (Barriball and While, 1994; Kendall, 2008). Therefore, in the present study, standardised questionnaires were administered for each participant in both groups and face-to-face semi-structured interviews were administered on surrogates. Standardised questionnaires were used to obtain information on surrogates' negative and positive emotional states (psychological well-being) and the nature of the bond they develop with the unborn child (maternal-foetal bonding). Semi-structured interviews, with a pre-established coding scheme, were carried out to obtain in-depth information on the surrogates' experiences over time – from their decision making process of becoming a surrogate, onset of their pregnancy, the time of delivery and relinquishment, to the months post-delivery, in their own narratives (Kedall, 2008).

### **2.5.1 Questionnaires**

Surrogates and expectant mothers completed the following questionnaires: (a) the Anxiety, Depression and Stress Scale (ADSS) (Bhatnagar, Singh, Pandey, Sandhya & Amitabh, 2011) (b) the Life Satisfaction Scale (LSS) (Alam and Srivastava, 2001) (c) the Women Social Freedom Scale (WSF) (Bhusan, 1987), and (d) the Maternal Fetal Attachment Scale (MFAS) (Cranley, 1981). The first three scales were standardised in India and were purchased from the National Psychological Corporation (NPC), India. A questionnaire assessing a mother's bond with the unborn child standardised on Indian women could not be found. Therefore, the MFAS, one of the most widely used scales to measure maternal-foetal bonding (Cranley, 1981), was utilised. Before selecting any scale, it was ensured that it had a good reliability



and validity, and had been standardised on an appropriate population. ADSS and MFAS were in English and back translation was utilised to make these scales culturally adaptive (Brislin, 1970). Hereby, questions were first translated from Hindi to English. Then to check the quality of the translation, a different person translated them from English to Hindi. Wordings of a few items were modified to make them culturally adaptive.

As majority of the participants were either unable to read or write or had poor reading and writing skills, the questionnaire items and their response options were read out to the participants by the interviewer. As during the pilot phase of this study, it was observed that the participants due to lack or absence of education were struggling with a likert scale, questionnaires, which had a binary response option of ‘yes’ or ‘no’, were deliberately chosen. The ADSS was administered during both phases, whereas LSS, MFAS were administered during phase 1 and WSF was administered during the phase 2, of the study. At the end of this section, Tables 2.4-2.5 describe the questionnaires utilised in this study and present a summary of the questionnaires administered on both groups.

Table 2.4: Data on standardised questionnaires used for the study

Questionnaire	Subscales	Sample items
*Anxiety Depression & Stress Scale (ADSS)	a) Anxiety b) Depression c) Stress	1) I have no expectations/hope from the future. 2) I feel that I get upset easily. 3) I have crying bouts without any good reason.
Life Satisfaction Scale (LSS)	a) Health Satisfaction b) Economic Satisfaction	1) Do you often eat medicines? 2) Have you collected enough money for your basic needs to be fulfilled?
Women Social Freedom Scale (WSF)	No Subscales	1) Should the girl choose her husband? 2) Should an unmarried girl have the freedom to have sexual relationships with a man? 3) A woman becomes complete only after becoming a mother?
*Maternal-Foetal Attachment Scale (MFAS)	a) Emotional bonding b) Instrumental bonding	1) I talk to the unborn baby. 2) I give up doing certain things because I want to help the baby. 3) I can hardly wait to hold the baby.

Table 2.5: Summary of data collected from the surrogates and the comparison group of mothers

Questionnaires	Phase 1	Phase 2
ADSS	Surrogates: 50 (100%) Comparison Group: 66 (94%)	Surrogates: 45 (100%) Comparison Group: 44 (90%)
LSS	Surrogates: 47 (94%) Comparison Group: 66 (94%)	Not Applicable
WSF	Not Applicable	Surrogates: 45 (100%) Comparison Group: 49 (100%)
MFAS	Surrogates: 50 (100%) Comparison Group: 69 (100%)	Not Applicable

### 2.5.1.1 Psychological well-being

#### *Anxiety, Depression and Stress Scale*

Participants were asked to complete the Anxiety, Depression and Stress Scale (ADSS, Bhatnagar et. al., 2011) during pregnancy and following the birth of the child. This scale was administered to assess the negative emotional states of the participants. The questions assessing anxiety mainly focused on physical symptoms and apprehension; the questions assessing depression assessed inertia, loss of interest, and poor emotional control; and the questions assessing stress inquired primarily about negative life events (Bhatnagar et al., 2011). Based on the diagnostic criteria of International Classification of Disease and Diagnostic Statistical Manual, this questionnaire included cognitive, physical, behavioural and emotional symptoms of anxiety, depression and stress (Singh & Bhatnagar, 2016). The 48-item scale comprises 19 items on anxiety, 15 items on depression, and 14 items on stress. Response and scoring of items are ‘Yes=1’ or ‘No=0’ and scores ranged from 0 to 48. Higher scores indicate higher levels of anxiety, depression and stress. This scale also provided cut-off percentile scores for normal ( $P_1$ - $P_{25}$ ), mild ( $P_{26}$ - $P_{50}$ ), moderate ( $P_{51}$ - $P_{75}$ ) and severe/clinical ( $P_{76}$ - $P_{100}$ ) anxiety, depression and stress.

The standardisation of ADSS included participants from illiterate and marginalised groups in India. It was standardised on 972 non-psychiatric individuals. This scale has an excellent internal consistency of 0.81. Individual reliability scores reported for anxiety, depression, and stress are 0.76, 0.75 and 0.61, respectively. The internal consistency scores for the present sample, as measured by Cronbach alpha, were 0.92 and 0.90 for the first and second phase of

the study, respectively. Cronbach alphas for anxiety, depression and stress individually were 0.86, 0.87, and 0.89 during phase 1 of and 0.86, 0.90, and 0.88 for phase 2, of the study.

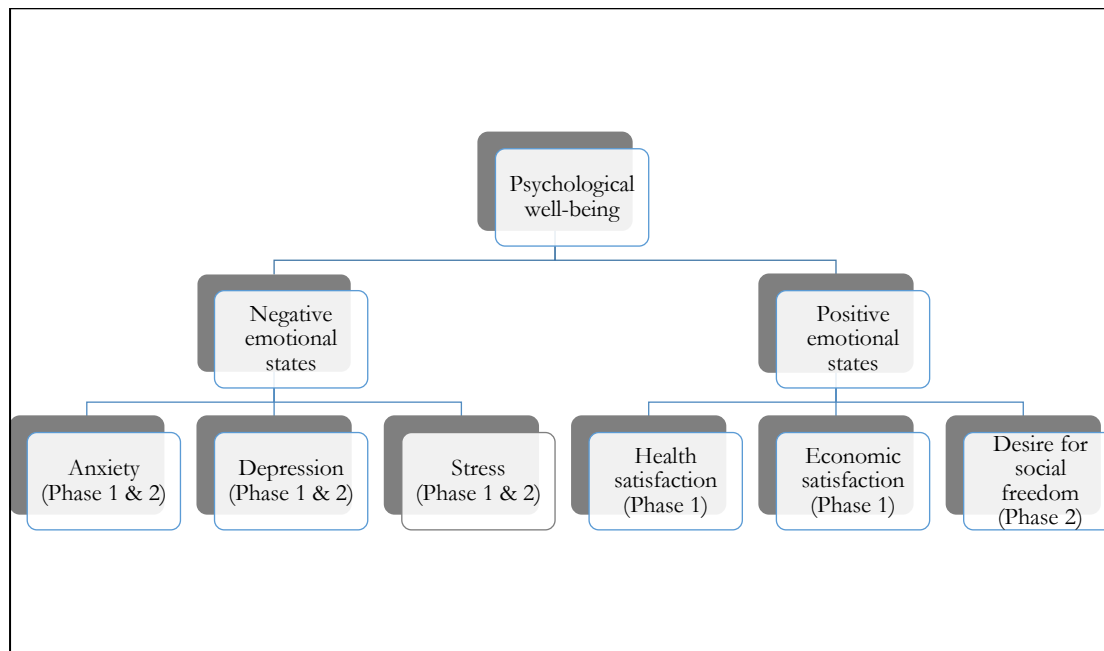
#### Life Satisfaction Scale

The Life Satisfaction Scale (LSS) (Alam and Srivastava, 2001) has 60 items assessing positive emotional states – health, personal, economic, marital, social, and job satisfaction. Only health and economic satisfaction with 10 items each, administered during pregnancy, are reported in this thesis. Response and scoring of items are ‘Yes=1’ or ‘No=0’. For each subscale, scores ranged from 0 to 10, with higher scores indicating higher satisfaction. This scale has been standardised on 875 males and females with an age range of 18-40 years drawn from both rural and urban areas in India. The test-retest reliability (computed with a lapse of 6 weeks) was found to be 0.84. The validity of the scale was obtained by correlating it with Saxena’s Adjustment Inventory (Saxena, 1962) and the Srivastava Adjustment Inventory (Srivastava & Tiwari, 1972) and correlations were found to be 0.74 and 0.84, respectively. Also, the LSS has been reported to have good face and content validity. In the present study, the internal consistency of health and economic satisfaction were 0.56 and 0.60, respectively.

#### Women Social Freedom Scale

Women Social Freedom Scale (WSF) (Bhusan, 1987) assesses the desire for social freedom in women in India, including freedom from interference by parents and husband, freedom from social taboos, customs and rituals, freedom concerning sex, marriage, economic freedom and social equality. Desire for freedom was considered to be a positive emotional state and was assessed during the second phase of the study. The 24-item scale does not have any subscales and was scored to produce a total score. Response and scoring of items are in ‘Yes=1’ or ‘No=0’. Scores ranged from 0 to 24, with higher scores representing higher social freedom. The scale was standardised on 500 college girls. Test-retest and split half reliability was each higher than 0.75. The internal consistency for this sample was found to be 0.38. Item analysis was then administered and 5 items with least factor loadings were deleted. Cronbach alpha was thus increased to 0.53. Image 2.3 below summarises information on all the psychological constructs assessed in the present study.

Image 2.3: A summary of questionnaire measures for psychological well-being



### 2.5.1.1 Maternal-foetal bonding

#### Maternal Fetal Attachment Scale

The women's bonding with the foetus was assessed during pregnancy using the Maternal Fetal Attachment Scale (MFAS, Cranley, 1981). Cranley (1981) defined Maternal Foetal Attachment as 'the extent to which women engage in behavior that represent an affiliation and interaction with their unborn child' (p. 282; Alhusen, 2008). This scale originally had 24 items with a five point Likert scale. However, as participants struggled with multiple response options, the responses were restricted to 'Yes=1' or 'No=0'. For the purpose of this study, items such as, 'I can hardly wait to hold *my* baby' were changed to 'I can hardly wait to hold *the* baby' for both groups. Due to these changes it is referred as the modified MFAS. This scale was standardised on 326 women and has a reliability of 0.84. Following guidelines of item analysis, item 22 ('I feel my body is ugly') was removed from the questionnaire. Thereafter, the Cronbach alpha was found to be 0.72 for the present sample. Due to item deletion, the total score now ranged from 0 to 23.

#### Principal component analysis

A principal component analysis using varimax rotation was conducted on the modified MFAS and items with values below 0.4 ( $n = 5$  items) and items with negative loading ( $n = 1$  item) were excluded (Lemke & Wiersma, 1976). Following general guidelines on factor

analysis, the number of factors was fixed to 3 and maximum iterations for converging were kept as 25. The Kaiser-Meyer-Olkin test, which measures the suitability of the data for factor analysis, revealed an acceptable score of 0.07. After these tests, a model was identified which measured the feelings, thoughts, and actions towards the foetus. Three subscales were identified from this model with 10, 5 and 4 items each, and 0.74, 0.60 and 0.53 Cronbach alphas, respectively.

The third subscale was excluded from the analysis as it lacked a strong theoretical foundation and had a Cronbach alpha value of less than 0.60. The two factors with 10 and 5 items respectively, were named the following: a) Emotional Bonding b) Instrumental Bonding. The Emotional Bonding subscale measured the level of interaction women had with the foetus and whether they had attributed characteristics to the foetus. The Instrumental Bonding subscale assessed the extent to which women were caring towards the foetus. Table 2.4 shows the items and factor loadings of the subscales.

Table 2.6: Factorial structure of maternal-foetal attachment subscales

Item	Factor loadings	
	Factor 1	Factor 2
I can hardly wait to hold the baby.	.625	
I can almost guess what the baby's personality will be from the way he/she moved around.	.615	
It seems the baby kicks and moves to tell me it's eating time.	.604	
I wonder if the baby thinks and feels "things" inside of me.	.578	
I poke the baby to get him/her to poke back.	.535	
I talk to the unborn baby.	.506	
I wonder if the baby can hear inside of me.	.500	
I imagine myself taking care of the baby.	.477	
I decided on a name for a baby boy	.436	
I refer to the baby by a nickname	.408	
I give up doing certain things because I want to help the baby.		.702
I eat meat & vegetables to be sure the baby gets a good diet.		.701
I do things to try to stay healthy that I would not do if I were not pregnant.		.502
I stroke my tummy to quiet the baby when there is too much kicking.		.497
I try to picture what the baby will look like.		.482

*Note:* Rotated component matrix for the attachment scale; extraction method was principal component analysis, and rotation method was Varimax; only factor loadings over 0.40 are show

### 2.5.2 Semi-structured interviews

Detailed information on surrogates' experiences was collected through face-to-face, semi-structured interviews. Fifty and 45 semi-structured interviews were conducted with surrogates during pregnancy and following the birth of the baby, respectively. This allowed for detailed probing and follow-up questions, such that sufficient information could be received from the participant in order for ratings to be made. The interview consisted of questions which were either open ended or had pre-determined codes. Before starting the data collection, a standardised coding manual was created with a detailed coding scheme for most variables (Quinton & Rutter, 1988) (see Appendix IV for description of codes). The interview procedure incorporated the participant's non-verbal behavior, facial expressions and tone of voice into the coding process, wherever appropriate. The interview and coding scheme for the present study were based on the research studies conducted on British surrogates at the Centre for Family Research, University of Cambridge. The codes were revised for the present study to make them more culturally relevant and new questions and codes pertaining to surrogacy arrangements in India were added. During the qualitative analysis of surrogates' experiences, a few new codes were created and added to the coding manual (see Section 5.1.2).

It is noteworthy that since the interviewer, NL is a native Hindi speaker and understood cultural nuances; it helped in collecting a rich level of data and developing an instant rapport with the participant. Some of the ethical and general guidelines followed by the interviewer are discussed below. First, participants were informed that their responses would not be shared with anyone. Second, less threatening – demographic questions, were asked at the beginning of the interview, in order to develop an initial rapport with the interviewee. Third, if the participant seemed uncomfortable at any point of the interview, then related questions on the topic were excluded or reformulated accordingly. For example, if the interviewee felt shy or uneasy discussing the medical aspect of surrogacy, then those questions were either asked differently or dropped. Finally, an attempt was made to avoid leading questions (Gaskell, 2000; Bauer & Gaskell, 2000). Over-arching themes for phase 1 and phase 2 interviews are shown below.

The *Phase 1* interview with the surrogates covered questions on experiences of family life, motivations for becoming a surrogate, information and knowledge regarding surrogacy,

experiences at the clinic and with intended parents before and during the surrogacy arrangement, their expectations of the birth and relinquishment, satisfaction with monetary incentives and medical assistance, support during pregnancy, hiding surrogacy from family and community, experiences of stigma associated with surrogacy, relationship with husband and family members before and during surrogacy, feelings/opinions of family-friends-neighbors about their decision to become a surrogate, life at the surrogacy house, and feelings towards the unborn child. The interviews conducted during pregnancy lasted for approximately 1.5 hours.

The *Phase 2* interview with the surrogates focused on life after surrogacy. The interview covered questions regarding the experience of delivery, feelings experienced during and after relinquishment, meeting and perceptions of intending parents, attitudes, thoughts and feelings towards the newborn, level of attachment/bonding towards the baby, post-surrogacy emotional difficulties, view on payments, usage of money earned via surrogacy, attitude of family members regarding surrogacy and the resultant child, and experience of stigmatisation. The interviews conducted at phase 2 lasted for approximately 45 minutes. Table 2.7 provides a brief description of the questions and codes of the surrogate interviews.

In order to assess inter-rater reliability, 25 interviews each from phase 1 and phase 2 were randomly selected and coded by another researcher. The second coder used the transcripts and the coding manual to code the required questions. The inter-class correlation coefficients (average measure) for phase 1 was 0.72 and for phase 2 was 0.8.



Table 2.7: Sample interview questions and codes from interviews with surrogates

Interview Questions	Codes
<i>Phase 1: During Pregnancy</i>	
How did your husband react to your intention/decision of becoming a surrogate? <i>Probe:</i> What was he happy/not happy about?	1 = positive, 2 = neutral, 3 = negative
How did you feel when you received the news of being pregnant?	1 = excited, 2 = mixed, 3 = anxious
Every mother feels differently towards the baby, how do you feel towards this baby?	1 = attachment, 2 = neutral, 3 = detachment
What sort of concerns did you have regarding surrogacy? <i>Probe:</i> Concern related to health, society, morality, contract etc.	Open ended question
Some women hide their surrogacy pregnancy and some don't, are you hiding your surrogacy from society?	0 = no, 1 = somewhat, 2 = yes
<i>Phase 2: Post-birth</i>	
Do you miss the surrogate house? <i>Probe:</i> What do you particularly miss or disliked about the surrogate house?	1 = no, 2 = somewhat, 3 = yes
Overall, are you happy with the handover experience?	1 = no, 2 = not really, 3 = yes
How do you feel about the surrogate baby now? <i>Probe:</i> How often do you think about him/her?	1 = attached, 2 = mixed, 3 = don't think about baby
Are you satisfied with the money received?	0 = no, 1 = somewhat, 2 = yes
Would you consider becoming a surrogate again? <i>Probe:</i> Why?	0 = no, 1 = maybe, 2 = yes, 3 = started the process

## **Chapter 3**

### **Comparisons between surrogates and expectant mothers**

This chapter reports results from analyses conducted to explore the first, second, sixth and seventh aims of the study, which is to evaluate whether surrogates differ from expectant mothers in their psychological problems during pregnancy and post-birth (Section 3.2), maternal–foetal bonding during pregnancy (Section 3.3), health and economic satisfaction during pregnancy (Section 3.4) and desire for social freedom post-birth (Section 3.5).

#### **3.1 Analysis plan**

Data were analysed using PASW Statistics, version 23.0.0.0. Where a significant correlation existed between a demographic variable and a dependent variable, the analysis was repeated with the demographic variable included as a covariate. In line with Field (2013), all variables were screened for outliers and normality using histograms, which provided a visual summary of the data distribution, highlighting any outliers. Additionally, a Shapiro-Wilk test was conducted to test for normality. Owing to the relatively small sample size, only extreme outliers were removed from the data set. Data were screened for homogeneity of variance criteria, using Levene's test for ANOVAs and Box's test for MANOVAs. Analyses were conducted only when Levene's test and Box's test were not significant. Moreover, prior to analyses, dependent variables that were highly uncorrelated or correlated ( $-0.9 \leq r \leq 0.9$ ) were excluded. In cases of criteria violation, a Kruskal-Wallis test, a non-parametric test to assess group differences, was run to see if results differed (Field, 2013). Since the results of parametric and non-parametric tests did not differ in the present study, only findings from parametric tests are reported, for consistency. In line with research analysis norms, statistical power was set at 0.8 and the alpha significance level was set at .05 (Cohen, 1992).

In Section 3.2, a series of 2x2 repeated mixed ANOVAs, with group (surrogates versus expectant mothers) and time (pregnancy versus post-birth) as factors, were conducted to

examine the differences between surrogates and the comparison group at both phases of the study. Separate analyses were carried out for anxiety, depression and stress and the main effects for group, the main effects for time and the interaction between group and time were noted. Chi-square analyses were also used to assess whether group differences existed in the proportion of women scoring above the cut-off point for severe anxiety, depression and stress, during pregnancy and post-birth. Women with severe anxiety, depression and stress were above the cut-off point for clinical problems. Thus, for these analyses, the variable codes were modified to ‘not severe’ [normal ( $P_1$ - $P_{25}$ ), mild ( $P_{26}$ - $P_{50}$ ), moderate ( $P_{51}$ - $P_{75}$ )] anxiety, depression and stress and ‘severe’ ( $P_{76}$ - $P_{100}$ ) anxiety, depression and stress (Sections 3.2.1-3.2.3). A multivariate analysis of variance (MANOVA) was then conducted to assess group differences for the maternal–foetal bonding subscales (Section 3.2.2). Analyses of variance (ANOVAs) were further used to test whether surrogates and the comparison group of mothers differed in their health and economic satisfaction and desire for social freedom (Sections 3.2.3-3.2.4).

Partial eta squared ( $\eta^2$ ) and Cramer’s V are reported for each analysis to measure the effect size in the ANOVAs and MANOVAs, and the strength of the relationship between variables in the Chi-square analyses, respectively. Pearson’s  $r$  is reported for correlational analyses, with scores between 0 and 0.3 representing weak correlations, scores between 0.3 and 0.7 representing moderate correlations and scores of 0.7 and above indicating strong correlations (Cohen, 1988). Additional bootstrap analyses with a 95% confidence interval and 1,000 resamples were conducted to verify significant findings. Bootstrap analysis incorporates non-normal data and randomly draws repeated samples. Owing to the skewed data that is characteristic of studies with small sample sizes, bootstrap analyses provide an additional confirmation that the findings are robust and would remain in a larger sample. For bootstrap analyses, bias and standard error values are reported.

## 3.2 Aim I – Psychological problems

In the following sections, three 2x2 mixed ANOVAs were conducted to examine group differences in anxiety, depression and stress at both time points of the study (during pregnancy and post-birth). Chi square analyses were administered to assess group differences in terms of proportion of women scoring above the cut-off point for severe anxiety, depression and stress.

### 3.2.1 Anxiety

The ANOVA for anxiety found no significant main effect for group,  $F(1, 83) = 0.95, p = 0.33$ , no significant main effect for time,  $F(1, 83) = 1.14, p = 0.28$ , and no significant interaction effect between group and time,  $F(1, 83) = 1.22, p = 0.27$ . This shows that there were no significant differences between surrogates and expectant mothers in anxiety during pregnancy or after the birth of the baby (see Table 3.1). Of the potential covariates, household income was negatively correlated with anxiety during phase 1 of the study ( $r = -0.20, p = 0.03$ ). Thus, the analysis was repeated with household income entered as a covariate. This did not change the main effect for group  $F(1, 75) = 1.29, p = 0.25$ , main effect for time  $F(1, 75) = 0.95, p = 0.33$ , or interaction between group and time,  $F(1, 75) = 1.02, p = 0.31$ . The covariate did not reach significance either,  $F(1, 75) = 0.27, p = 0.60$ . It was not possible to administer bootstrap tests for repeated measure designs in PASW.

During pregnancy, 20% of surrogates obtained scores above the cut-off point for severe anxiety compared with 12.1% of expectant mothers. After the birth, the percentages of surrogates and expectant mothers who were above the cut off point for severe anxiety were 20% and 8.1%, respectively. A Chi square test was conducted to compare the proportion of women who scored above the cut-off point, for severe prenatal anxiety, in surrogates and expectant mothers. Group differences were not identified,  $\chi^2(1) = 1.68, p = 0.20$ . Another Chi square test was conducted to compare the proportion of women who scored above the cut-off point, for severe postnatal anxiety, in both groups. Surrogates and expectant mothers did not differ in severe postnatal anxiety,  $\chi^2(1) = 2.91, p = 0.13$  (see Table 3.2). Figures 1-2, illustrate the percentages of surrogates and expectant mothers with severe and not severe (normal, mild and moderate) anxiety, during pregnancy and post-birth.

Figure 3.1: Percentages of surrogates and expectant mothers with severe and not severe prenatal anxiety

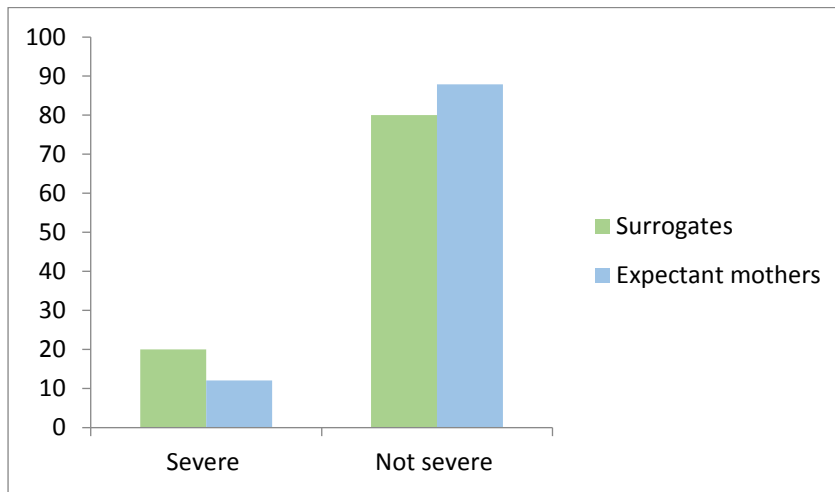
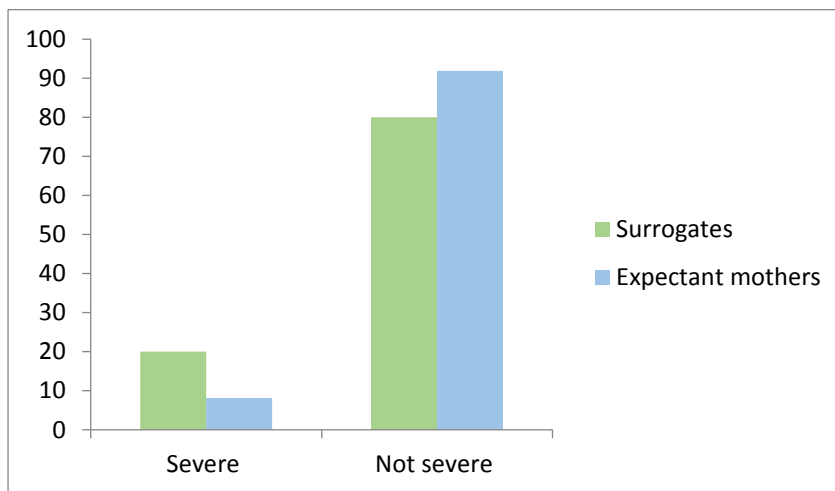


Figure 3.1: Percentages of surrogates and expectant mothers with severe and not severe postnatal anxiety



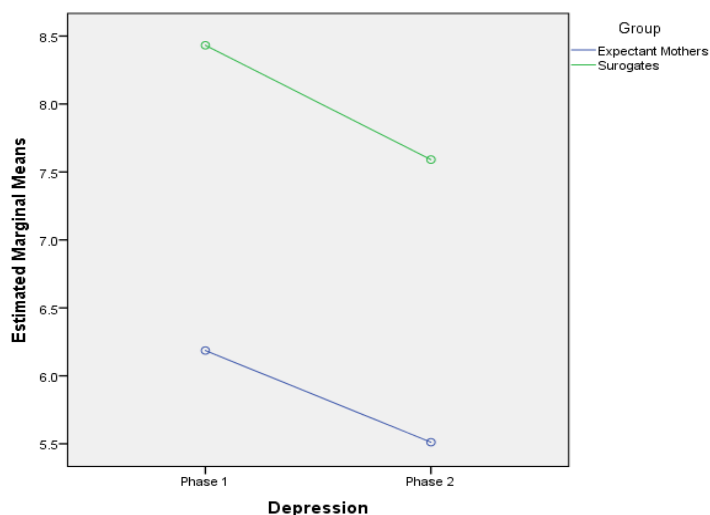
Findings: Surrogates and the comparison group of mothers did not differ in their anxiety levels during pregnancy and several months after the birth. The anxiety levels of women in both groups did not significantly increase from the time of pregnancy to after the birth. Also, proportion of women suffering from severe anxiety did not differ between the surrogates and the comparison group of mothers, both during pregnancy and post-birth.

### 3.2.2 Depression

For depression, a 2x2 mixed ANOVA found a significant main effect for group,  $F(1, 85) = 6.509$ ,  $p = 0.01$ , indicating higher levels of depression among surrogates compared to

expectant mothers. However, there was no significant effect for time,  $F(1, 85) = 2.31, p = 0.13$  and no significant interaction effect between group and time,  $F(1, 85) = 0.02, p = 0.86$ , showing that surrogates had higher levels of depression than expectant mothers during pregnancy and after the birth of the baby (see Table 3.1). As the number of previous children was positively correlated with depression during pregnancy ( $r = 0.23, p = 0.01$ ), the analysis was repeated with number of children as a covariate. The group difference remained significant after adjusting for number of children,  $F(1, 84) = 4.22, p = 0.04$ . The main effect for time  $F(1, 84) = 0.52, p = 0.47$ , and interaction effect of group and time,  $F(1, 84) = 0.09, p = 0.76$ , remained non-significant. Figure 3 provides a visual description to the mean scores of depression, during pregnancy and after the birth.

Figure 3.3: Mean scores for prenatal (Phase 1) and postnatal (Phase 2) depression for surrogates and expectant mothers.



During pregnancy, 38% of surrogates obtained scores above the cut-off point for severe depression compared with 18.1% of expectant mothers. Following the birth, the percentages of surrogates and expectant mothers who scored above the cut-off point for severe depression were 31.1% and 12.2%, respectively. A Chi square test was performed to examine whether groups differed in the proportion of women who scored above the cut-off point for severe prenatal depression. Surrogates and expectant mothers differed significantly in severe prenatal depression,  $\chi^2(1) = 6.62, p = 0.01$ . Another Chi square test was conducted to identify whether groups differed in severe postnatal depression. Surrogates and expectant mothers also differed significantly in severe postnatal depression,  $\chi^2(1) = 8.27, p = 0.00$  (see Table 3.2). Bootstrap analysis confirmed the findings as it did not change the results for

severe prenatal depression,  $SE = 0.09$ ,  $CI = (0.03, 0.43)$ ,  $p = 0.01$ , and severe postnatal depression  $SE = 0.09$ ,  $CI = (0.02, 0.40)$ ,  $p = 0.02$ . Figures 4-5 show the percentages of surrogates and expectant mothers with severe and not severe (normal, mild and moderate) depression, during pregnancy and post-birth.

Figure 3.4: Percentages of surrogates and expectant mothers with severe and not severe prenatal depression

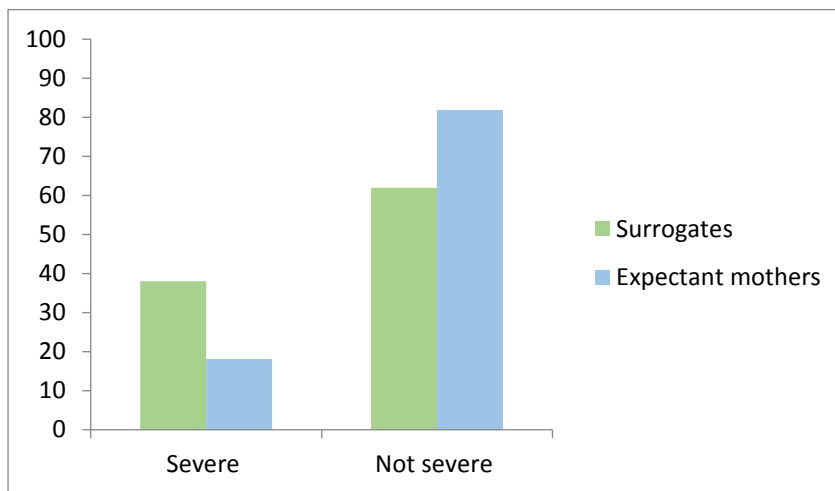
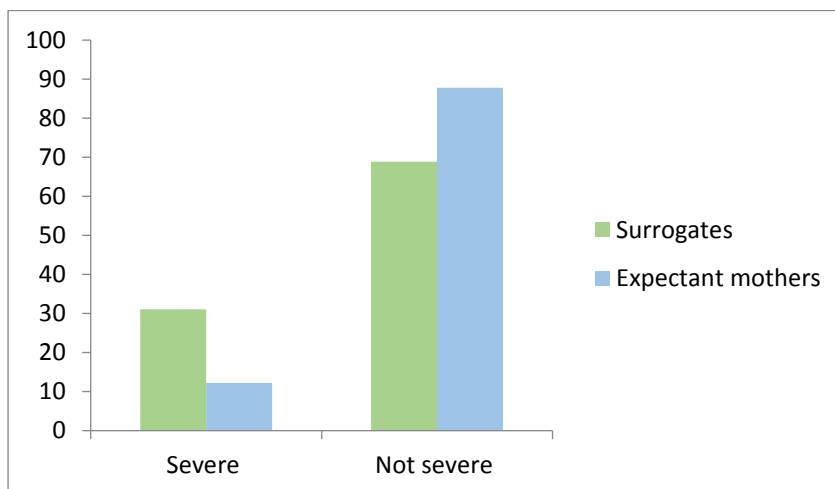


Figure 3.5: Percentages of surrogates and expectant mothers with severe and not severe postnatal depression



Findings: Surrogates suffered from higher levels of depression during pregnancy and several months post-birth, than the comparison group of mothers. However, the depression levels of women in both groups did not significantly change from the time of pregnancy to several

months after the birth. Also, surrogates were more likely to experience severe depression than the comparison group of mothers, during pregnancy and after the birth.

### 3.2.3 Stress

The 2x2 mixed ANOVA for stress found no significant main effect for group,  $F(1, 85) = 1.20$ ,  $p = 0.27$ , no significant main effect for time,  $F(1, 85) = 0.06$ ,  $p = 0.80$ , and no significant interaction between group and time,  $F(1, 85) = 0.00$ ,  $p = 0.98$ . Thus, there were no significant differences between surrogates and expectant mothers in stress during pregnancy or following the birth of the baby (see Table 3.1). None of the demographic variables correlated with stress during pregnancy or post-birth.

During pregnancy, 34% of surrogates obtained scores above the cut-off point for severe stress compared with 21.2% of expectant mothers. Following the birth, the percentages of surrogates and expectant mothers who scored above the cut-off point for severe stress were 34% and 12.2%, respectively. Chi-square tests were administered to examine whether the groups differed in terms of the proportion of women who were above the cut-off point for severe prenatal and postnatal stress. Group difference in proportions for severe prenatal stress was marginally significant,  $\chi^2(1) = 2.98$ ,  $p = 0.09$ . However, group difference in proportions for severe postnatal stress was significant, showing that surrogates were more likely to have clinical stress after the birth than expectant mothers,  $\chi^2(1) = 4.98$ ,  $p = 0.04$  (see Table 3.2). The bootstrap analysis verified the significant group difference in stress levels after the birth,  $SE = 0.08$ ,  $CI = (0.08, 0.57)$ ,  $p = 0.03$ . Figures 6-7, present the percentages of surrogates and expectant mothers with severe and not severe (normal, mild and moderate) stress, during pregnancy and post-birth.



Figure 3.6: Percentages of surrogates and expectant mothers with severe and not severe prenatal stress

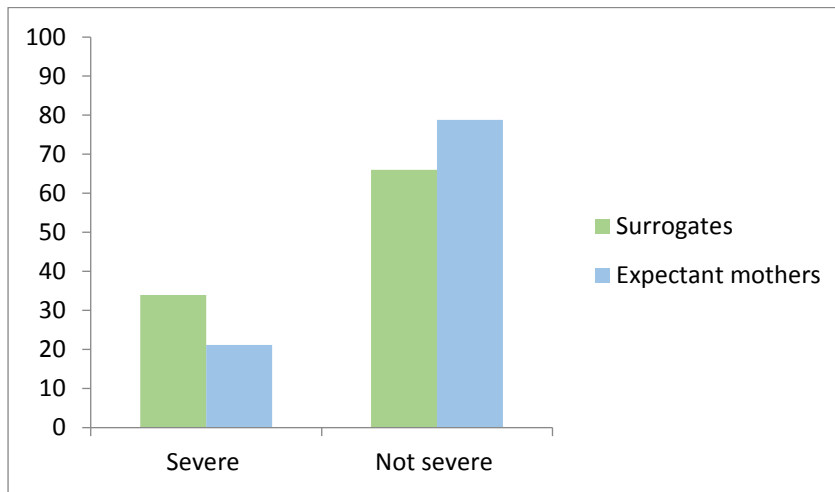
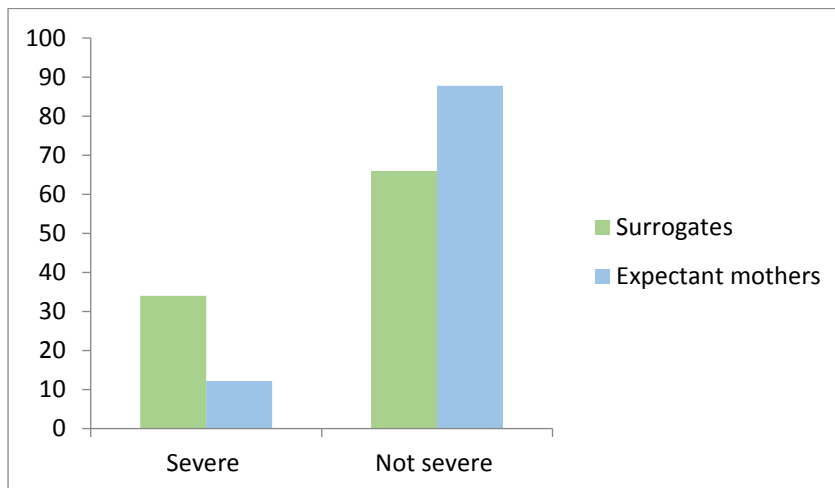


Figure 3.7: Percentages of surrogates and expectant mothers with severe and not severe postnatal stress



Findings: Groups did not differ in their levels of prenatal and postnatal stress and stress levels of women in both groups did not significantly change from the time of pregnancy to post-birth. However, surrogates were more likely to suffer from severe stress after the birth, than the comparison group of new mothers. Groups did not differ in severe stress during pregnancy.

Table 3.1: Means, standard deviations, F statistics, significance ( $p$ ), effect size ( $\eta p^2$ ), and degrees of freedom (df) for main effects (group and time) and interaction effects (group x time), of the 2x2 mixed ANOVAs for comparing psychological problems, in surrogates and expectant mothers, during pregnancy and post-birth

Variables	<u>Surrogates</u>		<u>Expectant Mothers</u>		<u>Surrogates vs.</u> <u>Expectant Mothers</u>				<u>Pre vs.</u> <u>Post Pregnancy</u>				<u>Group x Time</u> <u>Interaction</u>			
	Mean	SD	Mean	SD	F	$p$	$\eta p^2$	df	F	$p$	$\eta p^2$	df	F	$p$	$\eta p^2$	df
Prenatal anxiety	9.57	5.50	7.65	4.79	0.95	0.33	0.01	1,83	1.14	0.28	0.01	1,83	1.22	0.27	0.01	1,83
Postnatal anxiety	8.23	5.39	7.65	5.26												
Prenatal depression	8.43	4.88	6.07	4.06	6.50	<b>0.01</b>	0.07	1,85	2.31	0.13	0.02	1,85	0.02	0.86	0.00	1,85
Postnatal depression	7.59	4.88	5.41	4.47												
Prenatal stress	7.80	4.69	6.80	4.07	1.20	0.27	0.01	1,85	0.06	0.80	0.00	1,85	0.00	0.98	0.00	1,85
Postnatal stress	7.68	4.70	6.73	4.22												

Table 3.2: Frequencies, Chi-square ( $\chi^2$ ), degree of freedom (df), significance ( $p$ ), and cramer's v (V) values for comparisons of 'severe' and 'not severe' (normal, mild and moderate) prenatal and postnatal anxiety, depression, and stress in surrogates and expectant mothers

Variables	Surrogates n(%)				Expectant Mothers n(%)				$\chi^2$	df	$p$	V
	Normal	Mild	Moderate	Severe	Normal	Mild	Moderate	Severe				
Prenatal anxiety	11(22)	14(28)	15(30)	10(20)	16(24.2)	25(37.8)	17(25.7)	8(12.1)	1.68	1	0.20	0.11
Postnatal anxiety	13(28.8)	12(26.6)	11(24.4)	9(20)	19(38.7)	14(28.5)	12(24.4)	4(8.1)	2.91	1	0.13	0.17
Prenatal depression	12(24)	9(18)	10(20)	19(38)	20(30.3)	22(33.3)	12(18.1)	12(18.1)	6.62	1	<b>0.01</b>	0.23
Postnatal depression	14(31.1)	6(13.3)	11(24.4)	14(31.1)	22(44.8)	12(24.4)	9(18.3)	6(12.2)	8.27	1	<b>0.00</b>	0.29
Prenatal stress	11(22)	13(26)	9(18)	17(34)	16(24.2)	21(34.8)	15(22.7)	14(21.2)	2.98	1	0.09	0.15
Postnatal stress	14(31.1)	7(15.5)	7(15.5)	17(34)	17(34.6)	12(24.4)	14(28.5)	6(12.2)	4.98	1	<b>0.04</b>	0.23

### 3.3 Aim II – Maternal-foetal bonding

After identification of the new subscales, emotional bonding and instrumental bonding, the hypothesis for maternal-foetal bonding was revised. It is now hypothesised that surrogates would experience lower emotional and instrumental bonding with the unborn baby than expectant mothers. The two subscales of MFAS, emotional bonding and instrumental bonding, were entered into a MANOVA. Wilks's  $\lambda$  was significant,  $F(2, 116) = 4.40, p = 0.01$ . One-way ANOVAs showed a significant difference between surrogates and expectant mothers in emotional bonding,  $F(1, 116) = 4.19, p = 0.04$ , with surrogates showing lower emotional involvement with the foetus than expectant mothers. There was also a significant difference between surrogates and expectant mothers for instrumental bonding,  $F(1, 116) = 4.27, p = 0.04$ , reflecting greater care and attention towards the unborn baby by surrogates compared to expectant mothers (see Table 3.3). None of the demographic variables correlated with the dependent variables, so no additional MANCOVA was administered. It was not possible to administer bootstrap analysis for this model in PASW.

Table 3.3: Means, standard deviations, F statistic, significance ( $p$ ), effect size ( $\eta^2$ ), and degrees of freedom ( $df$ ) values for comparisons of subscales of the revised MFAS in surrogates and expectant mothers

Variables	<u>Surrogates</u>		<u>Expectant Mothers</u>		F	$p$	$\eta^2$	df
	Mean	SD	Mean	SD				
Factor 1: Emotional Bonding	-0.21	1.23	0.16	0.75	4.23	<b>0.04</b>	0.03	1,116
Factor 2: Instrumental Bonding	0.21	0.68	-0.16	1.16	4.19	<b>0.04</b>	0.03	1,116

Findings: Surrogates were more likely to emotionally bond with the foetus, however they were less likely to display instrumental bonding with the unborn baby, than expectant mothers.

### 3.4 Aim VI – Health and economic satisfaction

Two separate ANOVAs were conducted, in order to assess whether surrogates and expectant mothers differed in their health and economic satisfaction during pregnancy, respectively.

The ANOVA comparing the surrogates' and expectant mothers' satisfaction with their health during pregnancy approached significance,  $F(1,112) = 3.0, p = 0.08$ . This non-significant trend suggests that surrogates experienced lower health satisfaction than expectant mothers during pregnancy. Health satisfaction did not correlate with any potential covariates.

The ANOVA comparing surrogates and expectant mothers on economic satisfaction during pregnancy was significant,  $F(1,112) = 13.0, p < 0.001$ , indicating that surrogates experienced greater economic satisfaction than expectant mothers (see Table 3.4). Of the potential covariates, economic satisfaction was negatively correlated with household income ( $r = -0.25, p < 0.001$ ) and month of pregnancy ( $r = -0.24, p = 0.01$ ). An ANCOVA was carried out with household income and month of pregnancy as covariates. Groups still significantly differed in their economic satisfaction,  $F(1, 105) = 6.71, p = 0.01$ , with household income reaching statistical significance,  $F(1, 105) = 8.67, p < 0.001$ . Bootstrap analyses of economic satisfaction did not affect the results, (SE = 0.38, CI = (-1.7, -0.23),  $p = 0.01$ ).

Table 3.4: Means, standard deviations, F statistic, significance ( $p$ ), effect size ( $\eta^2$ ), and degree of freedom (df) values for comparisons of health and economic satisfaction between surrogates and expectant mothers

Variables	<u>Surrogates</u>		<u>Expectant Mothers</u>		F	$p$	$\eta^2$	df
	Mean	SD	Mean	SD				
Health satisfaction	5.32	1.77	5.86	1.53	3.00	0.08	0.02	1,112
Economic satisfaction	5.57	1.63	4.54	1.39	13.00	<b>0.00</b>	0.10	1,112

Findings: Surrogates experienced greater economic satisfaction than expectant mothers, however groups did not significantly differ in their experience of health satisfaction during pregnancy.

### 3.5 Aim VII - Desire for social freedom

An ANOVA was carried out with desire for social freedom as the dependent variable. No group differences were found,  $F(1, 90) = 0.36$ ,  $p = 0.55$ , suggesting that surrogates and the comparison group of mothers did not differ in their desire for social freedom (see Table 3.5). Women's social freedom scores did not correlate with any of the demographic variables, so an additional ANCOVA was not administered.

Table 3.5: Means, standard deviations and ANOVA results (F statistic, significance ( $p$ ), effect size ( $\eta^2$ ), and degree of freedom values (df)) for comparisons of women's social freedom scores between surrogates and expectant mothers

Variables	<u>Surrogates</u>		<u>Expectant Mothers</u>		F	p	$\eta^2$	df
	Mean	SD	Mean	SD				
Women social freedom	10.24	1.63	9.97	2.49	0.36	0.55	0.00	1,92

According to the standardised norms, the mean score of 500 college girls on the women's social freedom scale was 11.58. It was found that 28.8% of surrogates were above this mean score compared with 24.4% of the comparison group of mothers. Chi square test was performed to examine whether groups differed in the proportion of women above the normative mean. Groups differences were not identified,  $\chi^2(1) = 0.09$ ,  $p = 0.75$ .

Finding: Surrogates did not differ from the comparison group of mothers in their desire for social freedom.

## **Chapter 4**

### **Factors associated with surrogates' psychological problems, maternal-foetal bonding and experiences**

This chapter reports results from analyses conducted to explore the third, fourth and eighth aims of the study, *id est* (i) to identify the factors associated with surrogates' psychological problems (Section 4.2), (ii) to identify the predictive factors associated with maternal-foetal bonding in surrogates (Section 4.3) and (ii) to explore factors associated with surrogates' specific experiences of satisfaction with: the surrogate house, the clinic, relinquishment and the intended parents (Section 4.4).

#### **4.1 Analysis plan**

Linear, multiple or hierarchical regression analyses were administered to test the related hypotheses. For each analysis, covariates that correlated with the dependent variable were entered in the first step (see Tables 4.2 and 4.3). Covariate adjustment is done in order to isolate the effect of the predictor variable on the dependent variable with greater accuracy and power (Robinson & Jewell, 1991). It should be noted that where none of the potential covariates correlated with the outcome variable, then, depending on the number of independent predictors, a linear or multiple regression analysis was conducted. Before independent predictors were added, they were correlated with each other to check for possible multicollinearity. Collinearity diagnostic tests (i.e., tolerance and variance inflation factor [VIF] tests) were also used to identify multicollinearity between independent variables. In general, tolerance values lower than 0.1 and VIF values greater than 10 were considered problematic. In the present study, analyses generated tolerance values  $\geq 0.4$  and VIF values  $\leq 0.6$ , indicating that multicollinearity was not an issue (Craney & Surles, 2002).

Moreover, to prevent the overfitting of regression models, whereby number of dependent variables in an analysis are too complex in relation to the number of data points, a limited number of independent predictor variables were entered in each analysis (Ogundimu, Altman, & Collins, 2016; Coolen, Barrett, Paga & Vicente, 2007). Furthermore, at least 10 items per predictor (events per variable [EPV]) were preferred for the accurate calculation of predictability (Austin & Steyerberg, 2015). To achieve this, codes with fewer than 10 events in a variable were mostly recoded or dropped from the analyses (see Table 4.1). However, researchers have argued that 5–9 EPV can be justified with modern resampling tools, such as bootstrap analysis (Vittinghoff & McCulloch, 2007). Therefore, in the present study, in the rare cases in which the criterion of a minimum of 10 EPV was not met and results were significant, bootstrapping was administered.

Finally, to measure variance, adjusted  $R^2$  (rather than  $R^2$ ) is reported, as it is more rigorous and better at accounting for the number of independent predictors in a model. In particular, adjusted  $R^2$  is recommended for analyses drawing on small sample sizes (Austin & Steyerberg, 2015). As mentioned in the previous chapter, upon failure of any statistical assumption tests, results were re-analysed and confirmed using non-parametric regression analyses. However, in this thesis, only parametric findings are reported.

All of the variables used in the present chapter are listed in Table 4.1. In addition, correlations between demographic variables (potential covariates) and dependent variables are shown in Tables 4.2-4.3.

Table 4.1: Variables with codes and number of responses

<b>Codes</b>	<b>N</b>
Social support during pregnancy	
Sufficient support	33
No support	17
Satisfaction with payment	
Satisfied	37



Somewhat satisfied or dissatisfied	13
Feelings towards surrogate house	
Positive	37
Neutral	13
Hiding surrogacy	
From most people	34
From everyone	16
Facing criticism	
Yes	13
No	37
Satisfaction with relinquishment	
Satisfied	15
Dissatisfied	29
Level of medical information	
Bare minimum or little information	39
Full information	11
Satisfaction with intended parents (post-birth)	
Satisfied	18
Somewhat satisfied	16
Dissatisfied	10
Met intended parents (post-birth)	
Yes	20
No	24
Met newborn	
Yes	12
No	32
Satisfaction with payment (post-birth)	
Satisfied	26
Somewhat satisfied or dissatisfied	18
Satisfaction with clinic (post-birth)	
Satisfied	36
Dissatisfied	09

Table 4.2: Correlations between potential covariates and variables related to surrogates' psychological problems and maternal-foetal bonding

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Prenatal anxiety															
2. Prenatal depression	.88**														
3. Prenatal stress	.81**	.86**													
4. Postnatal anxiety	.58**	.57**	.50**												
5. Postnatal depression	.63**	.61**	.52**	.87**											
6. Postnatal stress	.63**	.63**	.61**	.84**	.89**										
7. Emotional bonding	.05	.05	.17	.24	.03	.19									
8. Instrumental bonding	-.01	-.00	.14	.08	-.04	-.02	.37**								
9. Age	.09	.18	.12	.16	.10	.17	.19	.09							
10. Month of pregnancy	-.05	-.04	-.04	.00	.13	.09	.20	.11	.15						
11. Monthly income	-.25	-.21	-.26	-.28	-.22	-.25	.00	-.11	-.16	-.06					
12. Number of children	.15	.14	.13	.05	.20	.10	.08	-.05	.18	.31*	.22				
13. Religion	.13	.08	.05	.11	.22	.18	-.11	.22	.08	.15	-.26	.29*			
14. Educational status	-.11	-.12	-.16	-.22	-.19	-.15	-.31*	-.28	-.29*	-.28*	-.03	-.38**	.11		
15. Marital Status	-.23	-.20	-.26	-.05	-.02	-.07	-.26	.21	-.16	-.07	-.07	-.43**	.35**	.37**	
16. Work before pregnancy	-.16	-.19	-.09	.04	.03	.08	.20	.28*	-.13	.17	.08	-.02	.11	.07	.20

Note: Pearson correlation coefficient r is reported. \* $p < .05$ , \*\* $p < .001$

Table 4.3: Correlations between potential covariates and surrogates' satisfaction with the surrogate house, the clinic, relinquishment and the intended parents

	1	2	3	4	5	6	7	8	9	10
1. Satisfaction with surrogate house										
2. Satisfaction with clinic	-.03									
3. Satisfaction with relinquishment	-.31*	.23								
4. Satisfaction with intended parents	-.11	-.02	.19							
4. Age	.25	-.07	.19	-.01						
5. Month of pregnancy	.00	.09	.24	.03	.15					
6. Monthly income	.07	.28	-.23	.03	-.16	-.06				
7. Number of children	.00	-.26	-.15	.13	.18	.31*	.23			
8. Religion	-.46**	-.27	.10	-.01	.08	.15	-.26	.29*		
9. Educational status	-.28	.05	.14	-.15	-.29*	-.28*	-.03	-.38**	.11	
10. Marital Status	-.44**	.21	.11	-.24	-.16	-.07	-.07	-.43**	.35**	
11. Work before pregnancy	-.14	.49	.13	-.12	-.13	.17	.08	-.02	.11	.20

Note: Pearson correlation coefficient r is reported. \* $p < .05$ , \*\* $p < .001$

## **4.2 Aim III - Psychological problems**

In this section, predictive factors associated with surrogates' anxiety, depression and stress during pregnancy are reported first (Section 4.2.1), followed by predictive factors associated with their anxiety, depression and stress post-birth (Section 4.2.2).

### **4.2.1 During pregnancy**

It was hypothesised that health satisfaction, perceived support during pregnancy, satisfaction with payment, feelings towards the surrogate house, and <sup>5</sup>experiences of stigma will influence surrogates' anxiety, depression, and stress during pregnancy.

None of the demographic variables correlated with anxiety, depression, and stress scores during pregnancy (see Table 4.1). Therefore, instead of hierarchical regression, three separate multiple regression analyses were conducted for anxiety, depression and stress scores. Since perceived support during pregnancy and feelings towards surrogate house were correlated with each other ( $r = 0.40$ ,  $p < 0.001$ ), the latter was not entered into the analyses.

#### **4.2.1.1 Prenatal anxiety**

Health satisfaction, perceived support during pregnancy, satisfaction with payment, hiding surrogacy, and facing criticism were entered into a multiple regression analysis, with anxiety during pregnancy as the dependent variable. The model approached significance,  $F(5, 46) = 2.27$ ,  $p = 0.06$ , with the independent predictors jointly explaining 12% of the variance in anxiety during pregnancy. Only health satisfaction was significantly associated with prenatal anxiety ( $\beta = -0.32$ ,  $p = 0.02$ ), showing that surrogates who experienced less health satisfaction may have greater anxiety during pregnancy (see Table 4.4).

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<sup>5</sup> Experience of stigmatization was assessed with the following two variables: hiding surrogacy and facing criticism.

Table 4.4: Factors associated with surrogates' prenatal anxiety

Variable	Predictors	B	SE B	$\beta$	<i>p</i>	Adjusted R <sup>2</sup>
Prenatal anxiety					0.06	0.12
	Health satisfaction	-0.99	0.43	-0.32	0.02*	
	Support during pregnancy	-1.13	0.81	-0.20	0.17	
	Satisfaction with payment	0.02	1.76	0.00	0.98	
	Hiding surrogacy	0.24	1.66	0.20	0.15	
	Facing criticism	0.83	1.72	0.06	0.63	

Note: \* $p < 0.05$

Finding: Surrogates who experienced lower health satisfaction during pregnancy were at a risk of higher prenatal anxiety.

#### 4.2.1.2 Prenatal depression

Health satisfaction, perceived support during pregnancy, satisfaction with payment, hiding surrogacy, and facing criticism were entered into a multiple regression analysis, with depression post-birth as the dependent variable. The model was significant,  $F(5, 46) = 2.91$ ,  $p = 0.02$ . The collective variance explained by the predictors was 17%. Again, only health satisfaction significantly explained the variance in depression during pregnancy ( $\beta = -0.34$ ,  $p = 0.01$ ), such that surrogates with lower health satisfaction may experience greater depression during the surrogacy pregnancy. However, facing criticism approached significance ( $\beta = 0.23$ ,  $p = 0.08$ ) (see Table 4.5), indicating that surrogates who experience criticism during pregnancy are more likely to feel depressed. Bootstrap analysis did not alter the results; rather health satisfaction and facing criticism became stronger predictors of depression during pregnancy ( $p = 0.01$ ,  $p = 0.05$ ), indicating that these factors may even be better predictors of the dependent variable in a larger sample (see Table 4.6).

Table 4.5: Factors associated with surrogates' prenatal depression

Variable	Predictors	B	SE B	$\beta$	<i>p</i>	Adjusted R <sup>2</sup>
Prenatal depression					0.02*	0.17
	Health satisfaction	-0.88	0.37	-0.32	0.02*	
	Support during pregnancy	-0.94	0.70	-0.18	0.19	
	Satisfaction with payment	-0.02	1.53	-0.00	0.98	
	Hiding surrogacy	2.28	1.44	0.22	0.12	
	Facing criticism	2.61	1.49	0.24	0.08	

Note: \* $p < 0.05$

Table 4.6: Bootstrap coefficients for factors associated with surrogates' prenatal depression

Variable	Predictors	Bias	SE B	95% CI		<i>p</i>
Prenatal depression	Health satisfaction	-0.02	0.34	-1.64	-0.29	0.01**
	Support during pregnancy	-0.03	0.69	-2.42	0.32	0.15
	Satisfaction with payment	0.11	1.64	-3.49	3.05	0.79
	Hiding surrogacy	-0.98	1.45	-0.68	4.87	0.12
	Facing criticism	0.04	1.33	-0.04	5.24	0.05

Note: \*\* $p < 0.01$ . Bootstrap was administered with 1000 samples.

Finding: Surrogates who experienced lower health satisfaction during pregnancy were at a risk of higher prenatal depression.

#### 4.2.1.3 Prenatal stress

A multiple regression model was administered with health satisfaction, support during pregnancy, satisfaction with payment, hiding surrogacy, and facing criticism as independent predictors. The analysis approached significance,  $F(5, 46) = 2.39$ ,  $p = 0.05$ , with the predictors jointly explaining 13% of the variance in stress during pregnancy. Yet again, only health satisfaction significantly explained the variance in prenatal stress ( $\beta = -0.30$ ,  $p = 0.03$ ), showing that lower health satisfaction is predictive of greater stress in surrogates during pregnancy (see Table 4.7).

Table 4.7: Factors associated with surrogates' prenatal stress

Variable	Predictors	B	SE B	$\beta$	<i>p</i>	Adjusted R <sup>2</sup>
Prenatal stress					0.05	0.13
	Health Satisfaction	-0.81	0.36	-0.31	0.03*	
	Support during pregnancy	-0.48	0.69	-0.10	0.48	
	Satisfaction with payment	-1.30	1.48	-0.12	0.38	
	Hiding surrogacy	2.03	1.40	0.20	0.15	
	Facing criticism	1.46	1.45	1.00	0.31	

Note: \* $p < 0.05$

Finding: Surrogates who experienced lower health satisfaction during pregnancy were at a risk of higher prenatal stress.

#### 4.2.2 Post-birth

It was hypothesised that support during pregnancy, hiding surrogacy, facing criticism, and satisfaction with relinquishment would predict surrogates' anxiety, depression, and stress levels post-birth.

None of the demographic variables correlated with postnatal anxiety, depression, and stress scores (see Table 4.2). Separate (two-step) hierarchical regressions were conducted whereby anxiety, depression and stress scores during pregnancy were entered in the first step of the analysis, to control for levels of anxiety, depression and stress during pregnancy, respectively.

##### 4.2.2.1 Postnatal anxiety

Hierarchical regression was conducted to examine the effects of anxiety during pregnancy (entered in step 1), support during pregnancy, hiding surrogacy, facing criticism and satisfaction with relinquishment (entered in step 2), on surrogates' anxiety levels after the birth of the baby (see Table 4.8). Prenatal anxiety accounted for 33% of the variance in surrogates' postnatal anxiety,  $F(1, 40) = 21.40$ ,  $p < 0.001$ . Support during pregnancy, hiding surrogacy, facing criticism and satisfaction with relinquishment explained an additional 13% of the variance in postnatal anxiety,  $F(5,$

40) = 7.71,  $p < 0.001$ . However, as shown in Table 4.8, only facing criticism had a significant relationship with postnatal anxiety ( $\beta = 0.36$ ,  $p < 0.001$ ). When all variables were entered into the analysis, prenatal anxiety, which was entered at step 1, remained significant. The analysis was repeated with bootstrapping to ensure stability in the results. As shown in Table 4.9, bootstrap coefficients of the model altered the results, such that, facing criticism was now only approaching significance ( $p = 0.06$ ).

Table 4.8: Factors associated with surrogates' postnatal anxiety

Step	Predictors	B	SE B	$\beta$	$p$
Step 1	Prenatal anxiety	0.58	0.12	0.59	0.00***
Step 2	Support during pregnancy	-0.83	0.70	0.24	0.24
	Hiding surrogacy	1.32	1.46	0.10	0.37
	Facing criticism	4.98	1.63	0.36	0.00***
	Satisfaction with relinquishment	0.17	0.69	0.03	0.80
DV	Postnatal anxiety	Adjusted $R^2 = 0.33$ for Step 1 $\Delta$ Adjusted $R^2 = 0.13$ for Step 2			

Note: \*\*\* $p < 0.001$ . DV = Dependent variable.

Table 4.9: Bootstrap coefficients for factors associated with surrogates' postnatal anxiety

Step	Predictors	Bias	SE B	95% CI		$p$
Step 1	Prenatal anxiety	0.00	0.15	0.25	0.88	0.00***
Step 2	Support during pregnancy	-0.04	0.78	-2.34	0.69	0.29
	Hiding surrogacy	-0.21	1.51	-1.81	4.25	0.39
	Facing criticism	-0.08	2.54	-0.30	9.68	0.06
	Satisfaction with relinquishment	-0.00	0.71	-1.30	1.41	0.80
DV	Postnatal anxiety					

Note: \* $p < 0.05$ . DV = Dependent variable

Finding: A marginally significant finding showed that women who faced criticism from family or friends for being a surrogate were at a risk of greater postnatal anxiety.

#### 4.2.2.2 Postnatal depression

Hierarchical regression was conducted to examine the effects of depression during pregnancy (entered in step 1), support during pregnancy, hiding surrogacy, facing



criticism, and satisfaction with relinquishment (entered in step 2) on surrogates' postnatal depression. The first step was found to be significant,  $F(1, 41) = 31.13, p < 0.001$ , with prenatal depression explaining 42% of variance in postnatal depression. The second step of the model explained a further 15% of variance in depression post-birth and was significant,  $F(5, 41) = 12.05, p < 0.001$ . After accounting for the effects of depression during pregnancy, support during pregnancy ( $\beta = -0.26, p = 0.01$ ) and facing criticism ( $\beta = 0.27, p = 0.01$ ) significantly explained the variance in the postnatal depression. Hiding surrogacy approached significance ( $\beta = 0.19, p = 0.07$ ), whereas satisfaction with relinquishment was not significantly related to depression in surrogates following the birth of the baby (see Table 4.10). When all predictors were included in the analysis, prenatal depression was still significant. When the analysis was run with bootstrapping, the results showed that they would not alter much with a larger sample. Support during pregnancy ( $p = 0.02$ ) and facing criticism ( $p = 0.04$ ) were still significantly related to depression following the birth (see Table 4.11).

Additionally, an exploratory bivariate correlation was carried out to examine whether surrogates' satisfaction with payment (post-birth) was related to lower postnatal depression levels. No significant relationship was found. In order to avoid overfitting the regression model, satisfaction with payment was not entered into the analysis above.

Table 4.10: Factors associated with surrogates' postnatal depression

Step	Predictors	B	SE B	$\beta$	$p$
Step 1	Prenatal depression	0.65	0.11	0.66	0.00***
Step 2	Support during pregnancy	-1.38	0.55	-0.26	0.01**
	Hiding surrogacy	2.19	1.18	0.19	0.07
	Facing criticism	3.20	1.29	0.27	0.01**
	Satisfaction with relinquishment	-0.19	0.54	-0.03	0.71
DV	Postnatal depression	Adjusted $R^2 = 0.42$ for Step 1 $\Delta$ Adjusted $R^2 = 0.15$ for Step 2			

Note: \*\* $p < 0.01$ , \*\*\* $p < 0.001$ . DV = Dependent variable.

Table 4.11: Bootstrap coefficients for factors associated with surrogates' postnatal depression

Step	Predictors	Bias	SE B	95% CI		p
Step 1	Prenatal depression	-0.00	0.11	0.42	0.85	0.00***
Step 2	Support during pregnancy	-0.00	0.55	-2.46	-0.33	0.02*
	Hiding surrogacy	-0.19	1.26	-0.60	4.52	0.08
	Facing criticism	0.00	1.58	-0.11	6.03	0.04*
	Satisfaction with relinquishment	0.04	0.57	-1.29	1.04	0.70
DV	Postnatal depression					

Note: \* $p < 0.05$ , \*\*\* $p < 0.001$ . DV = Dependent variable.

Finding: Surrogates who received lower support during pregnancy and faced criticism for being a surrogate experienced greater postnatal depression. A marginally significant finding further suggests that surrogates who hid surrogacy from family, friends or from community at large, suffered from greater postnatal depression.

#### 4.2.2.3 Postnatal stress

A hierarchical regression analysis was conducted where stress during pregnancy was entered in the first step and support during pregnancy, hiding surrogacy, facing criticism, and satisfaction with relinquishment were entered in the second step of the analysis. The first step was found to be significant,  $F(1, 41) = 29$ ,  $p < 0.001$ , with prenatal stress explaining 40% of the variance in postnatal stress. The second step was also found to be significant,  $F(5, 41) = 9.55$ ,  $p < 0.001$ , with the predictors explaining an additional 11% of the variance in surrogates' postnatal stress. While facing criticism was significantly associated with greater stress levels in surrogates following the birth of the baby ( $\beta = 0.30$ ,  $p = 0.01$ ), none of the other independent predictors was significant (see Table 4.12). When all of the variables were entered into the analysis, prenatal stress remained significant. As shown in Table 4.13, bootstrap coefficients did not alter the findings, with criticism being the only significant predictor of postnatal stress ( $p = 0.02$ ).

Table 4.12: Factors associated with surrogates' postnatal stress

Step	Predictors	B	SE B	$\beta$	<i>p</i>
Step 1	Prenatal stress	0.64	0.12	0.64	0.00***
Step 2	Support during pregnancy	-0.84	0.57	-0.16	0.14
	Hiding surrogacy	1.03	1.21	0.09	0.4
	Facing criticism	3.54	1.30	0.30	0.01**
	Satisfaction with relinquishment	0.30	0.56	0.06	0.59
DV	Postnatal stress	Adjusted R <sup>2</sup> = 0.40 for Step 1 $\Delta$ Adjusted R <sup>2</sup> = 0.11 for Step 2			

Note: \*\**p* < 0.01, \*\*\**p* < 0.001. DV = Dependent variable.

Table 4.13: Bootstrap coefficients for factors associated with surrogates' postnatal stress

Step	Predictors	Bias	SE B	95% CI		<i>p</i>
Step 1	Prenatal stress	0.00	0.13	0.36	0.91	0.00***
Step 2	Support during pregnancy	-0.02	0.59	-2.04	0.31	0.15
	Hiding surrogacy	-0.20	1.32	-1.99	3.39	0.44
	Facing criticism	-0.08	1.61	0.09	6.32	0.02*
	Satisfaction with relinquishment	0.06	0.63	-0.83	1.58	0.63
DV	Postnatal stress					

Note: \**p* < 0.05, \*\*\**p* < 0.001. DV = Dependent variable.

Finding: Surrogates who received criticism from friends or family for being a surrogate suffered from greater postnatal stress.

### 4.3 Aim IV – Maternal-foetal bonding

With the subscales of the Maternal Fetal Attachment Scale, the original hypothesis for factors associated with maternal-foetal bonding was revised to produce two related hypotheses: (i) that satisfaction with the surrogate house and level of medical information regarding surrogacy would be predictive of surrogates' emotional bonding, and (ii) that satisfaction with intended parents and satisfaction with payment would be predictive of surrogates' instrumental bonding. Two (two-step) hierarchical regressions were conducted for emotional bonding and instrumental bonding, separately.

#### 4.3.1 Emotional bonding

The demographic variable that significantly correlated with emotional bonding, educational status, was entered in the first step of the analysis (see Table 4.14). Since it is a categorical variable with three codes, two dummy variables were created (schooling  $\leq 6^{\text{th}}$  grade and  $\geq 7^{\text{th}}$  grade) with 'no schooling' serving as the reference group. In the next step, satisfaction with the surrogate house and level of medical information were entered into the analysis. This analysis tests whether, satisfaction with the surrogate house and level of medical information, explain a statistically significant amount of variance in surrogates' emotional bond with the foetus, after controlling for their educational status.

The first step was marginally significant,  $F(2, 47) = 2.80, p = 0.07$ , with educational status explaining 7% of the variance in surrogates' level of emotional prenatal bonding. The second step was also significant,  $F(4, 47) = 4.02, p < 0.001$ , with satisfaction with the surrogate house and level of medical information, explaining an additional 13% of the variance in surrogates' emotional bond with the foetus. The level of medical information ( $\beta = 0.30, p = 0.03$ ) was a significant indicator of emotional bonding. Also, the relationship between feelings towards the surrogate house and emotional prenatal bonding approached significance ( $p = 0.07$ ) (see Table 4.14), showing that surrogates who enjoyed living at the surrogate house were more likely to interact with, and wonder about the foetus. When all the variables were entered into the analysis, higher educational status remained a significant predictor of

surrogates' emotional bonding with the unborn baby. Bootstrapping did not alter these results (see Table 4.15).

Table 4.14: Factors associated with surrogates' emotional bonding

Step	Predictors	B	SE B	$\beta$	<i>p</i>
Step 1	Schooling $\leq$ 6 <sup>th</sup> versus no schooling	-0.09	0.45	-0.03	0.83
	Schooling $\geq$ 7 <sup>th</sup> versus no schooling	-0.85	0.37	-0.34	0.02*
Step 2	Satisfaction with surrogate house	0.70	0.37	0.25	0.07
	Level of medical information	0.49	0.21	0.30	0.03*
DV	Emotional bonding	Adjusted R <sup>2</sup> = 0.07 for Step 1 $\Delta$ Adjusted R <sup>2</sup> = 0.13 for Step 2			

Note: \**p* < 0.05. DV = Dependent variable.

Table 4.15: Bootstrap coefficients for factors associated with surrogates' emotional bonding

Step	Predictors	Bias	SE B	95% CI		<i>p</i>
Step 1	Schooling $\leq$ 6 <sup>th</sup> versus no schooling	-0.02	0.40	-0.92	0.64	0.79
	Schooling $\geq$ 7 <sup>th</sup> versus no schooling	-0.02	0.41	-1.71	-0.10	0.04*
Step 2	Satisfaction with surrogate house	-0.00	0.48	-0.18	1.72	0.13
	Level of medical information	0.00	0.22	0.06	0.93	0.03*
DV	Emotional bonding					

Note: \**p* < 0.05. DV = Dependent variable.

Findings: Surrogates who had a higher level of medical understanding of surrogacy pregnancy displayed greater emotional prenatal bonding. Furthermore, surrogates with higher educational qualifications (schooling  $\geq$  7<sup>th</sup> grade) displayed significantly lower emotional bonding with the unborn baby compared to surrogates who had not been schooled at all.

### 4.3.2 Instrumental bonding

The demographic variable, work before pregnancy, significantly correlated with the dependent variable, instrumental bonding, and was entered in the first step of the analysis (see Table 4.2). The second step comprised satisfaction with intended parents and satisfaction with payment as the independent predictors. Since satisfaction with intended parents is a categorical variable with three codes, two dummy variables were

created (dissatisfied with intended parents and somewhat satisfied with intended parents) with 'feeling satisfied with intended parents' as the reference group. Thus this analysis tests whether, dissatisfied with intended parents, somewhat satisfied with intended parents, and satisfaction with payment, explain a statistically significant amount of variance in surrogates' level of instrumental prenatal bonding, after controlling for their occupational status before surrogacy.

The first step was significant,  $F(1, 44) = 5.96, p = 0.01$ , with work before pregnancy explaining 10% of the variance in surrogates' instrumental bond with the foetus. The second step was also significant,  $F(4, 44) = 2.92, p = 0.03$ . However, dissatisfied with intended parents, somewhat satisfied with intended parents, and satisfaction with payment, only explained an additional variance of 5% in surrogates' instrumental bonding (see Table 4.16). This suggests that a significant amount of variance has been left unexplained by the independent predictors in this analysis. From the three independent predictors, only dissatisfaction with intended parents significantly predicted surrogates' lower care and attention towards the foetus ( $\beta = -0.32, p = 0.04$ ). When all variables were entered into the model, work before pregnancy remained significant. Bootstrap analysis showed that the results would not sustain in a larger sample, as dissatisfaction with intended parents was not a significant predictor of lower instrumental bonding anymore (see Table 4.17).

Table 4.16: Factors associated with surrogates' instrumental bonding

Step	Predictors	B	SE B	$\beta$	<i>p</i>
Step 1	Work before pregnancy	0.78	0.32	0.35*	0.01**
Step 2	Dissatisfied versus satisfied with intended parents	-0.66	0.31	-0.32*	0.04*
	Somewhat satisfied versus satisfied with intended parents	-0.00	0.24	-0.00	0.86
	Satisfaction with payment	0.28	0.28	0.16	0.59
DV	Instrumental bonding	Adjusted R <sup>2</sup> = 0.1 for Step 1 $\Delta$ Adjusted R <sup>2</sup> = 0.07 for Step 2			

Note: \* $p < 0.05$ . DV = Dependent variable.

Table 4.17: Bootstrap coefficients for factors associated with surrogates' instrumental bonding

Step	Predictors	Bias	SE B	95% CI		<i>p</i>
Step 1	Worked before pregnancy	0.11	0.49	-0.18	1.80	0.04*
Step 2	Dissatisfied versus satisfied with intended parents	0.04	0.58	-0.31	0.11	0.14
	Somewhat satisfied versus satisfied with intended parents	0.00	0.37	-0.53	0.37	0.13
	Satisfaction with payment	0.03	0.17	-0.26	0.41	0.67
DV	Instrumental bonding					

Note: \* $p < 0.05$ . DV = Dependent variable. Bootstrap analysis is based on 998 samples.

Findings: Women who were employed before becoming a surrogate displayed a greater instrumental bond with the foetus. Also, surrogates who felt dissatisfied with intended parents displayed lower care and attention towards the unborn baby. This finding however, should be interpreted with caution as it disappeared with bootstrap analysis.

### 4.3.3 Associations between maternal-foetal bonding and psychological problems

It was hypothesised that greater maternal-foetal bonding will be associated with more psychological problems in surrogates, both during pregnancy and post-birth. Regression analysis was not conducted, as it was evident from the correlations shown in Table 4.2 that anxiety, depression and stress scores (during pregnancy and post-birth) were not significantly related to the maternal-foetal bonding subscale scores. This suggests that there was no significant relationship between psychological problems experienced by surrogates and their emotional and instrumental bonding with the unborn baby. In contrast, exploratory Bivariate

correlation analysis revealed that expectant mothers who were less emotionally involved with the foetus were more likely to have greater prenatal anxiety ( $r = -0.30, p = 0.01$ ).

Findings: Surrogates who experienced greater emotional or instrumental bonding with the unborn baby were not found to have greater psychological problems, both during pregnancy and post-relinquishment.

## **4.4 Aim VIII - Factors associated with surrogates' experiences**

### **4.4.1 Satisfaction with the surrogate house during pregnancy**

It was hypothesised that support during pregnancy would be associated with surrogates' satisfaction with the surrogate house. Previous analysis has shown that surrogates who felt positive towards the surrogate house were more likely to feel supported ( $r = 0.40, p < 0.001$ ). Of the potential demographic variables, surrogates' religious affiliation and marital status were correlated with their satisfaction with surrogate house (refer to Table 4.3). A hierarchical regression was conducted, with religious affiliation and marital status entered in the first step, and support during pregnancy entered in the second step of the analysis. The first step was significant,  $F(2, 49) = 10.27, p < 0.001$ . Religious affiliation and marital status jointly explained 27% of the variance in surrogates' satisfaction with the surrogate house. The second step was also significant,  $F(3, 49) = 8.88, p < 0.001$ , with support during pregnancy significantly explaining an additional 6% of the variance in surrogates' satisfaction with the surrogate house ( $\beta = 0.27, p = 0.03$ ).

Thus after controlling for surrogates' religious affiliation and marital status, support during pregnancy significantly predicted surrogates' positive feelings towards the surrogate house (see Table 4.18). However, a significant amount of variance in the dependent variable was unexplained. Upon entering all variables in the second step, religious affiliation approached significance ( $p = 0.08$ ) and marital status remained significant ( $p = 0.04$ ). Finally, the same analysis was repeated with bootstrapping to verify the regression (see Table 4.19). It altered the results, such that whilst religious affiliation ( $p = 0.01$ ) and marital status ( $p = 0.04$ ) remained significant indicators of satisfaction with the surrogate house, support during pregnancy ( $p = 0.10$ ) no longer approached significance.



Table 4.18: Factors associated with surrogates' satisfaction with the surrogate house

Step	Predictors	B	SE B	$\beta$	<i>p</i>
Step 1	Religion	-0.28	0.10	-0.35	0.00***
	Marital status	-0.29	0.12	-0.31	0.01**
Step 2	Support during pregnancy	0.12	0.06	0.27	0.03*
DV	Satisfaction with surrogate house	Adjusted R <sup>2</sup> = 0.27 for Step 1 $\Delta$ Adjusted R <sup>2</sup> = 0.06 for Step 2			

Note: \**p* < 0.05, \*\**p* < 0.01, \*\*\**p* < 0.001. DV = Dependent variable

Table 4.19: Bootstrap coefficients for factors associated with surrogates' satisfaction with the surrogate house

Step	Predictors	Bias	SE B	95% CI		<i>p</i>
Step 1	Religion	-0.00	0.10	-0.49	-0.08	0.01**
	Marital status	0.00	0.13	-0.57	-0.20	0.04*
Step 2	Support during pregnancy	0.00	0.08	-0.02	0.29	0.10
DV	Satisfaction with surrogate house					

Note: \**p* < 0.05, \*\**p* < 0.01. DV = Dependent variable.

Findings: Surrogates who were Hindus (versus Muslims) and had husbands (versus did not have husbands) were more likely to feel satisfied with the surrogate house. Additionally, surrogates who felt supported during pregnancy displayed positive feelings towards the surrogate house. However, this finding disappeared with bootstrap analysis and thus should be interpreted with caution.

#### 4.4.2 Satisfaction with the clinic post-birth

It was hypothesised that health satisfaction during pregnancy and satisfaction with payment following the birth would predict surrogates' satisfaction with the clinic post-birth. None of the demographic variables correlated with the outcome variable.

A multiple linear regression analysis was conducted to assess the combined effect of health satisfaction during pregnancy and satisfaction with payment post-birth. The model was significant,  $F(2, 40) = 6.38$ ,  $p < 0.001$ . Both variables jointly explained 21% of the variance in surrogates' satisfaction with the clinic. However, only satisfaction with payment significantly explained the variance in satisfaction with the clinic ( $\beta = 0.46$ ,  $p < 0.001$ ) (Table 4.20). Bootstrap coefficients revealed that results would not alter with a larger sample as

satisfaction with payment remained a significant indicator of satisfaction with the clinic (see Table 4.21).

Table 4.20: Factors associated with surrogates' satisfaction with the clinic

Variable	Predictors	B	SE B	$\beta$	<i>p</i>	Adjusted R <sup>2</sup>
Satisfaction with clinic					0.00***	0.21
	Health Satisfaction	0.06	0.04	0.19	0.16	
	Satisfaction with payment	0.55	0.16	0.46	0.00***	

Note: \*\*\**p* < 0.001.

Table 4.21: Bootstrap coefficients for factors associated with surrogates' satisfaction with the clinic

Variable	Predictors	Bias	SE B	95% CI		<i>p</i>
Satisfaction with clinic	Health satisfaction	-0.00	0.04	-0.02	1.14	0.14
	Satisfaction with payment	0.00	0.19	0.20	0.94	0.02*

Note: \**p* < 0.05

Finding: For Indian surrogates, greater satisfaction with the payment received for surrogacy was predictive of them feeling more satisfied with the clinic.

#### 4.4.3 Satisfaction with relinquishment

It was hypothesised that meeting the intended parents (post-birth), meeting the newborn, and satisfaction with payment (post-birth) would be predictive of surrogates' satisfaction with relinquishment. Satisfaction with relinquishment did not correlate with any of the demographic variables. Since meeting intended parents and meeting the newborn correlated with each other ( $r = 0.31$ ,  $p = 0.03$ ), the latter variable was excluded from the analysis. However, to explore if there was a relationship between meeting newborn and satisfaction with relinquishment, Bivariate correlation was administered. No significant relationship was found between the two.

A multiple regression analysis was carried out with meeting the intended parents and satisfaction with payment as independent predictors. The model was significant,  $F(2, 42) = 6.40$ ,  $p < 0.001$ , with the predictors explaining 20% of the variance in surrogates' satisfaction

with relinquishment. As shown in Table 4.22, there was a significant relationship between meeting the intended parents and satisfaction with relinquishment ( $\beta = 0.36$ ;  $p = 0.01$ ), but the relationship between satisfaction with payment and satisfaction with relinquishment was marginally significant ( $p = .06$ ). Bootstrapping was conducted to verify the robustness of the model. As shown in Table 4.23, it did not alter the findings.

Table 4.22: Factors associated with surrogates' satisfaction with relinquishment

Variable	Predictors	B	SE B	$\beta$	$p$	Adjusted R <sup>2</sup>
Satisfaction with relinquishment					0.00***	0.20
	Meeting intended parents	0.63	0.25	0.36	0.01**	
	Satisfaction with payment	0.48	0.25	0.26	0.06	

Note: \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

Table 4.23: Bootstrap coefficients for factors associated with surrogates' satisfaction with relinquishment

Variable	Predictors	Bias	SE B	95% CI		$p$
Satisfaction with relinquishment	Meeting intended parents	0.01	0.25	0.12	1.14	0.02*
	Satisfaction with payment	-0.01	0.25	-0.01	0.97	0.07

Note: \* $p < 0.05$

Findings: Meeting the intended parents after the birth was found to be associated with greater satisfaction with the experience of relinquishment. Surrogates' satisfaction with payment was also indicative of their satisfaction with relinquishment, however this finding was marginally significant.

#### 4.4.4 Satisfaction with intended parents post-birth

It was hypothesised that surrogates' satisfaction with payment (post-birth) and the clinic (post-birth) would be predictive of their satisfaction with the intended parents. However, since satisfaction with payment and satisfaction with clinic were highly correlated ( $r = 0.60$ ,  $p = 0.00$ ), satisfaction with clinic was dropped from the analysis.

Satisfaction with payment was entered into a simple linear regression with surrogates' satisfaction with intended parents as the dependent variable. The analysis approached

significance,  $F(1, 41) = 3.51, p = 0.06$ , with satisfaction with payment explaining 6% of the variance in surrogates' satisfaction with the intended parents (see Table 4.24), indicating that surrogates who were most satisfied with payment felt most satisfied with the intended parents.

Table 4.24: Factors associated with surrogates' satisfaction with the intended parents

Variable	Predictor	B	SE B	$\beta$	$p$	Adjusted $R^2$
Satisfaction with intended parents					0.06	0.06
	Satisfaction with payment	-0.30	0.16	-0.28	0.06	

Finding: A marginally significant finding showed that surrogates' greater satisfaction with the intended parents was associated with feeling more satisfied with the payment received for being a surrogate.

## **Chapter 5**

### **Content analysis of surrogates' experiences**

This chapter reports results from the analyses conducted to explore the fifth aim of the study, which was to explore surrogates' experiences, both during pregnancy and post-birth. Content analysis approach was conducted on the data collected from the semi-structured interviews during both phases of the study.

#### **5.1 Analysis plan**

##### **5.1.1 Selecting a method of analysis**

Content analysis is considered to be one of the most suitable methods for analysing data collected through a mixed method approach, as it lies at the intersection of qualitative and quantitative approaches. Thus, it provides researchers the flexibility to manoeuvre between objective text and inferred content (Hsieh & Shannon, 2005; Sandelowski, 2000; Weber, 1990), which are characteristics of both quantitative and qualitative analysis.

Content analysis enables the researcher to summarise a large volume of data by narrowing it down into cases or frequencies. Berelson (1952, p. 18) defines content analysis as 'a quantitative description of the manifest content of communication'. It is an interactive approach whereby the researcher re-reads the transcripts and accommodates new understandings (Sandelowski, 2000). Content analysis was especially beneficial in the present study as it allowed the researcher to incorporate the socio-cultural context (Mayring, 2000) and provided a platform to the marginalised voices of surrogates (Sandelowski, 2000; White & Marsh, 2006). The method draws on qualitative description, using illustrations, whereby participants'

feelings are reported as much as possible from their own perspective and through their own interpretations (Sandelowski, 2000).

Previously, ethnographers, anthropologists and sociologists have used in-depth qualitative analysis to document the lives of Indian surrogates. However, owing to the methodology used, these studies focused on specific aspects and thus lacked a holistic view of surrogates' lived experiences. This is the first research study to explore the thoughts, attitudes and feelings of Indian surrogates from the time they first heard about surrogacy to several months after the birth of the surrogacy child.

Unlike in quantitative content analysis, in qualitative content analysis, counting frequencies and participants 'is a means to an end, not the end itself' (Sandelowski, 2000). It is important to note that researchers disagree on the precise differences between 'qualitative content analysis' and 'quantitative content analysis' (Forman & Damschroder, 2008; Krippendorff, 2004; White & Marsh, 2006). Forman and Damschroder argue that the primary difference between the two lies in the coding strategy, whereby quantitative content analysis uses only pre-determined codes and qualitative content analysis adopts an evolving coding scheme. Based on this argument, the present methodology can be described as 'qualitative content analysis'.

### **5.1.2 Developing a coding scheme**

The foundation of content analysis lies in its coding process, in which a large amount of text is narrowed into a few categories of interest (Weber, 1990). These categories are then used to establish a coding scheme. Hsieh and Shannon (2005) discuss three approaches to qualitative content analysis: conventional, directed and summative. The approaches are differentiated through the manner in which the initial codes are established. In the conventional approach, codes and themes are drawn from the transcripts. The directed approach utilises a theory (or previous research findings) to establish primary codes; during analysis, the primary coding scheme is modified, refined and developed. Finally, the summative approach involves the identification of words or phrases in transcripts and inference of the larger context. Hsieh and Shannon (2005) suggest that researchers who follow one of these three approaches produce

research with higher validity. The present study utilised the directed approach as it had an evolving coding scheme.

In qualitative content analysis, researchers often start with pre-existing codes (Sandelowski, 2000). While pre-determined codes are called ‘deductive codes’, ‘inductive codes’, by contrast, are developed during the data collection or analysis (Forman & Damschroder, 2008). In the present study, codes were developed during three phases. First, semi-structured interviews conducted with British surrogates at the Centre for Family Research, University of Cambridge and previous research findings were used to establish initial codes for the semi-structured interviews. Second, codes were added on the basis of participant responses in the pilot study. For example, it was observed that when asked about experiences at birth, most surrogates spoke about their memory of catching a glimpse of the baby in the delivery room. Therefore, a code referring to this was created. Third, during the analysis, transcripts were read multiple times; initial codes were refined and additional codes were added. This final – important – step increased the contextualisation of the data. Appendices VI-VII describe the codes utilised in the present study. Lastly, in all stages, an attempt was made to code the data in a way that would tap into aspects of Indian surrogacy that had not been sufficiently explored in previous research. ATLAS.ti version 1.5.1 (qualitative data analysis software) was used to import all transcripts and rate them according to the coding scheme. The program facilitated the creation of new codes, quotation management and frequency counting.

### **5.1.3 Data presentation**

In this chapter, each phase of the study is presented separately. An attempt is made to present codes in a chronological order, and similar codes (representing related experiences) are clustered together. The coding process is described, where necessary and data are presented along with interview excerpts (in display quotes). Cases and percentages are reported for all codes and Tables 5.1 and 5.2 summarise the main codes, cases and percentages.

## 5.2 Phase 1: Surrogates' experiences during pregnancy

With respect to the pregnancy, the study aimed to explore surrogates': (i) motivations for becoming a surrogate, (ii) decision making regarding surrogacy, (iii) level of medical information, (iv) experiences with the intended parents, (v) experiences of stigma, (vi) experiences at the surrogate house, and (vii) feelings towards the unborn child.

Table 5.1. Codes, number of cases and percentages for phase 1 interviews

<b>Codes</b>	<b>n</b>	<b>%</b>
First heard about surrogacy from		
Agents who were also neighbours/friends	7	14
Neighbours/friends	35	70
Family members	6	12
Others	2	4
Duration between first hearing of surrogacy and deciding to become a surrogate		
Within 1 year	31	63.3
Between 1 and 2 years	6	12.2
More than 2 years	13	26
Consulting regarding decision to become a surrogate		
Individual decision	11	22
Husband only	15	30
Family members only	9	18
Husband and family members	14	28
Husband, family members and friends	1	2
Husband's initial reaction to surrogacy		
Positive	9	32.1
Neutral	4	14.2
Negative	15	53.5
Husband's reaction to surrogacy during pregnancy		
Positive	20	71.4
Neutral	5	17.8



Negative	3	10.7
Level of medical information regarding surrogacy		
Bare minimum or no information	23	46
Some information	14	32
Full information	10	20
Belief that the surrogacy child could resemble the surrogate		
Yes	9	18
Not sure	3	6
No	38	76
Motivations for becoming a surrogate		
Children's education/future	18	36
Buying a house	18	36
Poverty	8	16
Debt	3	6
Information on the intended parents		
Bare minimum or no information	38	76
Some information	10	20
Full information	1	2
Meeting with the intended parents		
Met during embryo transfer	2	4
Met during pregnancy	13	26
Did not meet	35	70
Hiding surrogacy		
Hiding from everyone	16	32
Hiding from most people	34	68
Facing criticism		
Did not face criticism	37	74
Faced criticism	13	26
Feelings towards the surrogate house		
Positive	37	74
Neutral	13	26
Negative	0	0
Become a surrogate without a financial incentive?		

No or confusion regarding why anyone would do such a thing	42	84
Yes or yes if their financial situation was better	8	16
Connection to the unborn child		
Yes	5	10
Neutral	37	74
No	8	16

### 5.2.1 Motivations for becoming a surrogate

All surrogates cited financial compensation as their main motivation for becoming a surrogate. As Table 5.1 shows, an equal number (18, 36%) of surrogates reported funding their children's education and buying a house as their primary reasons for becoming surrogates. Furthermore, some surrogates mentioned poverty (8, 16%) or debt (3, 6%) as primary motivating factors.

The following quotations provide examples of surrogates' motivations to earn money through surrogacy:

*The main reason was that my kids used to be hungry all the time and they didn't have good clothes to wear also. I mean we had a lot of difficulties.*

*We couldn't manage our expenses at home and also want our children to be educated. We both, husband and wife, are not educated, so that's why I think of educating them and we want to see them reach a higher level.*

*Getting a house is the biggest thing. If I have a house, my rent amount can be saved and I can even help my kids for their studies.*

*It is my desire that my children stand on their feet and spend a happy life.*

Overall, surrogates' primary motivation was to provide a better life for their children, either by supplying them with a good education or by buying a house to safeguard their future.

Generally surrogates spoke about surrogacy as a necessity rather than 'choice'. They perceived it as their last alternative. For instance, one surrogate said:

*My husband's sickness and problems at home 'made' me take this decision.*

Another simply stated:

*This was my compulsion.*

## **5.2.2 Decision making regarding surrogacy**

This section provides information regarding: from whom surrogates first heard about surrogacy, duration of the decision-making process of becoming a surrogate, family members they consulted regarding their decision and their partners' reaction to surrogacy.

### **5.2.2.1 First heard about surrogacy**

As shown in Table 5.1, nearly two-thirds of surrogates (35, 70%) first heard about surrogacy from their neighbours or friends. Usually, these neighbours or friends had been surrogates before and put the women in contact with agents in exchange for a commission. For example, one surrogate said:

*My neighbour told me that delivery is done in a big hospital. She told me that they care for mothers pretty well. She went through this surrogacy thing twice [...] and introduced me to the agent.*

Another said:

*The neighbour got around ₹ 20,000 from the agent. They take some money from us as well. The neighbour is asking me for ₹ 30,000.*

A few heard about surrogacy directly from agents (7, 14%) or family members (6, 12%). Again, it was common for these agents and family members to have previously been surrogates.

While some surrogates heard about surrogacy from different sources, the large majority (42, 84%) mentioned that they had never before encountered the concept. The following are examples of surrogates' reports of their thoughts and feelings when first hearing about surrogacy:

*No, I was not aware about it. I had not even heard about something like this in my whole life. I found it strange that how can a baby be born via injection and*

*medicine? Even the hen's eggs are nowadays getting formed by machines, so why cannot babies?*

*I did not trust initially but when I had come here and my sister also explained to me, then I understood.*

*I was confused and had concerns. I also thought that they would make me sleep with another man, but I understood it all once I visited the clinic.*

A few women (5, 10%) reported that they had no specific reaction to learning about surrogacy. For example, one woman said:

*I got to know about surrogacy when I got it done.*

Surrogates were also asked how long it took them to sign the surrogacy contract after first hearing about surrogacy. For the majority (31, 63.3%), it was less than a year. The following quote illustrates how financial pressures led some surrogates to make a quick decision:

*No I heard about it a month ago and I decided to go for it as soon as I heard about that. I was in a lot of financial trouble that's why I opted to be here.*

Only a few surrogates (6, 12.2%) took more than 2 years to reach this decision.

#### **5.2.2.2 Consulting family**

All surrogates who were married at the time of interview (29, 58%) discussed their decision with their husbands. Of these 29 surrogates, approximately one-third consulted their husbands only (15, 30%) and a similar proportion consulted their husbands and other family members (14, 28%). A significant number of surrogates who were not married (12, 57%) discussed the surrogacy arrangement with prominent female figures in their lives, such as their mothers and sisters. Others (10, 20%) discussed the decision with their husbands, family members and friends. Strikingly, a few (11, 22%) reported that the decision to become a surrogate was their own, and that, therefore, they did not consult anyone. Most surrogates ( $n = 9$ ) in this latter group were single (divorced, widowed, separated or abandoned), and this might have influenced their disclosure pattern. In terms of consulting children, it is important to note that surrogates rarely disclosed the surrogacy arrangement to their children, who were mostly considered too young to understand. For example, one surrogate said:

*They ask me, 'Mummy, what has happened to your stomach?' I say it is gastric problem.*

### **5.2.2.3 Husbands' reaction to surrogacy**

Of the married surrogates, the majority (15, 53.5%) had husbands who expressed a negative initial reaction towards surrogacy, while nine (32.1%) and four (14.2%) surrogates had husbands who expressed positive and neutral reactions, respectively. It was common for husbands to initially reject the idea, calling surrogacy 'dirty work'. This was primarily due to their confusion about the medical procedures involved. Surrogates also reported that their husbands struggled with the idea of how they would explain the pregnancy to others. However, it was common for these women to report that they ultimately convinced their husbands to allow them to become surrogates. Nearly half of the surrogates (15, 53.5%) arranged for their husbands to meet the agent or fertility clinic staff to learn more about the surrogacy arrangement and what it involved.

The surrogates generally reported that husbands felt more positive by the time of the interview (i.e., during pregnancy) (20, 71.4%), though a few husbands were reported by their wives to feel neutral (5, 17.8%) or negative (3, 10.7%). Women's narratives further explained their husbands' gradual transition from negative to positive feelings. For example, one surrogate said:

*First he said 'No' and then later when I told him how it is done, then did not say anything, he agreed.*

Another reported:

*He was scared but later he understood. I explained to my mother-in-law and husband that one does not have to make physical relationship [...] He used to think something different. That is why he would not send me.*

Another surrogate, whose husband took a few months to be convinced, said:

*Before my husband used to doubt me. He used to think I would sleep with someone. Then he came and visited the surrogate house, all females were there, and so he asked me, 'If only females are here then how do you get pregnant'? The nurse and senior doctor explained everything to him [...] they*

*will only give you injections. We people don't get intimate with anyone – that is something wrong.*

In one of the rare occurrences in which a woman's husband did not agree to the arrangement, the surrogate said:

*I made the decision on my own and told him after the [embryo] transfer.*

In contrast, another surrogate reported:

*If he hadn't supported me, I would have never done it. But he said, 'If you want go for it and I will support you'.*

### **5.2.3 Medical information regarding surrogacy**

The majority of surrogates (23, 46%) demonstrated little information, as exemplified by the following quotes by two surrogates (see Appendix IV for explanation on coding):

*Nobody had told me here. I had heard that a baby is given birth by injections. For 3 months the injections are given regularly. That is how baby's size increases. I know this much only. Now I know that embryo transfer is done and a report comes after 12 days. That is all I know.*

*A child is readied by injections and medicines. That is why I have come here from my village.*

Some surrogates (14, 32%) demonstrated bare minimum information. For instance, one surrogate simply said:

*I just heard that they insert an egg.*

Another gave a more detailed description:

*They actually inject a small seed inside the body which forms the baby. The liquid from the man has got a seed, and that is injected in large amounts. But it depends on destiny whether it stays inside the body or not. I have opted to try for second time.*

Strikingly, of the 50 surrogates, only 10 (20%) had full information regarding the surrogacy pregnancy. For example, one surrogate reported:

*I heard that first they take the donor and then mix fluid of a man, then they start medicine and all.*

An overwhelming majority of the surrogates (39, 78%) reported that their source of medical information about surrogacy was an agent. Surrogates most commonly used the words ‘injection’, ‘medicine’ and ‘eggs’ to describe the surrogacy pregnancy. Upon being asked what the injection consisted of, most (42, 84%) expressed confusion. A few (25, 50%), however, answered ‘an egg’. When probed about their understanding of an egg, only six (12%) described an embryo. Of these six, only four (8%) knew the number of embryos that had been implanted into them.

To further investigate their understanding of genetic relatedness in gestational surrogacy, surrogates were asked if the child could resemble them or have similar traits. Of the 50 surrogates, 9 (18%) responded affirmatively and three (6%) were unsure, suggesting that the majority did not understand the lack of a genetic link in gestational surrogacy. For instance, one surrogate said:

*The child may look like me because the child has been in my womb for 9 months.*

Surrogates who said that the child would not look like them (38, 76%) gave different (non-biological) reasons for this. For example, one said:

*No I don't think so. Here I have seen photos after surrogacy and babies look like parents.*

## **5.2.4 Experiences with intended parents**

In the following sections surrogates’ level of information about the intended parents and whether she met them before or during the surrogacy pregnancy is described.

### **5.2.4.1 Information regarding the intended parents**

An overwhelming majority of surrogates (38, 76%) had ‘no information’, few (10, 20%) had ‘some information’ and only one had ‘full information’ about the intended parents. Information about the intended parents was mostly provided to surrogates by agents or clinic staff.

Some surrogates accepted their lack of information about the parents, while others repeatedly enquired about the parents with agents or clinic staff. For example, one surrogate said:

*I don't know anything about them and have to repeatedly ask. They just say that your clients are very nice people and are from Italy.*

Overall, surrogates were curious about the intended parent(s) but lacked direct contact with them.

#### **5.2.4.2 Meeting the intended parents before and during pregnancy**

Only two (4%) surrogates met the intended parents during the embryo transfer. One surrogate, who had a 10-minute meeting with the parents, said:

*They were crying and told me to take care of the baby. I asked them if they will keep coming and they said 'We live far away'.*

At the time of the first interview, the majority (35, 70%) of surrogates reported that they had not met the intended parents. Some of these surrogates expressed disappointment and a desire to know what kind of people the intended parents were. For example, one surrogate said:

*I think it is good to meet because I want to see parents of the baby I am carrying. But they haven't come to see me.*

Another surrogate, after carefully considering her words, said that she knew the child was not hers, but because she was keeping it in her womb she had a right to meet the parents. Another said:

*I understand that they are all big business people and have busy schedules but they can send a message that I should eat lots of food.*

This surrogate wanted the parents to ask after her health, at the very least.

A few surrogates (13, 26%) met the intended parent(s) during pregnancy. Of these women, two (4%) spoke to the intended parents over Skype. One surrogate, who was hosting a pregnancy for a non-resident Indian couple, said:



*They had come here to meet once after sonography but they did not say much to me. They only told me to take care of myself and did not come again.*

Although the participants were not specifically asked when they expected to see the intended parents, a few (8, 16%) claimed that they did not expect to see them during the pregnancy but were sure that they would meet them after the delivery. For example, one surrogate said:

*If they wanted to meet me, they would have asked. It is ok if they don't meet otherwise they will meet after delivery.*

Another stated:

*If they come to see us, then we also want to meet them. But some people live far and have jobs so they will meet us after the delivery.*

Surrogates sometimes used the words 'good client' and 'bad client' and mentioned that a potential future meeting would be left to fate. For instance, one surrogate said:

*Their client was good enough to show them and let them click a photo [with them] but some don't even show, surrogate would be unconscious and they just take them away and you don't even get to know.*

Surrogates' narratives about meeting the intended parents post-delivery are further discussed in Section 5.3.5.1.

## **5.2.5 Impact of social stigma**

This section presents data from codes pertaining to the effects of stigmatisation of surrogacy. First, it elaborates on the proportion of surrogates who hid surrogacy and how they hid surrogacy. Second, it describes surrogates' experiences of facing criticism when surrogacy information was either disclosed to others or found out by others.

### **5.2.5.1 Hiding surrogacy**

All surrogates hid their involvement in surrogacy to some extent. The majority (34, 68%) hid surrogacy from most people and a smaller number (16, 32%) hid surrogacy from everyone. Surrogates often created stories and lied to conceal their pregnancy from family, neighbours and the wider community. For instance, one said:

*Yes, neighbours ask me about it and I repeat the same, that I have a disease.*  
Another said:

*I am not hiding my pregnancy. I just tell people that it is my baby. After my delivery I will say that I have given my baby to my sister or my brother.*

Moreover, in order to explain their absence to relatives and neighbours, surrogates often claimed to have taken work as domestic helpers in nearby towns. For example:

*My mother keeps making excuses that I am at work or I have been to my in-laws place or something else [...] We are telling them 100 lies in order to hide a single truth.*

Another said:

*People who want to speak will speak but I don't bother, they don't feed me right. I have told my children to tell people that mom has gone for household work will be back after a few months. She comes sometimes in the night and leaves in the morning.*

One woman, who did not conceal her role as a surrogate, expressed the following:

*No I did not hide from anyone. I thought when I go home they will see my stomach and later ask me 'where is the baby?' So I told them all and they are okay with it.*

Another surrogate spoke about how the support she received from her husband enabled her to be more open with others:

*If my husband is with me why should I be scared? I didn't hide from anyone, this [is] nothing bad and I am not afraid.*

A general lack of knowledge and awareness about surrogacy in the larger society further complicated matters. Often, surrogates expressed fears that people would not understand the surrogacy pregnancy and might associate it with 'dirty sex work'. This was more of a concern amongst surrogates who were separated, divorced or widowed.

One surrogate said:

*Surrogacy is a good thing as I am the reason for someone's happiness [...] relieve them from a burden. It is the problem of people if they do not understand it but I have to hide it as I don't have a husband with me and people may ask how I got pregnant.*

Some surrogates claimed that they might tell their family once the arrangement was complete. For example, one surrogate said:

*My parents and in-laws, they don't know what surrogacy is and it is difficult to make them understand so I am hiding from them now and will tell them later.*

A few surrogates (5, 10%) challenged society's 'moral' attitude towards surrogacy when explaining their reasons for not hiding their participation. For instance, one surrogate said:

*The baby has not been formed due to wrong methods. Whoever asks me, I tell them about it and slowly all the people are coming to know about it.*

In these cases, surrogates used the words 'good' and 'not wrong' to explain their openness about surrogacy. Another surrogate emphasised that it was her choice:

*Why to hide? There is no reason to hide from others when it is your body and you have taken the risk.*

#### **5.2.5.2 Facing criticism**

Most surrogates (37, 74%) did not report having received criticism in relation to their decision to become a surrogate, though a smaller number (13, 26%) did report such criticism. Since most surrogates hid the surrogacy from others, criticism was uncommon. However, surrogates often cited anticipation or fear of criticism as a reason for hiding their surrogacy. For example, one surrogate said:

*I don't want neighbours or anyone else to know about it or my husband and my kids will be affected the most, as their names will be spoilt.*

Another surrogate, who had been unsuccessful at hiding her surrogacy and had faced criticism for it, said:

*My neighbours say that it is 'paap' [sin] in their opinion because we get money by giving a child.*

In summary, surrogates were involved in a constant process of negotiating whether and to what extent they should conceal the surrogacy from their family, friends, neighbours and wider society.

### 5.2.6 Experiences at the surrogate house

The majority of surrogates (37, 74%) reported positive feelings towards the surrogate house, while others (13, 26%) reported neutral, rather than negative, feelings. For example, one surrogate said:

*It was easy living in the hostel. At first I felt strange, but then the other ladies said, 'Don't worry, we will take care of you.' I felt happy and good being there.*

Most surrogates (31, 62%) reported that it was common for women in the house to engage in verbal arguments. Describing this, few surrogates said:

*I don't get into fights, but I keep watching. Just like neighbours fight or like it happens in Big Boss [the Indian equivalent to Big Brother] TV show, the same way.*

*They should change the food and staff at the surrogate house. We are helpless and we have to listen to them and cannot answer back.*

*During pregnancy, we can get hungry any time and so strict timings for eating food should not be there.*

In reference to their daily routine, surrogates mainly spoke about eating according to a specified schedule, watching television and playing board games. It was common for surrogates to visit their homes for a few days in the first trimester of pregnancy, when their baby bump was not visible. Beyond this, however, they left the surrogate house mainly to attend medical check-ups at the clinic or hospital. A few spoke of occasionally going to the market. Approximately twice a month, husbands or other family members would visit.

### 5.2.7 Feelings towards the unborn child

Most surrogates (37, 74%) reported feeling neutral about the unborn child, and a few reported feeling connected (5, 10%) and disconnected (8, 16%). The following describes one surrogate's feelings towards the foetus:

*There will be no benefit if I remember. You remember the one who is there with you. You don't remember the one who is not yours.*

During pregnancy, when asked about their feelings towards the unborn child, surrogates often mentioned an emotional boundary between themselves and the foetus that helped them remain neutral. For example, one surrogate said:

*I already know that I have to give this baby to them. That is why there is no benefit by feeling close.*

When asked whether they felt connected to the child, only a few surrogates (4, 8%) replied with a simple 'No'. When probed, these women often provided a brief explanation, such as the following:

*It is not ours, this is others' belonging.*

The following quote illustrates surrogates' feeling of a duty of care towards the unborn child, due to a sense of fear.

*I didn't take care as much in my kids as I do now for these babies, because there is something based on medicine and tablets, I am scared [for the babies].*

During pregnancy, all surrogates expressed a desire to see the newborn. Their experiences with the newborn are described in Section 5.3.4.

Findings: All surrogates reported financial motivations for becoming a surrogate. Most of them had first heard about surrogacy from their friends or neighbours and underwent an embryo transfer within a year of first hearing about it. Commonly, surrogates consulted either their husbands or their mothers or sisters regarding their decision of becoming a surrogate. Majority of the husbands had a negative reaction to their wives' intention of taking up surrogacy. However, by the time of pregnancy most of them had transitioned to feeling neutral or positive about surrogacy. In reference to medical information about surrogacy, most surrogates demonstrated little

knowledge on the subject matter. Furthermore, they had none or little information about the intended parents and majority had not met them by the time of the first interview. Due to the social stigma attached to surrogacy in India, most surrogates were hiding surrogacy from closed ones. A few women who disclosed surrogacy reported experiencing criticism for being a surrogate. Additionally, majority of the surrogates reported feeling positive towards it. In reference to prenatal bonding, majority of the surrogates reported feeling neutral towards the unborn baby.

### 5.3 Phase 2: Surrogates' experiences post-birth

With respect to the post-birth period, the study explored surrogates': (i) feelings about life after surrogacy, (ii) retrospective feelings about the surrogate house, (iii) delivery experiences, (iv) experiences with the newborn, (v) experiences with the intended parents, (vi) experience of relinquishment, and (vii) role of financial compensation post-birth.

Table 5.2. Codes, number of cases and percentages for phase 2 interviews

<b>Codes</b>	<b>n</b>	<b>%</b>
Feelings towards life after surrogacy		
Happy	28	62.2
Neutral	12	26.6
Unhappy	3	6.6
Feelings towards the surrogate house (retrospective)		
Positive	30	66.6
Neutral	5	11.1
Negative	9	20
Type of delivery		
Caesarean delivery	38	80
Natural delivery	6	13.3
Birth complications		
None	34	75.6
Minor	5	11.1

Major	5	11.1
Met the newborn		
Yes	12	27.7
No	32	72.2
Caught a glimpse of the baby		
Yes	30	68.1
No	14	31.8
Felt connected to the newborn		
Connected	13	29.5
Mixed feelings	20	45.4
Not connected	11	25
Feelings towards level of contact with the newborn		
Positive	5	11.3
Neutral	14	31.8
Negative	24	54.5
Met the intended parents		
Yes	24	53.3
No	21	46.6
Feelings towards contact with the intended parents		
Positive	4	8.9
Neutral	16	35.6
Negative	22	48.9
Satisfaction with the intended parents		
Satisfied	17	37.8
Neutral	20	44.4
Dissatisfied	9	20
Does meeting the child make relinquishment easier or harder?		
Easier	32	72.7
Harder	8	18.1
Not sure	4	9
Satisfaction with relinquishment		
Satisfied	15	33.3
Neutral	9	20

Dissatisfied	19	42.2
Spoke about relinquishment to		
Family member only	10	22.7
Husband only	8	18.8
Friends	12	27.7
Nobody	5	11.3
Everyone	4	9
Others	5	11.3
Difficulty with relinquishment		
No difficulty	29	65.9
Moderate difficulty	16	35.6
Issues with payment		
Yes	16	35.5
No	28	62.2
Satisfaction with payment		
Satisfied	26	59
Somewhat satisfied	12	26.7
Dissatisfied	6	13.3
Become a surrogate without a financial incentive		
No or confusion regarding why anyone would do such a thing	42	84
Yes or yes if their financial situation was better	8	16
Decisions regarding use of surrogacy money		
Surrogate decided	19	42.2
Surrogate and her husband decided	17	37.8
Only husband decided	4	8.9
Surrogate and a family member decided	5	11.1
Become a surrogate again		
Yes	9	20
No	25	55.6
Not sure	8	17.8
Started the process	2	4.4



### 5.3.1 Feelings about life after surrogacy

Surrogates were asked an open-ended question regarding their feelings about life after surrogacy, and their responses were coded as ‘happy’, ‘neutral’ or ‘unhappy’. The majority of surrogates (28, 62.2%) reported feeling happy, a further 12 (26.6%) felt neutral, and 3 (6.6%) expressed unhappiness. One surrogate, who felt happy, said:

*Everything has become good, we don't have any tensions now as we had earlier, now we started a small business and life is going on well.*

Another said:

*Now I feel relieved, I could repay my debts, I got a house, I invested some money and I am able to meet my expenses [...] I am able to spend on my children. Life has improved.*

For these surrogates, satisfaction with the money earned via surrogacy determined their level of happiness with the arrangements. Surrogates who felt ‘neutral’ seemed to think that life had not changed in any significant way for them. For example, one said:

*It is going on as like it used to go earlier.*

Another said:

*My life is the same as before because with this money I could not buy a house, but I repaid the loans and invested some money for my daughter.*

For this woman, satisfaction with the surrogacy payment affected her response to her life post-surrogacy. Surrogates who experienced birth complications and could not resume normal life in the weeks following surrogacy tended to express negative feelings towards their surrogacy experiences. For instance, one surrogate reported:

*After surrogacy I had lots of problems. My child was born in surgery and so I had problems after that. The stitches [from caesarean section] opened, due to which I had to bear so much [pain] for 2 to 2.5 month.*

### 5.3.2 Retrospective feelings towards the surrogate house

The surrogates’ retrospective views on the surrogate house were largely positive. The majority (30, 68.1%) felt positive about the surrogate house and only a few (5, 11.3%) felt neutral about it. However, in contrast to their views during pregnancy, a small

number of surrogates (9, 20.4%) reported negative feelings towards the surrogate house post-birth.

Some surrogates (10, 22.2%) compared life in the surrogate house to life at their home post-surrogacy. For instance, one surrogate said:

*I like it a lot because at home every day there is tension.*

Two other surrogates stated:

*My health improved by living in the surrogate house and there was no home or family tension. It was good both for me and the baby.*

*I had my best days in the surrogate house. There we just ate food, washed clothes, got ready and went out. Whereas at home, it would be cleaning, cooking, taking care of children, look after myself, and by that time I would be tired.*

Therefore, some women perceived life at the surrogate house as more relaxed than life at home, which involved hectic schedules and a range of responsibilities.

A few surrogates (7, 15.5%) reported ambivalent, rather than neutral, feelings towards the surrogate house. On the one hand, they disliked living there, primarily because of the dietary restrictions; on the other hand, they appreciated the relationships they built there. For example, one surrogate said:

*I don't think living there was beneficial but I had no way out [...] But the relationships I built there were priceless.*

In addition, a few surrogates (8, 17.7%) emphasised the immense difficulty of living at the surrogate house without their children. For instance, one surrogate stated:

*I can't ignore my children. It can be any house but I need to stay with my children. That gives you satisfaction.*

A few surrogates (6, 13.3%) found it difficult to share their feelings and experiences of surrogacy and relinquishment with others after leaving the surrogate house. For example, one surrogate said:

*I am fine now. I was happy here. After going home, I had to listen to everybody criticising me and no one used to do that there.*

Despite not being asked directly, many surrogates (30, 66.6%) spoke of missing the surrogate house. For instance, one surrogate commented:

*I miss being there. All are loved ones.*

Another said:

*Nowadays I just think of being at the surrogate house because there only I could sleep peacefully.*

### **5.3.3 Delivery experience**

Of the 44 surrogates with successful deliveries, 30 (68.1%) gave birth to a singleton and 14 (31.8%) gave birth to twins. One surrogate had a stillbirth. Thirty-eight (86.3%) surrogates had caesarean births and the remaining 6 (13.6%) had natural deliveries. Since nearly all surrogates had previously had natural deliveries with their own children, they reported anxieties about a caesarean birth. For instance, one surrogate reported:

*I was worried, in caesarean birth you don't get to know problems related to birth for a while, but in normal you immediately see the results.*

Two other surrogates claimed the following:

*I wanted a normal delivery, but they don't allow it. It was done in a hurry. My blood pressure was also not under control.*

*People used to scare me that it will be very painful [...] So I was crying a lot but I did not realise the pain [...] However, stitches still do hurt sometimes.*

Three-quarters (34, 75.6%) of the surrogates said that they did not suffer from any health complications post-birth. However, a few reported minor (5, 11.1%) or major (5, 11.1%) health complications. Often, surrogates compared surrogacy pregnancy with their previous pregnancies. For example, one said:

*When I gave birth to my children, I worked for 9 months and 9 days but this time around I wasn't able to do anything. These problems were on from the third month. There were so many troubles.*

### 5.3.4 Experiences with newborn

#### 5.3.4.1 Meeting the newborn

Of the 44 surrogates who had successful deliveries, two-thirds (32, 72.7%) did not see the baby to whom they had given birth. Of these 32 surrogates, 25 (55.5%) expressed negative feelings about not meeting the newborn. The following two excerpts illustrate these feelings:

*I met the parents only once and they had not even shown me the picture of the baby. They did not do at least that much for me. I had given them a baby after 18 years [...] They must be thinking that I will run away with the baby. If I had to run, I would have run when the baby was in my tummy only. It is okay if they do not want to show the baby but at least they can give me the photo.*

*Yes I saw that they covered baby's face, maybe they feel that some surrogates won't give the babies after seeing and that is why they cover the face. I just saw the hands and legs of the baby. They should let us see the baby at least.*

A few surrogates who did not meet the baby (9, 20.4%) spoke about the parents' lack of generosity and reciprocity. For example, one said:

*I wanted to give the baby for a good cause, to a childless couple. In return, I wanted to see the baby just once as I would never get this moment again in life. It was a good cause and I did not want to keep the baby.*

In contrast, a few surrogates (8, 18.1%) claimed that they did not expect to see the newborn, knew that they would be unable to see the newborn, or that it did not matter to them whether they saw the newborn.

#### 5.3.4.2 Catching a glimpse of the newborn

Although a large majority of surrogates did not meet the baby post-delivery, most (30, 68.1%) claimed that they caught a glimpse of the baby during birth. For example:

*After delivery they were taking him to clean. At that moment I turned my head and looked at him. They don't allow seeing, I have heard.*

Amongst the surrogates who did not manage to see the newborn (14, 31.8%), a few (8, 17.7%) spoke about hearing the baby cry:

*I heard her crying. They just had given me oxygen and gave me some medicine on my stomach and I did not realise when they had cut my stomach and*

*removed the baby. I just heard the baby cry and my eyes closed and I became unconscious.*

Another expressed:

*When the baby was in my womb kicking I felt good but later after delivery I felt lonely. I felt like going and seeing the baby. They should have showed me once but they did not show me. As soon as delivery was over the parents took the baby and went. I just heard the baby's voice crying.*

#### **5.3.4.3 Photograph of the newborn**

Many surrogates (20, 25.4%) spoke about wanting a photograph of the baby, although only one-quarter (11, 24.4%) received one. One surrogate, who wanted a photograph, said:

*They should have come to meet us and ask us how we were doing at least [...] and this is a caesarean and the marks would remain. So just for that sake we should at least get the photographs of the baby.*

Another commented:

*I will meet them again if they come. I will be happy, I will take photo with baby and the family and keep in my house so that I can remember.*

Photographs were seen as important mementoes that the women wanted to share with their loved ones. Some intended parents (5, 11.3%) showed the surrogate photographs of the baby on their phones but did not give the photographs to the surrogate. However, a few intended parents (7, 15.9%) took photos of the surrogate – perhaps reflecting their intention to disclose to the child in the future. Further findings relating to disclosure are discussed below, in Section 5.3.4.5.

#### **5.3.4.4 Feeling connected to the newborn**

Many surrogates (20, 45.4%) reported 'mixed feelings' towards the newborn and a similar proportion of surrogates reported feeling 'connected' (13, 29.5%) or 'not connected' (11, 25%) to the child. The following quotes reflect surrogates' varying feelings:

*I look at the photos of the baby every day and think of them.*

*I will obviously think about the child, but I think for 5 minutes and then I try forget.*

*I talk to friends about the babies and show them photos. That is when I think of them. Some people asked me how I could give away my babies. But I said they were surrogate babies, not my babies. I got paid 3.5 lakhs. It was their babies and I had to give them.*

*If it was my own child then it would differ. The child is no more mine and there is no use in thinking about it.*

#### **5.3.4.5 Feelings towards contact with the newborn**

Very few surrogates (5, 11.3%) felt positive about their level of contact with the newborn; most felt either negative (24, 53.3%) or neutral (14, 31.1%). Given that most surrogates did not see the baby and felt disappointed with this, this finding is not surprising. One surrogate, who felt negative about her level of contact with the newborn, simply said:

*I feel the child is mine but I haven't met.*

It is important to note that no surrogates reported a desire to establish a direct relationship with the surrogacy child, nor did they expect that one would be established. In relation to their thoughts on whether the child should be told about their surrogacy birth, approximately half (15, 45.4%) of the 33 surrogates who answered the question said that the parents should not disclose. One surrogate said:

*It is fine to meet when he is small as he won't remember anything. Otherwise when he grows up, he will ask questions like, 'Why am I brought here to meet her?' and will have questions about me in his mind.*

Another commented:

*I felt that the parents had waited for long for this day and so I should give them. They took my photo and said they will tell the child that I gave birth to him, but I asked them not to tell him that, otherwise [...] They will think how his mother can feel the pain when she did not give her birth.*

Others replied 'yes' (13, 39.3%) and five (15%) were 'not sure' and most of these surrogates did not elaborate on the reasons behind their responses.

### 5.3.5 Experiences with intended parents

#### 5.3.5.1 Meeting with intended parents post-birth

Seventeen surrogates (37.8%) had no contact with the intended parents before, during or after the surrogacy pregnancy. Overall, 20 (44.4%), 5 (11.1%) and 3 (6.7%) surrogates met the intended parents once, twice and thrice, respectively. Also, 14 (31.1%) surrogates met the parents before delivery. Two (4.4%) surrogates met the intended parents just before the delivery. One surrogate, who felt happy with the intended parents, explained:

*They came right before delivery [...] They said 'Take care of yourself and now your delivery will take place'. They asked me if the child moves inside, I told them he fights inside and they started laughing. Whenever they would come, they would join their hands out of respect and gratitude.*

Just over half of the surrogates (24, 53.3%) did not have any contact with the intended parents post-birth.

As there was no standard protocol at the clinic about meetings with intended parents and the level of contact between surrogates and intended parents, most surrogates felt uncertain about whether such meetings would occur. One surrogate said:

*In the surrogate house, the staff and the surrogate mothers say that some parents show the babies to the surrogate mothers and some don't [...] some surrogates have met the parents [...] it all depends on one's luck.*

It was common for surrogates to blame fate for preventing them from meeting the newborn or the intended parents. Since surrogates lived together in the surrogate house, they commonly shared stories. Consequently, surrogates often reported their feelings towards meeting (or not meeting) the intended parents and compared their experiences to those of their friends at the surrogate house. For instance, one reported:

*Actually one of my friends could not even meet the baby. They used to complain to me that they could not even meet the baby. I was also thinking the same that they would not meet me, but they did. It felt good that they came and asked about my health. I had worked for them and in turn they too had thought about me.*

Another surrogate recommended a standard procedure of meeting the intended parents at least once:

*I feel rules should be same for all. Surrogates whose clients do not meet them see other clients meeting their surrogates and feel bad. So the rule should be all clients meet the surrogates at least once.*

Meetings between surrogates and intended parents were usually brief, ranging from 5 to 20 minutes, and were supervised by a staff member from the clinic, who translated the conversations. Moreover, surrogates were expected to speak to the clinic if they needed any information from the intended parents. For example, one surrogate said:

*They were talking in English and madam translated their conversation. I had asked for the contact number but the clinic doesn't allow that. The parents had told me that they would send the photos of the babies to me [...] I don't know whether they have already sent it to the clinic or not.*

Lastly, surrogates who met the intended parents (20, 45.4%) often expressed relief during the second interview. For example:

*I felt happy to meet them. At least I know where the child is going. Who are the parents? I was relaxed.*

Since there were no independent relationships between intended parents and surrogates, surrogates viewed gifts as a sign of the intended parents' involvement. Some surrogates (12, 27.7%) spoke about expecting gifts from the intended parents as an act of reciprocity and expressed their disappointment when no such gifts were received. This disappointment was usually stronger when close friends at the surrogate house had received gifts from the intended parents. These gifts included cash, gold jewelry and chocolates for the surrogate's children.

### **5.3.5.2 Feelings towards contact with intended parents**

Similar to surrogates' feelings towards their level of contact with the newborn – the majority of surrogates felt negative (22, 48.9%) or neutral (16, 35.6%) about their contact with the intended parents, and only 4 (8.9%) felt positive. Most surrogates expressed disappointment over the parents' failure to visit them. For example, one surrogate said:

*I am happy that I could give a baby to a childless couple. I felt bad that I had given them such a big happiness and they had not even come to meet me once.*



However, some surrogates, who had made peace with the fact that they had not met the parents, said:

*I just felt that they should take good care of the child and give him good education. So what if I gave birth to him by keeping him in my womb? It is their baby after all.*

### **5.3.6 Experience of relinquishment**

Post-birth, surrogates were asked if they thought that meeting the child would ease or increase the difficulty of relinquishment. Of the 44 surrogates who were asked this question, most (32, 72.7%) felt that meeting the newborn would make the relinquishment process easier and a smaller number (8, 17.8%) felt that it would make relinquishment harder. A few (5, 11.1%) were unsure. Some surrogates who saw the baby (12, 28.8%) expressed contentment with the surrogacy arrangement and the relinquishment experience:

*Yes I could deal with the situation easily after seeing them [...] Otherwise I would have always thought how they look and how they are. I am peaceful now. After all I have kept the babies in my womb for 9 months, I deserve to see their faces at least.*

A roughly equal number of surrogates reported satisfaction (15, 33.3%) and dissatisfaction (19, 42.2%) with relinquishment, and a few (9, 20%) reported neutral feelings. Interestingly, a large majority (36, 80%) reported that they hoped to stay in touch with the intended parents.

Surrogates usually spoke about relinquishment to only one person in their life. For most surrogates, this was a family member (10, 22.7%) or their husband (8, 18.8%). However, a few surrogates (12, 27.7%) spoke about it with their friends (neighbours or friends from the surrogate house) and 5 (11.3%) did not speak to anyone about relinquishment.

When asked about any difficulty experienced during relinquishment, two-thirds of surrogates (29, 65.9%) revealed that they faced no difficulties and a further 16 (35.6%) reported moderate difficulties. Of the surrogates who did not report difficulties, one said:

*I have my own children. In a way I had done it for money, so I don't consider it that way.*

It was common for surrogates to feel anxious about relinquishing the child in the days preceding delivery. For instance, one surrogate expressed her momentary feeling of not wanting to give up the child:

*I felt like crying two days before the delivery as I knew that they would take the baby away. Then my sisters made me understand that it is not possible and that the child belongs to them. After that I became practical too. But I cried a lot. I wanted to see the baby's face once. They could have done that. I felt very sad.*

Another surrogate reported the difficulty she experienced due to missing the feeling of being pregnant:

*I felt good when I was pregnant, now I feel incomplete.*

### **5.3.7 Role of financial compensation**

Surrogates received approximately £3,000 for carrying one baby and £3,250 for carrying twins. Included in this sum was a monthly income of approximately £50, which went towards their accommodation in the surrogate house. When asked about their satisfaction with the payment, most surrogates (26, 59%) claimed they felt satisfied, a few felt somewhat satisfied (12, 26.7%) and 6 (13.3%) reported dissatisfaction.

Financial compensation was deeply embedded in surrogates' interpretation of different aspects of surrogacy, such as their relationships with the intended parents and bonding with the unborn child. One surrogate explained that the payment put the intended parents and surrogate on equal footing:

*To gain something you have to lose something right so, they need a child and we need money. Nobody will purposely become a surrogate. Give blood, take tablet what do they all mean? We are also going through something and they are giving money for that not for free.*

Another surrogate explained that payment helped her maintain emotional distance from the unborn child:

*I was alright [...] The agreement is there that I will never have any right over the baby [...] the baby belongs to the parents and I have been paid for that.*

Asked whether they would have become surrogates without a financial incentive, most (42, 84%) replied ‘no’ or expressed confusion regarding why anyone would do such a thing. A smaller number (8, 16%) replied ‘yes’ or said that they would have done so had their financial condition been stable. For example, one surrogate said:

*I would have become a surrogate in order to give a baby to someone else if I had money. I have given my first baby to my sister-in-law.*

While most surrogates (28, 62.2%) did not have issues with the payment they received, a few (16, 35.5%) did. For instance, one surrogate complained:

*If anything happens, they [the clinic] deduct money.*

Another spoke about issues with payment in relation to feeling voiceless:

*At the end the matters come down to money; that is why we have to stay quiet.*

A large number of surrogates (19, 42.2%) claimed that they made independent decisions on how the surrogacy money would be used, and a slightly smaller number (17, 37.8%) made these decisions with their husbands. In only 4 (8.9%) households, husbands dictated how the surrogacy money would be used.

Finally, when asked about whether they wanted to become surrogates again for financial reasons, the majority (25, 55.6%) answered ‘no’ and some replied ‘yes’ (9, 20%) or ‘maybe’ (8, 17.8%). Two (4.4%) surrogates mentioned that they had already started the process of becoming a surrogate again.

Findings: Majority of the surrogates reported feeling happy about life after surrogacy and their retrospective views on the surrogate house were largely positive. All surrogates except one had successful deliveries. Majority had caesarean births and did not suffer from any birth complications. Moreover, most of the surrogates did not meet the newborn and the intended parents after the birth. They however spoke about

catching a glimpse of the baby at the time of the delivery. Several surrogates reported wanting a photograph of the baby and they further expressed feeling both happiness and sorrow when they thought of the newborn. Surrogates further expressed negative feelings towards their lack of contact with the newborn and the intended parents. They often blamed fate for their lack of relationship with the intended parents. Surrogates who met the intended parents reported interacting with them for about 10 minutes. Their conversations were translated and supervised by a member of the fertility clinic. Regarding feelings towards giving up the newborn, approximately an equal number of surrogates reported feeling satisfied and dissatisfied with relinquishment. Additionally, majority of the surrogates said that meeting the intended parents would have made the process of relinquishment easier for them. Finally, in reference to financial compensation, most of the surrogates felt satisfied with the payment received for surrogacy.

## **Chapter 6**

### **Discussion**

Surrogacy in low-income countries has attracted much controversy primarily due to concerns over the treatment and welfare of surrogates. The present study aimed to examine some of these concerns, specifically in relation to the psychological welfare of surrogates in India. It was found that Indian surrogates had higher levels of depression, both during pregnancy and several months following the birth of the baby, than the comparison group of mothers. However, the difference in depression between the surrogates and the new mothers did not increase following the relinquishment of the baby, indicating that giving up the newborn did not appear to add to surrogates' levels of depression. (In fact, the mean scores showed a non-significant decrease in depression in both surrogates and new mothers after the birth of the baby). Around one-third of the surrogates (36%) scored above the cut-off for clinical depression on a standardised measure during pregnancy and around one-quarter of the surrogates (27%) obtained a score indicative of clinical depression, following the relinquishment. The other two psychological constructs of anxiety and stress did not differ significantly between the surrogates and the comparison group of mothers during either phase of the study. In addition, the proportion of women above the cut-off point for clinical stress following the birth was greater in the surrogates than the new mothers.

Findings related to prenatal bonding indicated that surrogates experienced lower levels of emotional bonding (e.g., they interacted less with and thought less about the foetus) but exhibited higher levels of instrumental bonding (e.g., they adopted better eating habits and avoided unhealthy practices during pregnancy) than women carrying their own baby. This finding suggests that surrogates perceive and regulate their emotions towards the unborn baby differently than do expectant mothers who intend to raise the baby they are carrying, in order to emotionally prepare themselves to

separate from the newborn at birth. This intention of separation appears to facilitate surrogates' emotional distance from the unborn baby (Berend, 2012; Braverman et al., 2012; Jadvā, 2016).

There was no empirical support for the commonly voiced assumption that surrogates who develop a strong bond with the unborn baby would suffer from greater psychological problems after they give up the baby to the intended parents; greater prenatal bonding was not associated with increased levels of psychological problems following relinquishment. Instead, socio-cultural factors including the anticipation of stigma, experiences of social humiliation and insufficient support during pregnancy were found to be risk factors for psychological problems in surrogates following the birth of the baby. Although surrogates' satisfaction with the payment they receive for surrogacy did not facilitate their psychological well-being, it had a positive impact on their feelings towards the clinic, the intended parents and even the experience of relinquishment. All surrogates were able to give up the child. However, not meeting the intended parents after the birth negatively contributed towards their satisfactory experience of relinquishment whereas not meeting the baby did not.

The qualitative findings relating to surrogates' experiences showed that the majority lacked basic medical information regarding surrogacy pregnancy, hid surrogacy from most people, felt positive and supported at the surrogate house, lived in uncertainty regarding whether or not they would be allowed to meet the intended parents and the baby, and did not actually get to meet them. Not meeting the newborn may have prevented some surrogates from achieving a sense of closure following the surrogacy arrangement.

## **6.1 Psychological well-being**

### *Depression*

The finding that the Indian surrogates had higher levels of prenatal and postnatal depression than the comparison group of mothers was in line with the hypothesis. It added empirical support to concerns raised by other researchers regarding the psychological well-being of surrogates in low-income countries practising cross-

border surrogacy (Crockin, 2013; Dasgupta & Dasgupta, 2014; Karandikar et al., 2014; Soderstrom-Antilla et al., 2016). Some of these concerns relate to the negative impact of the stigmatisation of surrogacy on surrogates, extreme power differentials between the *gift giver* (the surrogate) and the *gift taker* (the international couple seeking surrogacy) and the dominant role of the clinic, which has been claimed to compromise the physical and psychological health of surrogates for profit.

One possible explanation for the higher levels of depression in surrogates relative to expectant mothers is that women who become surrogates may have higher levels of depression prior to considering surrogacy and may continue to feel depressed during pregnancy. Furthermore, women who view surrogacy as a last resort for escaping financial difficulties may already have low levels of mental well-being. The decision to become a surrogate may also be emotionally difficult for Indian surrogates, who are faced with financial desperation, familial disapproval and stigmatisation (Karandikar et al., 2014; Majumdar, 2014). Moreover, surrogates in the present study were less educated than the comparison group, and research has reported a link between poor education and mental health (Patel & Kleinman, 2003). Thus, it is conceivable that the surrogates in the present study had higher depression scores because most were illiterate and significantly less educated than the comparison group of mothers.

Given that previous research has raised concerns over the quality of the psychological screening in the Global South (Palattiyil et al., 2010), Indian surrogates may have been vulnerable to severe depression during pregnancy and following the birth. In order to assess this, it would have been helpful to have information on surrogates' mental health prior to the onset of pregnancy. However, this study lacks information on the history of participants' psychological well-being.

Further, the higher rates of depression shown by surrogates during pregnancy may be explained by the theory of learned helplessness (Miller & Seligman, 1975; Seligman, 1975). According to this theory, depression results from repeatedly feeling a lack of control over one's circumstances. As a result, individuals may stop making an effort to change their circumstances because they feel convinced that their efforts will not

lead to a positive change. In the present study, surrogates' experiences aligned with the characteristics of the theory of learned helplessness in a number of ways. First, several women viewed their decision to be a surrogate as a necessity, rather than a choice. This is in line with previous research where the decision to become a surrogate is often viewed to result from *majburi*, which is a direct translation of helplessness (Banarjee, 2010; Pande, 2009a; Wilkinson, 2015). Second, some surrogates' narratives suggested that they avoided expressing their preferences regarding the surrogacy arrangement, as they feared that questioning the authority of the clinic or the decisions of the parents might negatively affect their payment. This may have put them in a subordinate position. Third, surrogates appeared to be helpless and vulnerable in terms of the decisions taken on their reproductive bodies by others. For instance, they were unaware of the number of embryos being transferred or possible foetal abortions. Similarly, throughout their pregnancy, they lacked control over their daily routine at the surrogate house, as this was imposed on them by the clinic. In summary, the oppressive social structures around Indian surrogates, as described in the present study and previous studies, suggest that they lack control over their circumstances, feel helpless and show extreme passive behaviour. From the lens of the theory of learned helplessness, these experiences are likely to be predictive of depression.

An extensive body of research shows an association between the experience of loss and depression (Bowlby, 2008; Swanson et al., 2009). However, this study did not support the hypothesis that surrogates would experience a sense of loss after relinquishment, as they were not found to express distress or sadness about losing the baby post-relinquishment. However, it is possible that loss was experienced by surrogates in a different way. In the West, surrogates have been found to experience loss of attention and care from the intended parents post-surrogacy (Ragone, 1994), whereas in India, loss of attention and care may be experienced with respect to the relationships built at the fertility clinic and the surrogate house during pregnancy. In particular, in the present study, surrogates' narratives showed that relationships at the surrogate house provided support in the form of close friendships, and that the loss of these friendships once the surrogacy ended could impact their well-being. Hence, a



sense of loss may have acted as a risk factor for depression in Indian surrogates after the surrogacy arrangement ended.

In contrast to this study, studies conducted in the West have found no signs of depression in British surrogates a few days, weeks or months post-relinquishment (van den Akker, 2007); 1 year post-birth (Jadva et al., 2003); or 10 years post-birth (Jadva et al., 2014). However, none of these studies was conducted during the surrogacy pregnancy and none had a normative comparison group. In the present study, surrogacy candidates were already at risk for psychological problems due to illiteracy and poverty. Thus, unlike surrogates in the West, they initiated the surrogacy arrangement from a position of massive disadvantage. However, given the concerns regarding surrogacy, it was unexpected that – despite starting at a disadvantage – surrogates in the present sample did not show increased depression levels following relinquishment.

The finding that more of the surrogates were above the cut-off point for clinical depression, than the comparison group of mothers raises substantial concerns about the health of the newborns, surrogates and surrogates' families. Maternal depression during pregnancy may negatively affect the mother's self-care and medical practice (Leigh & Milgrom, 2008) and may lead to developmental issues in the foetus, such as low birth weight and illness (Badr et al., 2005; Berle et al., 2005; Patel et al., 2004). Thus, this finding is of clinical importance. Maternal depression after the birth, may have a detrimental impact on surrogates' quality of life after surrogacy and may have negative consequences for their children and husbands (Boath, Pryce and Cox, 1997).

#### *Anxiety and stress*

The findings related to surrogates' anxiety and stress levels were relatively similar; thus, these will be discussed together. Contrary to the hypotheses suggesting that surrogates would have higher anxiety and stress during pregnancy and lower anxiety and stress several months following the birth, the groups did not differ in their anxiety and stress levels at either time point. It is possible that the scale employed to assess the surrogates' psychological health was not sensitive enough to tap into differences in anxiety and stress between groups.

These findings are similar to those of studies in the West, which have found normal or low levels of anxiety or stress. A study of British surrogates at different stages of the surrogacy arrangement (i.e., pregnancy, post-relinquishment or after a failed surrogacy arrangement) reported anxiety levels in the normal range (van den Akker, 2003). Further, an American study found surrogates to have significantly lower anxiety and higher resilience to stress than a normative population (Pizitz et al., 2013), although the women were assessed prior to embarking on surrogacy.

A substantial body of work has shown that stress occurs when individuals must readjust themselves to new circumstances during critical life events (Dohrenwend & Dohrenwend, 1974; Holmes & Rahe, 1967). Therefore, it was anticipated that surrogates, who had to completely reorient their daily lives during surrogacy, would have higher stress levels than expectant mothers. This line of reasoning was not supported by the findings in the present study, however the findings were consistent with the *stress relief hypothesis*, which claims that ‘life transitions could be non-problematic or even beneficial, when preceded by chronic role problems – a case where more “stress” is actually relief from existing stress’ (Wheaton, 1990, p. 209). Thus, it is possible that taking on the role of surrogate was non-problematic for these women, given their chronic life struggles prior to the surrogacy pregnancy. Along similar lines, a large body of more recent research on stress indicates that daily life hassles may be better predictors of psychological symptoms than critical life events (Canner, Coyne, Schaefer, & Lazarus, 1980). These two theoretical approaches suggest that being a surrogate and living in the surrogate house may have provided the surrogates some relief from their otherwise daily lives of household chores and difficult jobs. In fact, Rudrappa (2015) reported that some Indian surrogates found surrogacy more meaningful and less stressful than other labour positions (e.g., in factories or at home). This may explain why, despite undergoing a critical life event, surrogates’ stress levels were not higher than those of expectant mothers.

Although the mean scores of stress did not show group differences, subsequent comparisons showed that the group of surrogates had a higher proportion of women with scores above the cut-off for clinical stress post-relinquishment, than the

comparison group of new mothers. An explanation could be drawn from literature suggesting that living in uncertainty is a stressor (Lazarus, 1991; Lazarus & Averill, 1972) and ‘intensifies affective reactions to negative events’ (Wilson & Gilbert, 2009, p. 123). In the present study, several surrogates who wanted to meet the intended parents and the newborn lived in uncertainty, even 4 to 6 months after relinquishment of the baby, with respect to whether or not this meeting would ever take place. This uncertainty after the birth may have particularly affected surrogates who already had higher rates of stress during pregnancy. Research has also shown that lacking desired information and living in a state of ambiguity hampers one’s ability to adapt to new situations (Wilson & Gilbert, 2008) and might fixate one’s attention on a particular event, even after the event occurs (Wilson, Centerbar, Kermer, & Gilbert, 2005). This means that, for some surrogates, not knowing whether they would meet the intended parents and the newborn could have been extremely stressful and may have negatively affected their ability to move on with their lives after surrogacy.

#### *Factors associated with anxiety, depression and stress*

As predicted, satisfaction with health contributed to lower psychological problems in surrogates. This association may have been bidirectional, such that higher psychological problems could have led the surrogates to feel unhappy with their health during pregnancy. Also, this finding is not surprising, as physical health and mental health are interrelated, and anxiety, depression and stress demonstrate comorbidity (Glover, 2014). However, importantly, while these factors would have stood true for expectant mothers, as well, their satisfaction with health during pregnancy was not related to their prenatal anxiety, depression and stress levels. This suggests that health satisfaction proved to be more instrumental in surrogacy pregnancy than in traditional pregnancy, and further reinforces the importance of the quality of care for surrogates during pregnancy. Contrary to predictions, insufficient support during pregnancy, dissatisfaction with compensation and experiences of stigma were not related to surrogates’ anxiety, depression and stress levels during pregnancy.

Examination of risk factors associated with postnatal psychological problems in surrogates is especially important, as it relates to the way in which they move on in

life after surrogacy. First, in line with the findings shown by the extensive literature on maternal health (Glover, 2014; O'Hara & Swain, 2009), surrogates' prenatal anxiety, depression and stress levels were predictive of their psychological problems after the birth. Second, criticism from family and friends contributed to higher levels of anxiety, depression and stress after the childbirth in surrogates. Therefore, as predicted, the social disapproval experienced by the Indian surrogates in their conservative society posed long-term emotional difficulties for them. This finding lends weight to the concerns raised by researchers in the field of Indian surrogacy (Karandikar et al., 2014; Pande, 2009, 2010; Rudrappa, 2015; SAMA, 2012), who have argued that the stigmatisation of surrogacy is psychologically harmful to surrogates. It is also in line with the extensive psychological literature suggesting that secrecy and social stigma negatively impacts an individual's mental health (Markowitz, 1998; Pennebaker, 1985).

More risk factors for higher postnatal depression in surrogates were identified. As hypothesised, insufficient social support during pregnancy was negatively associated with depression a few months after the birth in surrogates. In line with this, previous studies conducted in Iran, the UK and the US have also discussed the potential emotional consequences for surrogates of a lack of social support, especially during pregnancy (Fischer & Gillman, 1991; Tehran et al., 2014; van den Akker, 2007). Additionally, a marginally significant finding showed that surrogates who hid surrogacy from their family and the community were more susceptible to developing higher postnatal depression. This suggests that, in addition to social disapproval, even anticipation of social disapproval negatively impacted the emotional well-being of surrogates (Dohrenwend et al., 1980). It is also possible that, due to the secrecy and stigma attached to surrogacy in India, surrogates found it difficult to seek support. Therefore, together these findings suggest that surrogates were more likely to develop psychological problems following the birth if they had experienced stigmatisation and received insufficient social support during pregnancy. In order to establish a stronger claim in future research, it may be useful to measure support network and stigmatisation using standardised questionnaires.

Notably, contrary to predictions, hiding the surrogacy and experiencing criticism did not significantly affect surrogates' well-being during pregnancy. It is possible that living in the surrogate house during pregnancy allowed women to escape from social disapproval (Vora, 2013). For instance, one of the surrogates expressed that 'after going home, I had to listen to everybody criticising me and no one used to do that there [at the surrogate house]'. It is possible that when surrogates moved back home post-birth they found themselves unable to maintain the false stories they had created in order to explain their absence. In fact, research indicates that keeping secrets requires active mental effort and may lead to cognitive preoccupation with the secret. In such cases, staying silent may be more psychologically harmful than revealing hidden information (Lane & Wegner, 1995). Furthermore, the resulting secrecy may have adversely affected surrogates' families (Golombok, MacCallum, Goodman, & Rutter, 2002; Landau, 1998), as the husband (and perhaps children) would have also had to lie to friends, neighbours and the extended family about the woman's absence from the home. Similar to stigmatisation, lack of social support during pregnancy was significantly associated with surrogates' depression levels following the birth, but not during pregnancy.

Furthermore, contrary to the hypothesis, feelings about giving up the surrogacy child were not found to be risk factors for long-term psychological problems in surrogates. This finding weakens concerns suggesting that relinquishment leads to long-term psychological harm for surrogates (Brazier et al., 1998). Also, satisfaction with financial compensation was not associated with lower depression levels in surrogates. This finding was surprising, owing to the participants' financial motivation for becoming a surrogate. Indian fertility clinics often claim to the media that the monetary compensation for Indian surrogates is life-changing and empowering (Bhalla & Thapliyal, 2013; Bundhun, 2015; Doshi, 2016); however, this finding does not support this claim of an effect on surrogates' psychological health, either during pregnancy or after surrogacy. So this implies that while payment may have offered some relief to surrogates, it did not significantly improve their psychological well-being. Overall, after examining the risk factors for prenatal and postnatal psychological problems in surrogates, it can be concluded that, instead of factors associated with surrogacy (e.g., positive or negative feelings towards relinquishment

or compensation), socio-cultural factors (e.g., feeling content with health during pregnancy, the anticipation of stigma, disapproval from family and friends and lack of a support network during pregnancy) posed long-term emotional challenges for surrogates.

### *Health and economic satisfaction*

On the basis of several health concerns relating to surrogacy in low-income countries (e.g., multiple embryo transfers, foetal abortions and deliberate caesarean births) (Madge, 2014; Tanderup et al., 2015), it was hypothesised that, despite having advanced medical assistance, surrogates would be less satisfied with their health during pregnancy than expectant mothers. Here, the finding did not support the hypothesis, but showed a non-significant trend. An explanation of this trend may be that, unlike expectant mothers, gestational surrogates underwent intensive medical interventions that may have made their surrogacy pregnancy more emotionally difficult. Alternatively surrogates may have felt more preoccupied with potential pregnancy complications because they were carrying a child for someone else and their payment was dependent on a successful pregnancy.

Given that surrogates were financially motivated (as the surrogacy arrangement allowed them to earn approximately 10 years' worth of income) (Pande, 2009a), it was hypothesised that they would experience greater economic satisfaction than expectant mothers during pregnancy. This hypothesis was confirmed. Group differences remained even after controlling for monthly household income. This means that surrogates felt economically more satisfied than other women in their community. This finding may be attributable to differences in sample characteristics, as, unlike the expectant mothers (who did not work), the majority (80%) of the surrogates were financially independent and thus may have felt more economically satisfied, more generally. Taken together, while from a health perspective surrogates appear to have been unhappy, from a monetary perspective they seem to have felt satisfied. These findings may shed light on the concern mentioned by Madge (2014), who argued that compensated surrogacy may be a case of 'long-term physical harm' for 'short-term financial empowerment' for Indian women. However, more

longitudinal research is needed for us to answer the question of whether Indian surrogates' long-term health is compromised for short-term economic gain.

### *Desire for social freedom*

Contrary to expectations, it was found that the surrogates and the comparison group of mothers did not differ in their desire for social freedom (i.e., freedom from patriarchy and social taboos). This finding is inconsistent with those of studies conducted in the West, which have indicated that surrogates are more likely to be non-conformist and to have a flexible outlook on moral and ethical notions in society, compared to the normative population (Kleinpeter & Hohman, 2000; Resnick, 1989; Tieu, 2009). It is interesting to note that, despite being significantly less educated than the comparison group of mothers, the surrogates in the present study appear to have been just as progressive as their counterparts. It is also possible that since the scale employed had low reliability scores, it was not sensitive enough to tap into differences between groups. Nevertheless, this is the first study to have examined the personality characteristics of surrogates in the Global South, and this topic would be interesting to explore in future research.

## **6.2 Maternal–foetal bonding**

This section answers the following questions: Do surrogates bond with the unborn child and, if so, what is the nature of this bond? What demographic characteristics or factors associated with Indian surrogacy arrangements might affect the bond they develop with the unborn child? And does the nature or intensity of this bond have a negative impact on surrogates' psychological health, especially after they relinquish the child to the intended parents?

### *Emotional bonding*

It was hypothesised that surrogates would show less emotional bonding with the foetus than would the expectant mothers. This prediction was confirmed, indicating that surrogates were less likely to think about, interact with, imagine and attribute characteristics to the unborn child than were women carrying their own baby. Importantly, this finding is in line with the only comparable previous research in the

field, which found that surrogates bonded less with the unborn child than did expectant mothers, as measured by the Maternal Fetal Attachment Scale (Cranley, 1981; Fischer & Gillman, 1991). This finding supports in-depth ethnographic accounts that suggest that Indian surrogates are made aware that they are ‘disposable labour’ and are expected to show ‘disposable attachment’, wherein even if they develop a bond with the unborn baby, they must abruptly break it at relinquishment (Khader, 2013; Pande, 2009).

This finding that surrogates regulate their emotional involvement with the unborn baby in compensated surrogacy arrangements supports previous research suggesting that viewing surrogacy as paid employment helps surrogates maintain an emotional distance from the foetus (Baslington, 2002; Smietana, 2017; Snowden, 1994). Therefore, given that surrogates in the present study had purely financial motivations and were compensated for their ‘work’, they may have been able to maintain an emotional distance from the unborn baby. It is also important to consider how surrogates’ mental well-being could have impacted on their bonding. Research has demonstrated that women with higher levels of depression during pregnancy struggle to develop a positive relationship with the unborn child (Lindgren, 2001). Since surrogates in the present study had higher levels of depression than did expectant mothers, this may have contributed to their lower degree of emotional bonding with the foetus, relative to the comparison group.

It was further hypothesised that positive feelings towards the surrogate house and less medical knowledge about the surrogacy pregnancy would be associated with a deeper emotional bond with the developing foetus. It was found that surrogates with positive feelings towards the surrogate house and greater (as opposed to less) medical information were more emotionally involved with the unborn baby. Women who were happy at the surrogate house may have felt more immersed in their role as a surrogate, and this immersion may have materialised in the form of collectively interacting with and thinking and wondering about the unborn babies. However, the finding only approached significance and disappeared with bootstrap analysis; therefore, it should be interpreted with caution.



The finding that surrogates with greater medical knowledge tended to develop a stronger emotional bond with the foetus was unexpected. Studies have shown that, due to a lack of education and informed consent, Indian surrogates may not discern that they do not share genetic material with the unborn baby (Pande, 2011; Tanderup et al., 2015). Since previous research has shown that surrogates report a lack of connection with the unborn baby when it is not their genetic material (Teman, 2010), it was anticipated that insufficient medical information (i.e., not understanding that surrogates lack a genetic connection to the child in gestational surrogacy arrangements) would facilitate deeper emotional bonding with the unborn baby. One explanation for the opposite and unexpected findings may lie in research indicating that Indian surrogates view their bond with the unborn child as one that is formed through blood and sweat, rather than genetic connections (which are emphasised in Western countries) (Pande, 2010a, 2014). Therefore, the premise of the hypothesis, based on explaining the surrogate–foetus bond via an understanding of genetic connection, may have rendered it weak. It is unclear why greater medical knowledge predicted greater emotional bonding with the foetus. Perhaps awareness of the medical processes led surrogates to feel more immersed in the development of their surrogacy pregnancy.

With regard to demographic factors, it was observed that surrogates with no education displayed higher emotional involvement with the unborn baby, such that they affiliated and interacted more with the foetus than did those with at least some education. Surrogates are generally expected to keep an emotional distance from the foetus (Baslington, 2002). However, this finding suggests that lack of education may interfere with their ability to regulate their feelings towards the unborn child.

#### *Instrumental bonding*

Contrary to the hypothesis, surrogates showed greater instrumental prenatal bonding than did expectant mothers. That is, they were more attentive towards the needs of the foetus and were more likely to be careful with their diet and to give up harmful habits compared to expectant mothers. It can be argued that, unlike emotional bonding, instrumental involvement with the unborn baby was not bonding in a psychological

sense, and that for surrogates it was reflective of how pragmatically they abided by their contract and commitment to care for the foetus in the best possible way.

Whilst it is not surprising that surrogates allotted time and effort to nurture and protect the foetus, it was unexpected that they did so more than women carrying own babies. A study conducted in the UK, which assessed prenatal bonding in surrogates and intended mothers (i.e., mothers who were not pregnant but expecting a baby) found contrasting results. British surrogates were less concerned about the health and well-being of the foetus than were intended mothers. An explanation for group differences in the present study is perhaps rooted in the structural realities of surrogates in the present sample. In India, the daily life of surrogates living in a surrogate house revolves around caring for the foetus and delivering it at full term. Therefore, unlike women expecting their own children, surrogates devote all their time and resources to self-care, a healthy pregnancy and the needs of the unborn child.

The findings supported the hypothesis that surrogates who were dissatisfied with the intended parents would display less care and attention towards the needs of the unborn child. Similar to the present study, Baslington's (2002) study on 'maternal-foetal detachment' found that surrogates' bond with the unborn child may have developed through an attachment with the couple in the surrogacy arrangement. Therefore, in the present study, surrogates may have felt less motivated to care for the developing foetus when they were dissatisfied with the couple. However, bootstrap analysis rendered this finding weak, therefore it should be interpreted with caution. Nevertheless, this finding highlights the importance of the relationship between the intended parents and the surrogate and shows how, in cross-border surrogacy, even when surrogates do not form any relationship with the couple, there may be negative consequences for the care shown to the foetus. Further research should examine whether this finding is also observed in countries in which intended parents maintain a direct relationship with the surrogate from a distance.

It was hypothesised that, due to the financial motivation for becoming a surrogate, dissatisfaction with compensation would negatively impact surrogates' attitudes and

behaviour towards the unborn baby. The findings did not support this hypothesis. It is possible that, since Indian surrogates are usually ‘trained’ to believe that payment for maternal care constitutes a ‘wicked’ form of surrogacy (as opposed to ‘pure’ surrogacy) (Cannell, 1990; Pande, 2011), surrogates in the present study did not associate financial gain with their commitment to the healthy growth of the foetus. In addition, whether or not surrogates had been in paid employment prior to the surrogacy pregnancy was also associated with their level of instrumental prenatal bonding. As previously mentioned, previous work may have helped these women view surrogacy as a job, in which their primary duty was to have a healthy pregnancy.

To conclude, the findings from the present study showed that the nature of prenatal bonding differs between surrogates and women carrying their own babies. In particular, surrogates formed less of an emotional bond with the foetus and more of an instrumental bond than did expectant mothers. As observed in the West, this shows that the surrogate views herself as the first ‘babysitter’, with no desire or expectation of being parent to the surrogacy child (Braverman et al., 2012). These findings also add empirical support to Pande’s (2010) framework of the ‘worker–mother’ duality, whereby surrogates limit their role as ‘mother’ by keeping an emotional distance from the unborn child, but responsibly abide by their role as ‘worker’ by showing vigilance towards the needs of the foetus. It is important to however, acknowledge a few limitations regarding the findings related to prenatal bonding. First, a modified version of MFAS was utilised in the present study. Second, the factors – emotional and instrumental bonding – have not been discussed in previous studies. Finally, participants may have given socially desirable responses, adhering to their role of a ‘good surrogate’. These limitations are discussed in further detail in Section 6.4.

#### *Maternal-foetal bonding and psychological problems*

It was hypothesised that surrogates who bonded more with the unborn baby would suffer from higher levels of anxiety, depression and stress, especially post-relinquishment. This was the first study to have assessed the relationship between these factors and to address this assumption. The hypothesis was not confirmed and the finding challenges the widely held assumption that deeper bonds – be they

emotional or instrumental – with the unborn baby are psychologically harmful for surrogates (British Medical Association, 1996).

### **6.3 Experiences of surrogates**

Surrogates in the present study were motivated by payment, which was commonly used to buy a house or pay for their child's education. This finding is consistent with those of previous studies on Indian surrogates (Dasgupta & Dasgupta, 2014; Pande, 2011; Saravanan, 2013), but differs from research findings on surrogates in the West. Studies in the West have usually reported either altruistic motivations (Jadva et al., 2003; van den Akker, 2003) or both altruistic and financial motivations (Baslington, 2002; Blyth, 1994). This difference in reported motivations may simply be a result of varying surrogacy legislation, with some countries permitting payment and others not allowing it. It is also possible that Indian surrogates, unlike surrogates in the West, find it culturally acceptable to report purely financial motivations, as they view surrogacy as a survival strategy rather than a choice (Pande, 2009; Wilkinson, 2015).

Unlike the surrogacy industry in the West, which relies heavily on the Internet to recruit surrogates, surrogates in the present study were recruited from agents, who were usually their neighbours or friends. Their decision to enter into surrogacy was made relatively quickly, with most surrogates reporting that they had first heard of surrogacy only a few months prior to pregnancy. Also, unlike in the West, where surrogates have been found to discuss surrogacy openly with family and friends (Jadva et al., 2003), most surrogates in the present study discussed their decision only with their husband and prominent female figures in their lives. Strikingly, a number of women did not consult anyone, and it may have been more psychologically challenging for them to make the decision to become a surrogate in isolation. Similar findings have been reported in Iran, whereby surrogates have been found to hide surrogacy from close relatives and to not inform (or consult) anyone about their surrogacy (Pashmi et al., 2010; Tehran et al., 2014). It is also important to note that, unlike surrogates in the West, surrogates in the present sample did not disclose their surrogacy to their children (Jadva & Imrie, 2013). The main reason reported for this was that the children were too young to understand.

This study provides a more nuanced understanding of surrogates' partners' reactions and openness to surrogacy. Most husbands initially expressed a negative reaction to their wife's consideration of surrogacy. This is in line with the findings of studies of surrogates in Iran (Tehran et al., 2014). Feeling unsupported by partners – especially during the decision making process – may have been emotionally difficult for surrogates. A few women experienced pervasive stigma from their husband and reported that their partner feared surrogacy was 'dirty work', as they lacked the medical knowledge to understand gestational surrogacy. The findings also show that the husbands' thoughts and feelings about the surrogacy arrangement often changed from negative to increasingly positive, over time. Such findings differ from those of Jadvā and colleagues' (2003) study of British surrogates, which showed that most of the surrogates' partners were positive about the surrogacy arrangement from the outset.

Perhaps unsurprisingly, given the educational background of surrogates in the present sample, only a few surrogates had knowledge of the biological processes involved in gestational surrogacy. This finding is in line with previous research (Nayak, 2014). Quite a few surrogates thought that the surrogacy child could resemble them – demonstrating their lack of scientific knowledge of genes and heritability. Similar findings were reported in a study of egg donors in India (Jadvā et al., 2016), which found that some donors were not aware that the resultant children could resemble them. Thus, surrogates in India may not understand the biological, social and psychological risks involved in surrogacy (Tanderup et al., 2015), and this raises concerns over whether or not they truly provide informed consent prior to entering into surrogacy (Knoche, 2014). This finding lends weight to concerns that lack of medical knowledge makes surrogates susceptible to neo-colonial exploitation (Deonandan et al., 2012).

Regarding the unborn baby, similar to Iranian surrogates, most surrogates in the present study reported that they were aware that they would have to give up the baby and claimed that they found it helpful to keep an emotional distance from the foetus (Tehran et al., 2014). Importantly, this finding, indicating that surrogates maintained

an emotional distance from the unborn child, emerged in both interviews and standardised questionnaires, lending it greater weight.

The majority of surrogates did not see or meet the newborn and the baby was taken away immediately after delivery. This finding is consistent with those of other studies of Indian surrogates (Pande, 2011). Unlike in the West, in India, surrogacy arrangements do not involve a pre-determined 'handover' or 'cooling off period', which would provide surrogates with the time and opportunity to reflect on their decision of whether or not to relinquish the baby (Shenfield, 2005). Satisfaction with seeing, holding and meeting the baby is thought to be an important aspect of a successful surrogacy arrangement (Hohman & Hagan, 2001), possibly because it provides surrogates with a sense of closure to the arrangement. Thus, unsurprisingly, surrogates in the present study largely expressed negative feelings about not being able to meet the baby. As a result, some described feeling a lack of generosity and reciprocity from the intended parents, and this may have left them feeling resentful at the end of the surrogacy arrangement. This was one of the first pieces of research to have examined surrogates' narratives of their inability to see or meet the surrogacy child; such a situation is unheard of in the West, though it may be a common feature of surrogacy in other low-income countries. Given that it is such a unique scenario, it is important to comprehend surrogates' feelings with respect to their inability to see, hold and meet the baby immediately after delivery and even a few months following the birth.

None of the surrogates had any contact with the baby and intended parents only a handful of surrogates reported contentment with their level of contact with them. Indian surrogacy arrangements contrast sharply with surrogacy arrangements in the West, wherein surrogates often remain in contact with the family they help create. In the UK, surrogates develop an independent relationship with the parents without the involvement of mediating parties, such as the fertility clinic (Braverman et al., 2012; Imrie & Jadvā, 2014) and most surrogates have contact with the child even 7 to 10 years after the birth and generally enjoy these relationships (Imrie & Jadvā, 2014; Jadvā et al., 2014). Somewhat similar to findings in the present study, previous research in the West has also found that surrogates who lack contact with the

surrogacy child may face emotional difficulties (Braverman et al., 2012; Jadva, 2016). In some cases where surrogates felt dissatisfied with intended parents, they expressed sadness and discussed fantasies of being reunited with the surrogacy child (Reame et al., 1998). However, no surrogates in the present sample reported a desire to establish a direct relationship with the child. Given that their wish to meet the baby was not met, it is perhaps unsurprising that they did not seek or expect a continued relationship with the child. Also, due to their lack of information and intended parents and knowledge about emerging modern family forms, surrogates were unaware of and did not question the type of family structure (e.g., involving heterosexual parents, same-sex parents or a single parent) the surrogacy child would be raised in. These findings are also not in line with those of a study of surrogacy arrangements in Iran, which showed that most surrogates remained in touch with intended parents during pregnancy; however, contact tended to be terminated by intended parents post-relinquishment, perhaps largely due to intended parents' insecurities about whether the surrogate's involvement would undermine their own relationship with the child (Pashmi et al., 2010).

As mentioned above, in the present study, several months post-birth, many surrogates were still uncertain about whether or not they would get to meet the intending parents (and the newborn). Since uncertainty is known to negatively impact psychological well-being (Izard, 1977, 1991; Lazarus, 1991), it could be argued that, if necessary, even a pre-discussed standard protocol of not meeting the intended parents (and the newborn) might be better for surrogates' emotional well-being than letting them live in a state of uncertainty.

This is the first study to have conducted an in-depth analysis of Indian surrogates' feelings towards intended parents and to determine which factors influence surrogates' satisfaction with them. As predicted, it was found that after the birth, surrogates who were positive about the clinic and their financial compensation felt satisfied with the intended parents. While satisfaction with compensation was only a marginally significant predictor, satisfaction with the clinic was a highly significant predictor of surrogates' feelings towards intended parents. This finding explains ethnographic accounts from previous research suggesting that, in Indian surrogacy

arrangements, members of the fertility clinic mediate the relationship between surrogates and intended parents (Mitra & Schick Tanz, 2016; Pande, 2011; Vora, 2013). It also increases our understanding of the factors that influence surrogates' feelings towards international parents in cross-border surrogacy arrangements.

The present study found that surrogates were able to relinquish the newborns, and this supports the findings of studies from the West (Imrie & Jadva, 2014; Jadva et al., 2003; Ragone, 1994; van den Akker, 2003). The finding that some surrogates found the relinquishment process difficult is corroborated by the findings of a study conducted in the UK, wherein some British surrogates reported moderate difficulty a few weeks post-relinquishment (Jadva et al., 2003). Generally, British and American surrogates have been found to report somewhat mixed feelings (sadness and happiness) during relinquishment (Ragone, 1994; van den Akker, 2006). In the present study, surrogates did not share their feelings about relinquishment with many others, and this may have made the weeks and months following the birth more difficult. Moreover, the surrogates' general concealment of the surrogacy arrangement (and lack of discussion about relinquishment with their loved ones) may have carried postnatal psychological risks. It is important to note that, unlike in the West, in India, surrogates are not (or are less) likely to receive psychological help before, during or after surrogacy (Karandikar et al., 2014).

In terms of factors which may make the surrogates' experience of relinquishment more satisfactory, as hypothesised, it was found that meeting the intended parents after the birth contributed to the surrogates' more positive experience of relinquishment. In contrast, whether or not the surrogates met the baby following relinquishment was not found to be predictive of their feelings towards relinquishment. Taken together, these findings indicate that meeting the intended parents after the birth was more important for surrogates to feel content with the experience of relinquishment than meeting the baby. In support with this finding, Baslington (2002) described the ease surrogates felt with respect to separation when they knew where and to whom the child was going. This finding also somewhat concurs with those of studies of American surrogates, which have shown that surrogates express satisfaction with the surrogacy arrangement primarily on the basis



of their relationship (or contact) with intended parents (Ciccarelli, 1997; Ciccarelli et al., 2005).

In addition, satisfaction with the full payment after surrogacy predicted surrogates' satisfaction with relinquishment. Although this finding only approached significance ( $p = 0.06$ ), it is an important finding, as it highlights the fundamental role of compensation in Indian surrogacy. As previously discussed, payment has been viewed as an important element in creating psychological detachment with the foetus and 'de-kinning' surrogates as parents (Baslington, 2002; Smietana, 2017). The present study furthered this line of reasoning by proposing that satisfaction with payment may have made relinquishment less difficult. Overall, both variables – whether the surrogate met the intended parents post-delivery and her feelings towards payment – explained a large proportion (20%) of the variance in surrogates' feelings towards relinquishment, making it a strong finding.

Experience or anticipation of stigma is central to surrogates' experiences in India, adding layers of complexity to the practice of surrogacy in that country. In the present sample, all surrogates hid their involvement in surrogacy, to some extent, due to anticipated criticism, and a few reported experiences of criticism from neighbours or family members. It could be argued that surrogates' constant self-negotiation about how and to what extent they should conceal the surrogacy from family, friends, neighbours and society was psychologically harmful. Also, similar to previous research (Nayak, 2014; Pande, 2010), the present study found that some surrogates built narratives that neutralised the stigma associated with surrogacy, deeming surrogacy a 'good' method of earning money (in contrast to 'bad' methods, such as prostitution or theft).

Furthermore, factors that may have led the surrogates to view the fertility clinic, the surrogate house and financial compensation in a positive or a negative light were investigated. Since fertility clinics regulated every aspect of surrogates' lives during pregnancy, their experiences with the clinic were a very important aspect of their surrogacy journey. An overwhelming majority expressed satisfaction with the clinic, and this satisfaction was further explored. As the fertility clinic was primarily

responsible for surrogates' health and payment, it was hypothesised that surrogates' health satisfaction during pregnancy and their happiness with compensation would positively influence their satisfaction with the clinic after surrogacy. Only satisfaction with payment was found to have a significant effect on surrogates' satisfaction with the clinic. This means that surrogates who felt satisfied with the compensation were more likely to feel happy with the clinic.

Regarding the surrogate house, the majority of surrogates reported feeling positive about the surrogate house, though a few felt neutral. None expressed negative feelings. This is an important finding, considering the fundamental role of surrogate houses in Indian surrogacy arrangements. It is possible that surrogate houses are common in other low-income countries, but they are unheard of in the West. Empirical analysis was conducted to examine surrogates' experiences with the surrogate house. As previous research suggests that surrogate houses provide surrogates with a sense of sisterhood (Pande, 2009a; Vora, 2014), it was hypothesised that surrogates' feelings of support during pregnancy would be associated with their greater satisfaction with the surrogate house during pregnancy. This hypothesis was confirmed, indicating that the surrogate house provided these women with an independent feminine space in which they could share stories, and this made their surrogacy journey less burdensome (Vora, 2013).

The finding that Hindu surrogates (as opposed to Muslim surrogates) and married surrogates (as opposed to those who were separated, divorced, widowed or abandoned) were more likely to feel positive towards the surrogate house sheds light on factors that may have interfered with surrogates' well-being during pregnancy. Although there was no significant difference between groups in terms of religious affiliation, it is possible that cultural elements at the surrogate house, such as prayer rooms, diet regulations and festival celebrations, were more influenced by Hinduism, and that this may have made Muslim women feel neglected or less involved. Notably, marital status was found to be a stronger predictor than religious affiliation and also, in the present sample, Muslim women were more likely to be without a husband. It is possible that surrogates who lacked a husband felt more apprehensive about the well-being of the children they had left at home (without a parent), and that this made their

time at the surrogate house less positive. Surrogate houses are unique feminine spaces and future research may benefit from exploring the attitudes and experiences of surrogates from different religions, castes and family structures whilst living together.

Given the financial motivation of surrogates, monetary compensation was found to play a crucial role in their surrogacy experiences. The finding that most surrogates were satisfied with their compensation after surrogacy conflicts with the findings of previous studies in the field (SAMA, 2012; Saravanan, 2013). Given that surrogates were interviewed at the clinic, it is possible that they may not have felt comfortable expressing their dissatisfaction with the payment given by the clinic (see Section 6.4). It is also possible that surrogates in the present study received more payment than average Indian surrogates, and that this may have resulted in differences between the study findings. However, in line with previous research, surrogates in the present study neither negotiated compensation nor addressed any issues they may have had with payment with the clinic (SAMA, 2012). This may reflect extreme power differentials between surrogates and the fertility clinic (Vora, 2013; Saravanan, 2013).

The examination of factors associated with surrogates' satisfaction with their financial compensation clearly shows that although surrogates' feelings about their payment did not decrease their psychological problems, it positively impacted their feelings towards other fundamental aspects of the surrogacy arrangement, *id est* the clinic, the intended parents and even the experience of relinquishment. These findings validate and explain the importance of surrogates' satisfaction with the money they receive for surrogacy in India.

## **6.4 Strengths and limitations**

This section reviews the strengths and limitations of the present study, relating to the design, methodology and analysis employed. The main advantage of the study is its originality, in many respects. First, it is the only investigation to have empirically studied the psychological well-being of surrogates in low-income countries. Importantly, it also presents risk factors for psychological problems, which makes the findings more transferable to interventions. Since most of the countries in the Global

South are going through a transient phase regarding their laws on surrogacy, this study has important policy implications. Second, it is also the first study to have examined maternal–foetal bonding in Indian surrogates. Third, it is the only mixed method research on Indian surrogates incorporating both quantitative and qualitative data analyses. A further advantage is its combination of a longitudinal and cross-sectional design, whereby both surrogates and a comparison group of mothers were assessed over time.

In terms of demographic characteristics, a particular strength of the study is that it matched surrogates and expectant mothers on household income; this is important, as experience of pregnancy can vary greatly between women from different socio-economic backgrounds (Patel et al., 2004). Moreover, since religion may also influence surrogates' perceptions of motherhood and reproductive donation, the similar proportion of Hindu and Muslim women in the sample of surrogates and expectant mothers, is another strength of the study (Inhorn, 2005). A disadvantage, however, is that, unlike surrogates, expectant mothers may have had an unplanned pregnancy, which could have been emotionally distressing (O'Keane & Marsh, 2007). If all of the expectant mothers had planned pregnancies and thus were less at risk for depression, an even greater difference in depression may have been expected between the surrogates and the comparison group of mothers.

One of the main limitations of the study is that all of the surrogates were recruited from a single clinic in Mumbai, and thus the findings may not be representative of surrogates' experiences at different clinics in India. Recruitment through a clinic could also be viewed as a limitation. However, unlike in the West, in India, it is not possible to use the Internet for recruitment. Given the stigma attached to surrogacy it would have been extremely difficult and unethical to approach surrogates in their home environments, as they had not disclosed their decision to most of their family and friends. Also, since these populations are difficult to reach (as they are hidden from mainstream society) (Baslington, 2002; Jadvia et al., 2003; Watters & Biernacki, 1989), institutional support made the recruitment process and response rate calculation more structured.

Conducting interviews at the clinic may have led to socially desirable responding, as surrogates may have been fearful of the negative consequences of expressing any possible glitch in the contract, disagreement with clinic staff, discomfort at the surrogate house, unhappiness with intended parents or dissatisfaction with payment. In order to limit this bias, surrogates were informed at the beginning of the study that their answers would remain anonymous and that no information would be shared with the clinic. Nevertheless, it is important to note that the clinic and the attached surrogate house may have been the only spaces in which participants could truly embrace their identity as a surrogate without feeling the burden of secrecy. Therefore, it is possible that they felt most comfortable speaking about their role as a surrogate at the clinic. The controversial nature of the topic may have also led to socially desirable responding. However, the study design, featuring long semi-structured interviews (lasting approximately 1 to 1.5 hours) with detailed questioning and probing, perhaps lessened this risk. Importantly, the interviews were conducted by a native speaker in a private room, without the presence of a clinic staff member or interpreter. However, some cultural nuances may have been lost when the interview audio files were translated and transcribed into English.

Another limitation of the study is the small sample size, which reduced statistical power, underrated significance and overrated effect sizes and thus may have reduced the data's predictive probability (Button et al., 2013; Hernandez, Graham, Master, & Albert, 2006). Moreover, the small sample size meant that variables had to sometimes be combined or recoded in order for analyses to be run in accordance with statistical guidelines. Thus, it may have reduced the variability of the data. An important strength of the study, however is that it provided one of the largest datasets of surrogates in a low-income country. Also, bootstrap analyses were administered to all significant findings in order to confirm their likely validity in a larger sample.

Owing to the design of the study, issues related to response rate must be raised. The high response rate of the surrogates during each phase of the study (100% and 90%, respectively) is a strength of this study. However, the response rate of the comparison group decreased from 89% to 70% between the two phases of the study. This is not surprising, because, unlike the surrogates, the comparison group of mothers had a

newborn to attend to at home in the second phase. In anticipation of this, a larger group of expectant mothers (relative to the group of surrogates) was recruited for the first phase of study. Nonetheless, the drop is concerning, as it is possible that mothers who were more depressed avoided social engagement and thus ceased participation in the study during the second phase. Also, there may have been recall bias in the retrospective data collected from the surrogates. An attempt was made to minimise this bias by using standardised questionnaires and blinding participants from the study hypotheses (Hassan, 2005).

A few limitations also relate to the standardised questionnaires used. First, self-report questionnaires were read out to the participants, as not all of them could read or write fluently. Second, questionnaires with binary responses were used, as during the pilot study it was observed that participants found it difficult to understand response options for Likert scales that were read out to them. However, binary responses often fail to allow for variability in individual opinion. As the interviewer had the flexibility to establish a coding scheme to balance out this limitation, semi-structured interviews were designed with multiple response options. Another limitation relates to the low internal reliability of some of the scales utilised in the present study. However, although research suggests that 0.9 is a preferred score for Cronbach's alpha (especially in clinical settings) and  $\geq 0.7$  is an acceptable score of reliability for new (or modified) tests (De Vellis, 1991; De Von et al., 2007; Parsian & Dunning, 2009; Schmitt, 1996),  $\geq 0.6$  is also an acceptable score when there is a small number of items in a scale (Lance et al., 2009; Loewenthal, 2001).

A further limitation emerged from the use of some pre-determined codes in the semi-structured interviews. Teman (2008) argued that pre-determined codes run the risk of the interviewer approaching the topic with preconceived notions (often based on Western assumptions about surrogacy) and failing to incorporate the unique cultural context of the surrogates. In order to circumvent this limitation, surrogates were asked many open-ended questions and were probed for further detail, where necessary. Although questions were designed to investigate the areas of interest in the study, an attempt was made to create a coding strategy that maintained cultural context at the forefront. Furthermore, the codes evolved during the pilot study, enabling an

inductive approach to data collection. New interview questions were created and adapted to reflect the socio-cultural context. For example, in order to account for the patriarchal set-up in India, surrogates were probed about their husband's reaction to surrogacy and answers were not always taken at face value. A related shortcoming is that surrogates' facial expressions and body language could only be taken into account by the first coder. Finally, an important strength of the study is that both quantitative and qualitative analyses were conducted to obtain a deeper understanding of the Indian surrogates' lives.

## **6.5 Policy context of surrogacy in India**

As described in Chapter 1, the Indian government has recently banned commercial surrogacy for foreigners and a new Surrogacy Bill is being drafted. The bill states that only altruistic surrogacy will be permitted, and only to infertile Indian couples – those who do not have a child (not even from a previous marriage) and who have been married for at least 5 years. Moreover, the surrogate should be a close family relative and can act as a surrogate only once. This section critiques the new bill, drawing on previous research in the field and the findings of the present study. Unfortunately, the bill's restrictive policy makes it possible that surrogacy will cease to exist or – similar to the organ trade in India – establish roots in the illegal market. It is important to note that the risk factors for the exploitation of surrogates might increase if the practice were to continue illegally.

The government claims that this decision follows 'Indian ethos' and has the intent of preventing the exploitation of women. The argument of cross-border surrogacy being exploitative emerges from numerous school of thoughts, such as viewing it as 'exploitation of womanhood' or perpetuation of 'neo-colonial exploitation'. The social, emotional and medical risks involved in surrogacy, especially cross-border surrogacy, has made the debate of exploitation even more difficult to untangle. However, exploitation is circumstantially relative and therefore a cultural lens is vital for examining such risks.

While it is not possible for a single study to settle the debate on exploitation of Indian surrogates practicing cross-border surrogacy, two themes from the findings of the present study may provide an insight into the complexity of the issue of exploitation: ‘informed choice’ and ‘feeling heard’. An informed choice may minimise risks and enhance a surrogate’s sense of autonomy. Therefore, it is important that surrogates should have full information on: the biological procedure involved in surrogacy, the parent(s) they are carrying the child for, the process of childbirth and handover, and the provisions of postnatal care. These should be pre-discussed and mutually accepted between the surrogates, intended parents and the clinic. During pregnancy surrogates should be provided information on the medical decisions being made on their reproductive bodies. Additionally, it is important to ensure that surrogates feel heard by the clinic members and the intended parents, especially in matters concerning the baby. This may provide them with a dignity of labour and make them feel equal to the intended parents in the surrogacy arrangement. Feeling heard may further enable the surrogates to express their desires, such as that of meeting the newborn or needing information about his/her health.

Furthermore, research indicates that Indian surrogates may not be in denial of their exploitation, but they may feel that their regular jobs (e.g., work in glass factories or the garment industry) are more ‘exploitative’ than surrogacy; thus, for these women, surrogacy may represent a well-considered choice (Rudrappa, 2015). Also it appears that surrogates are most ‘exploited’ by agents and fertility clinics than international intended parents; therefore, banning them from accessing surrogacy arrangements in India may not provide a solution to the concern regarding exploitation. In India – a country with high power differentials – unequal vulnerabilities can be a cause of exploitation (Panitch, 2013). Under the new bill, these vulnerabilities may not change or get worse as rich Indian intended parents would be equally likely to emotionally exploit voiceless women in extended families, and they could do so in the future without a contract (Rudrappa, 2016). Thus, the concept of ‘exploitation’ is not straightforward and banning surrogacy may not lead to the required change.

Forcing surrogacy to be practised within close family networks may have further limitations. Within a family, issues concerning failed pregnancies, multiple abortions,



miscarriages, parents' names on the birth certificate and mutually accepted procedures of handover may lead to more blame and guilt being levelled in the surrogacy arrangement. This may increase insecurities in existing relationships. Moreover, due to the stigma attached to surrogacy and issues related to future decisions regarding disclosure to the surrogacy child regarding his/her surrogacy birth, the family might need to collectively lie to society. Consequently, they may be less likely to follow guidelines regarding surrogacy arrangements or to seek psychological consultation. The present study has shown that the stigma and secrecy attached to surrogacy in India predicts higher depression in surrogates, thus this is a major cause of concern and are important findings as they provide empirical evidence to much needed policy interventions that may ensure long-term psychological well-being of surrogates in low-income countries. Examining factors associated with prenatal and postnatal depression, show that surrogates' prenatal depression was a strong predictor of their postnatal depression and is in line with extensive literature on maternal depression (Glover, 2014; O'Hara & Swain, 2009). Because of this association it might be useful to have interventions for the well-being of surrogates, during pregnancy, in order to avoid both prenatal and postnatal depression (Leigh & Milgrom, 2008).

It is difficult to anticipate how support during surrogacy pregnancy might change under the new bill. It is possible that surrogates could feel highly supported within a family context. However, they might also feel more pressure to adhere to intended parents' guidelines and demands, as they would be family, and this might prove to be very emotionally demanding (Tieu, 2009; Braverman et al., 2012). There is not enough evidence – especially in the Indian context – to overrule the idea that relinquishment might be more difficult in surrogacy arrangements involving similar genes and shared ancestry.

Moreover, one could argue that expecting a woman to become a surrogate without compensation might be more exploitative than the alternative. Findings from previous studies demonstrate that compensation plays an important role in helping surrogates maintain an emotional distance from the foetus and reaffirming the parenting status of the intended parents (Baslington, 2002; Smietana, 2017).

Most importantly, surrogacy policies must place surrogates' psychological well-being in the foreground. For this reason, the new bill might benefit from reviewing the findings of the present study. In particular, it is important to emphasise that surrogates' bonding with the foetus and their satisfaction with relinquishment were not found to be associated with their psychological well-being. This challenges the inherent assumption that surrogacy is exploitative because surrogates bond with the foetus and relinquishment causes them long-term psychological harm. Instead, having a social support network and protecting surrogates against feeling stigmatised and isolated may play an important role in improving their psychological health during pregnancy and post-birth, respectively. The present study also explained that a pre-discussed and standardised protocol for surrogates regarding the relationship with the intended parents and future surrogacy child may be beneficial for the surrogates.

Another problem with the current bill is that surrogates still do not have the ability to select their preferred surrogacy arrangement. While the present study found that many surrogates lived in uncertainty regarding whether they would meet the newborn and intended parents, even several months after delivery, the new bill suggests that the surrogate – being a close family relative – may feel forced to maintain a delicate relationship with these parties (perhaps in close proximity) over a lifetime. Overall the new suggested policy on surrogacy in India is devoid of both financial incentives and the dignity of reproductive labour, which may further disempower the surrogates. It is important to thoroughly evaluate the consequences of the new political guidelines and not let the practice become invisible while it is still exploitative.

Future research may benefit from conducting more wide-ranging studies by recruiting surrogates from different clinics across India. It might also be useful to conduct studies in different countries in the Global South. Given the new policy inclination towards altruistic surrogacy in India, future studies may benefit from comparing the psychological well-being and maternal-foetal bonding between Indian surrogates practicing altruistic and compensated surrogacy. For a wider and stronger impact, subsequent researches in the field may value from studying stigmatisation and support network of surrogates through standardised questionnaires. From a longitudinal perspective, it would be interesting to know whether the negative impact of

stigmatisation dissipates with time. Additionally, future studies would definitely benefit from conducting studies with larger sample sizes as they allow more nuanced analyses. Finally, a follow-up study to assess Indian surrogates' psychological well-being a few years post-surrogacy would be an interesting addition to the present literature.

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# Appendix I

## Information Sheets: Phase 1



### Surrogates

#### TO BE READ OUT BY INTERVIEWER

Thank you for your interest in our study of Indian surrogate mothers. I would like to tell you more about the study and what taking part involves.

#### **Why are we doing the study?**

This study will be the first to examine the motivations, experiences and psychological well-being of Indian Surrogate mothers. We are asking all women who are currently surrogates at this clinic if they would like to take part.

#### **What does taking part involve?**

As part of the study you will be interviewed twice about your experiences as a surrogate. You will also be asked to fill out a few questionnaires at both time points. The first interview will be conducted while you are a surrogate at this clinic and second will be conducted within four months after the birth of the baby. Each interview will last approximately 1-2 hours and will be digitally recorded. You are under no obligation to take part. If you wish to withdraw from the study, or if there are any questions that you do not wish to answer, you just need to let me know. You will be paid Rs. 500 for the first interview and Rs. 1500 for the second interview.

#### **Confidentiality?**

- We are an independent research group from the University of Cambridge in England. We are not linked to the clinic. The clinic will not be told the details of what we discuss.
- I will record the interview onto a tape, and only I and my research team in England will listen to the recording.
- We will then look at all the interviews from all the different surrogates together to find out more about the experiences of surrogates in India.
- These results will be compiled into reports for use by policy makers, doctors and other professionals.
- Your identity will not be disclosed.
- Digital recording will be deleted at the end of the study (within five years).

#### **What will happen to the findings of the research?**

The findings will be written up for publication in medical journals and presented at medical conferences and to other specialist groups of professionals involved with surrogacy.

#### **Who should I contact if I want further information?**

If you have any questions about the study please ask me (Nishtha Lamba) or you can contact me at a later date. Here are my contact details, email: nl316@cam.ac.uk, phone: 07438401937. If there is any aspect of the study that concerns you, you may speak to Mrs. Sakshi Parab at the Corion Fertility Clinic. Tel: 91 9892498088. If you wish to contact the research team at the Centre for Family Research our address is Dr Vasanti Jadva, Centre for Family Research, University of Cambridge, Free School Lane, CB2 3RF, United Kingdom.

*This project has been reviewed by the Psychology Research Ethics Committee of the University of Cambridge and has received ethical approval. This project has been reviewed by the Ethics Committee at the Corion Fertility Clinic and follows the guidelines set by the Indian Council of Medical Research.*

## **Expecting Mothers**

### **TO BE READ OUT BY INTERVIEWER**

Thank you for your interest in our study of Indian pregnant mothers. I would like to tell you more about the study and what taking part involves.

#### **Why are we doing the study?**

This study will be the first to examine the motivations, experiences and psychological well-being of Indian pregnant mothers. We are asking all women who are currently pregnant visiting this hospital if they would like to take part.

#### **What does taking part involve?**

As part of the study you will be interviewed twice about your experiences as a pregnant mother in India. You will also be asked to fill out a few questionnaires at both time points. The first interview will be conducted while you are pregnant and second will be conducted within four months after you have delivered your baby. Each interview will last approximately 1-2 hours and will be digitally recorded. You are under no obligation to take part. If you wish to withdraw from the study, or if there are any questions that you do not wish to answer, you just need to let me know. You will be paid Rs. 500 for the first interview and Rs. 1500 for the second interview.

#### **Confidentiality?**

- We are an independent research group from the University of Cambridge in England. We are not linked to the clinic. The clinic will not be told the details of what we discuss.
- I do not need to know your full name. I will call you only by your first name.
- I will record the interview onto a tape, and only I and my research team in England will listen to the recording.
- We will then look at all the interviews from all the different pregnant mothers together to find out more about the experiences of pregnant mothers in India.
- These results will be compiled into reports for use by policy makers, doctors and other professionals.
- Your identity will not be disclosed.

#### **What will happen to the findings of the research?**

The findings will be written up for publication in medical journals and presented at medical conferences and to other specialist groups of professionals involved with pregnancy and childbirth.

#### **Who should I contact if I want further information?**

If you have any questions about the study please ask me (Nishtha Lamba) or you can contact me at a later date. Here are my contact details, email: nl316@cam.ac.uk, phone: 07438401937. If there is any aspect of the study that concerns you, you may speak to Mrs. Sakshi Parab at the Corion Fertility Clinic. Tel: 91 9892498088. If you wish to contact the research team at the Centre for Family Research our address is Dr Vasanti Jadva, Centre for Family Research, University of Cambridge, Free School Lane, CB2 3RF, United Kingdom

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## Appendix II

### Information Sheets: Phase 2



### Surrogates

#### **TO BE READ OUT BY INTERVIEWER**

Thank you for your interest in our study of Indian surrogate mothers. I would like to tell you more about this second part of the study and what taking part involves.

#### **Why are we doing the study?**

This study is the first to examine the motivations, experiences and psychological well-being of Indian Surrogate mothers. We are asking all women who we saw during their pregnancy at this clinic if they would like to take part.

#### **What does taking part involve?**

As part of the study you will be interviewed about your experiences as a surrogate. You will also be asked to fill out a few questionnaires. The interview will last approximately 1-2 hours and will be digitally recorded. You are under no obligation to take part. If you wish to withdraw from the study, or if there are any questions that you do not wish to answer, you just need to let me know. You will be paid Rs. 1500 for being interviewed for this second time.

#### **Confidentiality?**

- We are an independent research group from the University of Cambridge in England. We are not linked to the clinic. The clinic will not be told the details of what we discuss. We will be assessing your mental health, if you are showing signs of any problems we may tell the doctor who will be able to help you.
- I will record the interview onto a tape, and only I and my research team in England will listen to the recording.
- We will then look at all the interviews from all the different surrogates together to find out more about the experiences of surrogates in India.
- These results will be compiled into reports for use by policy makers, doctors and other professionals.
- Your identity will not be disclosed.
- Recordings will be deleted at the end of the study (within five years).

#### **What will happen to the findings of the research?**

The findings will be written up for publication in medical journals and presented at medical conferences and to other specialist groups of professionals involved with surrogacy.

#### **Who should I contact if I want further information?**

If you have any questions about the study please ask me (Nishtha Lamba) or you can contact me at a later date. Here are my contact details, email: nl316@cam.ac.uk, phone: 07438401937. If there is any aspect of the study that concerns you, you may speak to Mrs. Sakshi Parab at the Corion Fertility Clinic. Tel: 91 9892498088. If you wish to contact the research team at the Centre for Family Research our address is Dr Vasanti Jadva, Centre for Family Research, University of Cambridge, Free School Lane, CB2 3RF, United Kingdom

*This project has been reviewed by the Psychology Research Ethics Committee of the University of Cambridge and has received ethical approval. This project has been reviewed by the Ethics Committee at the Corion Fertility Clinic and follows the guidelines set by the Indian Council of Medical Research.*

## **Expecting Mothers**

### **TO BE READ OUT BY INTERVIEWER**

Thank you for your interest in our study of Indian pregnant mothers. I would like to tell you more about this second part of the study and what taking part involves.

Why are we doing the study? This study is the first to examine the motivations, experiences and psychological well-being of Indian pregnant mothers. We are asking all women who we saw during their pregnancy at this hospital if they would like to take part.

### **What does taking part involve?**

As part of the study you will be interviewed about your experiences as a mother. You will also be asked to fill out a few questionnaires. The interview will last approximately 1-2 hours and will be digitally recorded. You are under no obligation to take part. If you wish to withdraw from the study, or if there are any questions that you do not wish to answer, you just need to let me know. You will be paid Rs. 1500 for being interviewed for this second time.

### **Confidentiality?**

- We are an independent research group from the University of Cambridge in England. We are not linked to the clinic. The clinic will not be told the details of what we discuss. We will be assessing your mental health, if you are showing signs of any problems we may tell the doctor who will be able to help you.
- I do not need to know your full name. I will call you only by your first name.
- I will record the interview onto a tape, and only I and my research team in England will listen to the recording.
- We will then look at all the interviews from all the different pregnant mothers together to find out more about the experiences of pregnant mothers in India.
- These results will be compiled into reports for use by policy makers, doctors and other professionals.
- Your identity will not be disclosed.
- Recordings will be deleted at the end of the study (within five years).

### **What will happen to the findings of the research?**

The findings will be written up for publication in medical journals and presented at medical conferences and to other specialist groups of professionals involved with pregnancy and childbirth.

### **Who should I contact if I want further information?**

If you have any questions about the study please ask me (Nishtha Lamba) or you can contact me at a later date. Here are my contact details, email: nl316@cam.ac.uk, phone: 07438401937. If there is any aspect of the study that concerns you, you may speak to Mrs. Sakshi Parab at the Corion Fertility Clinic. Tel: 91 9892498088. If you wish to contact the research team at the Centre for Family Research our address is Dr Vasanti Jadva, Centre for Family Research, University of Cambridge, Free School Lane, CB2 3RF, United Kingdom

*This project has been reviewed by the Psychology Research Ethics Committee of the University of Cambridge and has received ethical approval. This project has been reviewed by the Ethics Committee at the Corion Fertility Clinic and follows the guidelines set by the Indian Council of Medical Research.*

## Appendix III

### Consent Form



**UNIVERSITY OF  
CAMBRIDGE**

Participant's ID NUMBER:

**Centre for Family Research**

Free School Lane, Cambridge CB2 3RF

Office: 01223 334510

Fax: 01223 330574

Email: cfr-admin@lists.cam.ac.uk

To be read out by interviewer and recorded on a separate file.

Delete as

Necessary

- |   |        |
|---|--------|
| 1. I have understood the information sheet?   | YES/NO |
| 2. I have you had an opportunity to ask questions and discuss this study?                                     | YES/NO |
| 3. I understand that I am free to withdraw from this study without explanation?                               | YES/NO |
| 4. I understand that I will not be identified as having taken part in this study?                             | YES/NO |
| 5. I agree to allow the interview to be recorded? These recordings will be destroyed at the end of the study. | YES/NO |

The project has received ethical approval from the Psychology Research Ethics Committee of the University of Cambridge.

This project has been reviewed by the Ethics committee at the Corion Fertility Clinic and follows the guidelines set by the Indian Council of Medical Research.

I agree to participate in the study.

Signed .....Date.....

First name in Block Letters.....



## Appendix IV

### Coding Manual

#### Surrogate Interview: Phase 1

The codes adhere to the cultural context of surrogacy in India. Some of the codes from the interview, which are perhaps not self-explanatory, are explained in this coding manual.

1. Are you close to your parents?  
No=0, Somewhat=1, Yes=2  
**Rate 0** if the surrogate did not have any relationship with her parents; **Rate 1** if she talked to her parents once in a while and shared major life events with them; **Rate 2** if she spoke warmly about them and talked and met with them often.
2. Some women feel happy in their marriages, some don't. How do you feel about your marriage?  
No=0, Somewhat=1, Yes=2  
**Rate 0** if the surrogate mentioned negative things and felt dissatisfied in her marriage; **Rate 1** if she felt neutral or somewhat happy in her marriage, e.g. she may say that my husband is supportive but we fight a lot; **Rate 2** if she happily agreed and (upon probing) mentioned positive things about her relationship with her husband.
3. Surrogates' occupation  
Domestic Help=1, Catering=2, Factory (e.g. bead work/designing)=3, Agent=4  
**Rate 1** if the surrogate works in someone's house as a helper; **Rate 2** if she helps out in events as a waitress or a greeter; **Rate 3** if she works as a labour in factories, shops or at home; **Rate 4** if she worked at a fertility clinic as an agent.
4. Husband's occupation  
Unskilled manual work=1, Partly skilled= 2, Skilled manual work=3, Managerial/Technical=4  
**Rate 1:** Domestic helper, couriers, dockers, labourers, road construction/maintenance workers; **Rate 2:** Gardeners, waiters/waitresses, factory workers, packers, quarry workers, agricultural workers; **Rate 3:** Machine operators, electrician; plumber, metal workers, mechanics, taylor, butchers, security guards, chefs, flight attendants, nursery nurses; **Rate 4:** Teachers, social welfare officers, technicians, computer engineers, health associate professionals (e.g. nurses), business associate professionals (e.g. tax experts, insurance brokers, underwriters, customs and excise officers), artistic and sports (designers, artists, musicians, photographers, athletes).

5. Type of house  
Slum=0, Chawl=1, Apartment=2  
**Rate 0** would be described as thickly populated, run-down, house covered with thick sheets or thin walls, squalid part of a city, inhabited by poor people; **Rate 1** for 3-4 storied, mostly 1 room houses, shared restrooms, low cost for poor or lower-middle class; **Rate 2** would be described as multistoried, relatively spacious, multiple rooms and bathrooms.
6. How is your relationship with your father & mother in-law?  
Negative=0, Neutral=1, Mixed=2, Positive=3  
NOTES: **Rate 1** if the surrogate did not show any positive or negative feeling towards her father and mother in-law; **Rate 2** where the surrogate described the presence of both positive and negative feelings with regards to her father and mother-in-law.
7. Describe the medical process of surrogacy in your own words?  
Bare minimum or no information=1, Some/little information=2, Full information=3  
**Rate 1** where surrogates' statements demonstrated a lack of understanding of the concepts of 'sperm', 'eggs', 'embryos', 'gestational' and 'lack of genetic connection', they were coded as 'bare minimum or no information'; **Rate 2** where they demonstrated partial understanding, they were coded as 'little information'; **Rate 3** where the researcher felt that a surrogate understood these concepts, then her statements were coded as 'full information'.
8. Did you have any concerns about being a surrogate?  
None=1; Some=2; Lots=3  
NOTE: These codes demarcate the degree of anxiety and worry the surrogates had regarding becoming a surrogate. **Rate 1** if the surrogate did not mention any concern; **Rate 2** if she seemed slightly worried and mentioned one or two concerns; **Rate 3** if she seemed very worried and mentioned multiple concerns.
9. How much did you discuss regarding surrogacy with husband/family/friend?  
None=1, Some=2, Lots=3  
NOTE: These codes demarcate the level of consultation and discussion the surrogate had with her loved ones before deciding to become a surrogate. **Rate 1** if she did not discuss with husband/family/friends; **Rate 2** if she discussed a little bit with husband/family/friends; **Rate 3** if she had a detailed discussion with her husband/family/friends.
10. How did your husband/family/friend feel when they first heard about the news about your pregnancy? Positive=1, Neutral/ambivalent=2, Negative=3  
**Rate 1** if they showed excitement, (positive) concern and happiness regarding the news; **Rate 2** if they did not have anything positive or negative to say; **Rate 3** if they expressed feelings like indifference in a negative way, anger or criticism.
11. How does the husband/family/friend feel right now – during pregnancy?

Positive=1, Neutral/ambivalent=2, Negative=3

**Rate 1** if they expressed concern, care and general positivity towards the surrogate during her pregnancy; **Rate 2** if they did not display anything positive or negative; **Rate 3** if they expressed indifference in a negative way, anger or criticism regarding the surrogacy pregnancy.

12. Do you think husband/family/friend has been supportive up until now?  
No=0, Somewhat=1, Yes=2  
**Rate 0** if the surrogates' husband/family/friend showed no care, love, consideration (emotional or instrumental support) towards her; **Rate 1** if they expressed little bit of care, love, consideration (emotional or instrumental support) towards the surrogate; **Rate 2** if they had been involved in the pregnancy whereby they showed care, love, consideration (emotional or instrumental support) towards the surrogate.
13. Has surrogacy changed (for better or worse) your relationship with husband/family/friend?  
No=0, Somewhat=1, Yes=2  
**Rate 0** if the surrogate felt that nothing had changed in their relationship with their husbands/families/friends; **Rate 1** if the relationship had changed slightly due to surrogacy; **Rate 2** if the relationship had changed quite a lot due to surrogacy. NOTE: Inquire about whether this change is perceived to be positive or negative by the surrogate.
14. Do you feel husband/children might be getting attached to the baby in any way?  
No=0, Somewhat=1, Yes=2  
**Rate 0** if the husband/children did not talk about the pregnancy in a way that it displayed any connection with the unborn child; **Rate 1** if they displayed a connection, such as have shown any care towards the well-being of the unborn child and/or thought of the unborn child as part of the family; **Rate 2** if the husband/children spoke to (interacted with) the unborn child and/or thought of the unborn child as part of their family often.
15. What is the level of information regarding the intended parents?  
Bare minimum or no information=1, Some/little information=2, Full information=3  
NOTE: Coding bore in mind the socio-cultural context, wherein surrogates did not develop an independent direct relationship with the intended parents. **Rate 1** if the surrogates had only one piece of information regarding the intended parents – usually their nationality – or no information were coded as 'bare minimum or no information'; **Rate 2** wherein the responses of surrogates had two pieces of information about one or both intended parents (e.g., their nationality and age) were coded as 'some information'; **Rate 3** where the surrogates displayed more than 2 pieces of important information (e.g., the intended parents' nationality, age and length of time spent trying to conceive) were coded as 'full information'.
16. Overall, do you feel happy/satisfied with the intending parents?  
Dissatisfied=0, Somewhat satisfied=1, Satisfied=2

**Rate 0** if there is evidence of the surrogate feeling unhappy with the couple and that none of her expectations were met (e.g. feeling that she was not informed regarding basic aspects of the surrogacy arrangement); **Rate 1** if the surrogate showed some positive feeling towards the couple. Considering the cultural context whereby intended parents do not develop a direct relationship with the couple even neutral attitude was coded in this category; **Rate 2** if the surrogate felt positive towards her ‘clients’, especially if they mentioned signs of support (e.g. meeting them, calling them, sending them a gift).

17. Did you face any criticisms for becoming a surrogate?  
No=0, Somewhat=1, Yes=2  
**Rate 0** if the surrogate reported that she did not face any criticism; **Rate 1** if she claimed that she might have faced subtle criticism but is unsure about it; **Rate 2** if she experienced direct criticism. NOTE: Criticism could be from anyone – family, friends, neighbours etc. Inquire about the source of criticism.
18. Some women hide surrogacy and some don’t. Are you hiding your surrogacy from family or society?  
No=0, Somewhat=1, Yes=2  
**Rate 0** if the surrogate had been open about her surrogacy; **Rate 1** if she had told most of the people, but hid her surrogacy, from a few people; **Rate 2** if she did not tell anyone. NOTE: Disclosing to husband regarding surrogacy is an exception to this rule.
19. Did you ever feel pressurised to become a surrogate?  
No=0, Somewhat=1, Yes=2  
**Rate 0** if there is no evidence of surrogate feeling pressurised to become a surrogate; **Rate 1** if it was unclear whether she felt pressurised to become a surrogate or it was her decision (or both cases were present); **Rate 2** where it is evident that it wasn’t her individual decision and had been emotionally forced to become a surrogate. NOTE: keep a note of the husband’s or in-law’s relationship with the surrogate when coding this.
20. How did you feel being a surrogate mother right at the beginning (first month of pregnancy)?  
Happy=4, Mild apprehension=3, Mixed=2, High anxiety=1  
**Rate 4** if the surrogate felt happy regarding her surrogacy pregnancy (Note: inquire about the reason of happiness. E.g. does she express happiness related to the money she may now receive or does she talk about the opportunity of helping a childless couple; **Rate 3** wherein the surrogate mentioned some sources of worries or anxieties when she heard about being pregnancy, e.g. being nervous about officially taking on a role as a surrogate; **Rate 2** if she felt both negative and positive attitudes, such as she may say that she was unhappy about the treatment but very excited about being able to give a child to the intended parents and the money she was going to receive after the surrogacy; **Rate 1** whereby the surrogate expressed negative concerns and feelings when asked about the initial phase of surrogacy pregnancy.
21. How do you feel about being a surrogate mother now (4-9 month of pregnancy)?

Happy=4, Mild apprehension=3, Mixed=2, High anxiety=1

**Rate 4** if the surrogate expressed happiness (or peace) with the surrogacy pregnancy at the time of the interview (e.g. does she talk about positive aspects of the pregnancy?); **Rate 3** wherein she described any negative (confusions, concerns, anxieties) regarding the pregnancy; **Rate 2** if she expressed both negative and positive feelings towards the pregnancy (e.g. she may say that she feels anxious about birth complications but also feels happy speaking about her pregnancy with her friends at the surrogacy house); **Rate 1** if there is evidence that she felt highly worried about her pregnancy, such as facing medical complications, worried that it won't be a successful pregnancy, feels unhappy with the services provided to her etc.

22. Do you feel you have had a good social support system up until now?

Yes/sufficient=0, Some/insufficient=1, no support=2

NOTE: This question is about how the surrogate perceives her overall support system.

**Rate 0** is felt content with the overall support network available to her; **Rate 1** if she felt slightly supported but was not enough; **Rate 2** if she reported not feeling supported during pregnancy at all.

23. I would also like to know if becoming a surrogate has changed the way you see yourself?

No=0, Somewhat=1, Yes=2

**Rate 0** if the surrogate did not say anything, expressed confusion regarding why anything would change or simply replied that nothing has changed; **Rate 1** if the surrogate said that something may have changed in the way she viewed herself but she is not sure (e.g. maybe it has made me more empathetic towards the pain of being infertile but I am not sure); **Rate 2** if she expressed that something has changed and follows it up with explaining what has changed.

24. Different surrogates feel differently about the baby. How do you feel about the baby right now?

Attachment=1, Detachment=2, Neutral=3

**Rate 1** wherein the surrogate expressed connection and love towards the unborn child (e.g. Feels like this is my own baby or I don't feel very different towards this baby than how I felt with my own children during pregnancy); **Rate 2** if the surrogate reported keeping an emotional distance from the child (e.g. I don't feel anything because it is not my baby); **Rate 3** where the surrogate did not say much and expressed neither any connection nor any absence of connection.

## Appendix V

### Coding Manual

#### Surrogate Interview: Phase 2

The codes adhere to the cultural context of surrogacy in India. Some of the codes from the interview, which are perhaps not self-explanatory, are explained in this coding manual. Questions and codes similar to phase 1 interview have not been mentioned in this section.

1. How is your life now after surrogacy?  
Extremely Happy=0, Happy=1, Mixed/Neutral=2, Unhappy=3, Extremely Unhappy=4  
NOTE: **Rate 2** if the surrogate either expressed both happy and unhappy feelings or expressed nothing on how she felt about life after surrogacy.
2. Do you miss the surrogate house?  
No=0, Somewhat=1, Yes = 2  
NOTE: **Rate 1** wherein the surrogate felt that she sometimes misses the surrogate house but feels much happier being back home.
3. In comparison to home, how did you find the surrogate house?  
Positive=1, Neutral/ambivalent=2, Negative=3  
**Rate 1** if the surrogate expressed that she preferred living at the surrogate house; **Rate 2** if she did not particularly prefer one over the other; **Rate 3** if she preferred being home and/or disliked living at the surrogate house.
4. How were you feeling before the delivery?  
No difficulties=0, Minor difficulties=1, Moderate difficulties=2, Major difficulties=3  
**Rate 0** if surrogate described an entirely normal pregnancy with no complications or the need for any interventions at all; **Rate 1** for difficulties such as extreme tiredness, excessive nausea, lots of heartburn or back pain which are mild but bothersome symptoms in pregnancy; **Rate 2** if the problem was sufficient for the surrogate to visit the hospital. This rating may also include hypertension in pregnancy requiring monitoring or treatment or other diseases such as gestational diabetes or placenta praevia; **Rate 3** if the surrogate had been admitted into hospital at any point during the pregnancy. Difficulties may also include severe bleeding before labour (antepartum haemorrhage) requiring an emergency delivery or resuscitation.
5. Did you have any birth complications?  
None=0, Minor complications=1, Moderate complications=2, Major complications=3  
**Rate 0** would describe a labour or a caesarean birth and postpartum period with no complications or the need for any interventions at all; **Rate 1** may

include the need to be induced, a vacuum extraction in the second stage of labour; **Rate 2** may include difficulties such as: the need to be induced as an emergency due to a medical or foetal problem, an emergency Caesarean, a high forceps delivery, a bed tear requiring a lot of stitches, a postpartum haemorrhage requiring treatment, severe foetal distress requiring resuscitation of the baby in the delivery room; **Rate 3** would include a complicated Caesarean requiring a longer operation (e.g. major bleeding, rupture of the uterus or damage to the bladder etc.). It may include severe fetal distress resulting in death or major resuscitation of the baby and transfer to Intensive Care. It may also include a major postpartum haemorrhage putting the woman's life in mortal danger (e.g. requiring a large transfusion or transfer to Intensive Care).

6. Did you find it difficult to give up the child?  
None=0, Minor difficulties=1, Moderate difficulties=2, Major difficulties=3  
NOTE: **Rate 1** where the surrogate described having been upset but knew that she would get over it and saw the feelings as only lasting for the short term; **Rate 2** if the surrogate described feeling very depressed or anxious, however she was still able to go to work or manage her house or the family but had seen her GP with regard to her feelings and may be taking medication; **Rate 3** in a situation where the surrogate described feeling so depressed or anxious that she was unable to function. She had stopped going to work, and/or was finding it hard to manage her house or family. She was probably taking medication and may well have received out-patient treatment.
  
7. Were you asked about the time or process of relinquishment?  
No=0, Somewhat=1, Yes = 2  
**Rate 0** if there is evidence that the surrogate was not aware about the process of handover; **Rate 1** if the surrogate heard or was informed about a few aspects of the process of handover; **Rate 2** if the surrogate was asked about her preference regarding when, where and how handover of the surrogacy child would take place.
  
8. Overall, are you satisfied with the relinquishment (experience)?  
No=0, Somewhat=1, Yes = 2  
NOTE: **Rate 1** wherein the surrogate did not express unhappiness regarding the experience of relinquishment but did not particularly express any reason to feel happy with it either.
  
9. Do you think about the child?  
No = 0, Not really = 1, Yes = 2  
NOTE: **Rate 1** if the surrogate expressed that she did not think about the surrogacy child much but he/she might have come up in a few conversations or a prominent date (e.g. one month anniversary of the newborn).
  
10. How do you feel about the child nowadays?  
Highly attached=0, Mixed=1, Not attached/don't think about it=2  
**Rate 0** if the surrogate expressed that she felt connected to the newborn, thought of him/her often and felt the desire of meeting him/her (repeatedly);

**Rate 1** wherein the surrogate reported feeling connected and disconnected both to the newborn. E.g. she may say that she thinks of the child often but understands that it would be beneficial to maintain an emotional distance; **Rate 2** if the surrogate said that she did not feel connected with the newborn, e.g. a surrogate may say that I am so busy with my own children, I don't end up thinking much about the surrogacy child.

11. Did you speak to him about your experience of relinquishment – feelings towards the child?

No=0, Somewhat=1, Yes = 2

NOTE: **Rate 1** would describe a situation where surrogate may have spoken to her husband about the relinquishment in passing but did not particularly discuss or express her emotions regarding the matter.

12. Overall, do you feel satisfied with the intended parents?

No=0, Somewhat=1, Yes = 2

NOTE: **Rate 1** if the surrogate felt that the parents did not cause any problems but were not particularly caring or nice towards her either. She may also display mixed feelings such as, I felt sad as they did not meet me but I was happy that at least they sent gifts for my children.

13. In retrospect, are you satisfied with the clinic?

No=0, Somewhat=1, Yes = 2

NOTE: **Rate 1** wherein the surrogate did not express unhappiness with the clinic but did not particularly express any extreme happiness either. E.g. she may say that the clinic staff was fine and surrogacy experience at this clinic was ok.