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"The Miracle Mothers and Marvelous Babies": Psychosocial Aspects of Surrogacy – A Narrative Review

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Abstract

Surrogates are described in literature as true angels "who make dreams happen." On the other hand, surrogacy has also been surrounded by several psychosocial controversies. In this review, we have made an attempt to encapsulate this topic from the multiple perspectives of individuals who are involved in the surrogacy cycle. We present to the readers the various outlooks and dilemmas of the clinicians, patient parties contracting for surrogacy, the child born out of surrogacy, and the intricate role of the mental health professionals in surrogacy arrangements. The review also throws light upon the psychosocial issues in connection to the evolving Surrogacy practices in Indian and in the Western world.

KEYWORDS: *Distress, infertility, mental health, psychosocial, review, surrogacy*

INTRODUCTION

Infertility has been at a rise in developing countries.[1] So is the burden associated with it.[1] Over the past few decades, even treatments such as surrogacy that were once regarded as far-ended options by childless couples have become fairly acceptable. Surrogacy has gained tremendous popularity in several parts of the world including the Indian subcontinent. This review aims to present the various dilemmas of the individuals involved in the surrogacy cycle: the clinicians, patient parties contracting for surrogacy, the child born out of surrogacy, and the mental health professionals (MHPs). [Figure 1](#) depicts these participants as an integral part of the surrogacy cycle.

BASIC DEFINITIONS

Surrogacy has been defined as a contract in which a woman carries a pregnancy for another couple.[2] These couples are usually infertile couples and are often also referred as the intended parents/prospective parents/contracting/commissioning parents.[2,3] The woman receiving the embryos created from the gametes of one or both of the intended parents or others is referred to as the surrogate host.[2,3] The *in vitro* fertilization (IVF) surrogate is called as the gestational carrier (GC).[2,3] Surrogacy is usually of two types, namely "commercial surrogacy and altruistic surrogacy." Commercial surrogacy arrangements are

described as the ones in which the surrogate is paid over and above the necessary medical expenses.[2,3] In altruistic surrogacy arrangements, the surrogate is paid only the necessary pregnancy-related expenses and at times nothing at all.[2,3]

THE INFERTILITY EXPERT IN THE SURROGACY CYCLE

The infertility expert decides on surrogacy as a management plan for couples based on several indications and contraindications.[2,3] Their role is vital in the surrogacy cycle as he/she is the first building block of the cycle [Figure 1]. The infertility expert is involved in the following stages.

Preparations for surrogacy

Patient selection The intended parents are first seen in an in-depth consultation:[2,3] In this, they undergo a complete medical history (age, background, sociocultural and familial stability, family history of infertility, history of genetic diseases, and chromosomal analysis) and physical examination, screening for present of heritable diseases, sexually transmitted disease (STD), hepatitis B, C, HIV. Semen analysis for husband is done, and complete evaluation for ovarian functioning (Transvaginal sonography (TVS), hormonal profile, and Antimullerian hormone (AMH))is done for the female.

The expert decides on the suitability of the couple for surrogacy. Surrogacy may be carried out using gametes of intended parents or gametes providers. These decisions are deliberated by the infertility experts based on the complete evaluation of the couple.[2,3]

The couple is given an option of surrogacy (if possible) as a choice on the basis of certain indications.[2,3]

If the couple is willing, they are counseled by the assisted reproductive treatment (ART) over the surrogacy process:[2,3] In several countries, an MHP may be involved in this step in screening or aiding the intended couple for their psychological readiness for the process.

Once the couple is ready, the ART clinic (on the directions of the infertility expert) goes on to contact agencies that specialize in arrangements of anonymous surrogates. In many countries, the GCs may also be known to intended parents (sisters, cousins, and friends who are volunteer). The latter decisions are based on legal regulations which may vary from one country to the other.

Screening of the surrogate as a gestational carrier: In this step, the infertility expert screens the surrogate based on the following criteria[2,3]

- Surrogate should be of at least 21 years of age and <35 years of age
- The surrogate is in a stable marriage (in situations where marriage is a mandatory requirement) and a family environment which would support the treatment
- Surrogate's spouse understands the implications and their responsibilities. Both of them express the willingness and consent toward surrogacy
- The surrogate should satisfy all testable criteria to go through a successful full-term pregnancy
- She should have a history of ease of conception with at least 1 pregnancy that resulted in the delivery of a child
- She should have a history of regularity of menstrual cycles, normalcy of uterine cavity, and ease of conception in prior pregnancies
- She should not have any concomitant issues or severe medical disorders
- She should not have any personal habits of smoking, alcohol, substance, or drugs
- Carrier should be screened for infectious diseases, STDs, etc., which can endanger the health of the child and should not have received any blood or blood products in the last 6 months
- In several countries, an MHP is asked to conduct a psychological assessment assesses her suitability for surrogacy. Literature reports that psychological assessment of the surrogate is important especially to tolerate the cycle and in specific situations to judges: her ability to relinquish the child. [2,3]

Signing of contract and *in vitro* fertilization cycle

Once the willingness of all parties is ascertained and their medical and psychosocial assessment of the surrogate is completed, a contract is established among them. The treatment of the couple is planned, provided that all parties involved are counseled in depth about the arrangements, its risks, consequences and provide consent for it.[2,3] Surrogacy can be carried out in a controlled cycle and a natural cycle and this selection is based on the suitability of the intended couple.[2,3] Replacement in the controlled IVF-ET cycle is the most common method used for surrogacy. It has good rates of success and was first reported in 1985.[2,3]

Cycle management

A typical IVF cycle used for surrogacy involves the treatment of the intended mother (in case her oocytes are being used) and treatment of the host mother (GC).[2] The host mother can be prepared to undergo embryo transfer in either natural cycle or downregulated hormone controlled cycle.[2,3]

Critical Issues that need to be addressed by the medical experts before planning a gestational carrier surrogacy[2,3]

- The intended couple need to review all alternative treatment options before going in for such a treatment
- The GC needs to be appropriately identified, screened (medically and psychologically), counseled, and prepared to undergo the treatment
- All parties should understand the particulars of medical process and its risks (success rates, expectations, multiple pregnancies, multifetal reductions, risk of miscarriage and loss or bereavement associated with it, ownership and disposition of remaining embryos, obstetric complications, chances of handicaps in the child, etc.)
- All should understand the need for Chorionic villus sampling (CVS); amniocentesis if situation arises
- All parties should understand the immediate and long term psychological risks of surrogacy for intended couple, GC, her family, and the children born out of such treatments
- All parties have considered the possibility of family and friends being against the treatment
- All parties have established parameters of acceptable conduct on various issues (nutrition, smoking, alcohol, travel, exercise, care, attendance to prenatal visits, delivery, management of delivery, suppression of lactation in GC, as well as drug-induced lactation in intended mother postdelivery of the child)
- The roles, responsibilities, and acceptable modes of communication/contact that all parties should have also needs to be discussed. A mutual agreement should be made by persons involved in the surrogacy cycle over the extent of involvement they would be most conformable with. The type and ways of contacting each other during and after the surrogacy process, the expectations, avoidance of conflict or coercion, or emotional breakdown are matters that should be talked about on a priority basis
- All parties should agree on the life-medical and disability insurance for surrogate mother
- All parties should understand the legal matters
- All agree on the financial claims, issues, and contracts
- An option of psychological interventions needs to be available for all parties throughout the process
- It is necessary that the GC is treated with integrity, dignity, respect, and compassion
- Intended parents have contemplated over the "What and When and How" to tell the child born out of such treatments about their mode of birth and origins

- All parties in the contract confide in each other and are comfortable with the decision and trust that no one would take advantage of the other
- All parties should respect the sociocultural context, in which this arrangement is made as well as the ethnic and religious background of each other[4]
- In case a surrogate house is also managed by the medical expert then ensuring the overall health and wellbeing of GC and the baby and monitoring them throughout the Surrogacy becomes an added responsibility.[2,3,4] There are legal guidelines for same in various countries and the same should be rigorously followed
- Teamwork and cordiality should be ensured throughout the process
- The expert should be on the outlook for three common problems faced by parties during the process: (1) struggles with medical issues, (2) struggles with the relationship, and (3) struggles with logistic surprises.[4]

THE INTENDED PARENTS IN THE SURROGACY CYCLE

Intentions for opting for surrogacy

They have been described as being in the position of “Your body and my baby.”[5] Many of them have report that “It was the only way for them to have a child.” The most common reasons for opting for surrogacy have been “repeated IVF failures, reported by 43% (19) of women, lack of uterus (38%, $n = 16$) as a result either of a congenital abnormality or of an emergency hysterectomy.[6] Seven per cent of the women had been told that pregnancy would be life threatening, a further 7% had suffered habitual miscarriages and 5% (one) had other problems, i.e., a prolapsed uterus.”[6]

Other reasons for undergoing surrogacy cited in research were that the couple wanted a full or partial genetic link with the child or because their prior IVF or adoption failed.[7] Intended mothers were not likely to justify their unusual choice. Baslington, 1996, and Blyth, 1995, described them as carrying a personality that is “assertive and professionals,” “atypical,” “facing an infertility crisis” and “are in a desperation to have a child.”[8,9]

Concerns

The prospective parents come to surrogacy having surrendered a great deal already– psychological, socially, even financially. Given that the issues of trust and control are central struggles in surrogacy (as well as infertility), it is inevitable that there will be conflict surrounding prenatal and postnatal medical care. The central psychological conflict that often lingers on the minds of the intended parents is that related to “letting concerns go” versus “raising a concern.” Striking the balance between appropriate versus over-the-top expectations, involvement, and worries have often been reported to be struggle for them.[4,7,8,9,10,11,12] Some of the intended parents reported that their relationship with the GC was more of a “forced friendship” (Brazier *et al.*, 1998). Nevertheless, a majority report of sharing a “harmonious” relationship with the surrogate mother.[6] Further, a higher proportion of mothers than fathers (26% vs. 15%) had “mixed emotional feelings,” but their orientation toward the pregnancy was still positive, and very few parents had “high anxiety” where anxiety was the predominant feeling about the pregnancy. By the end of the pregnancy, most mothers and fathers had positive feelings.[6]

Issues

The prospective parents are best served first by having accurate medical information and then choosing their choices and confrontations carefully. A surrogate/carrier and a couple may cause each other significant distress if they are not clear about the other party's limitations and what really matters to them. Assumptions about what type of contact, communication, and relationship they prefer can be a common source of problems. A common mistake that couples make is to mistrust the surrogate/carrier's integrity or dignity and consequently offend or hurt her. Another common error occurs when a surrogate/carrier misreads a couple's genuine enthusiasm, seeing instead anxiety, aversion or aloofness. Researchers describe that the controversies usually evolve around “what will happen if multiple pregnancies merge,

miscarriages, travel, diet, money, illness, conduct, choice of doctor, medication, bed rest, labor and delivery options, presence of all parties during birth, and the mode of handing over of the child to the commissioning couple.”[4,6,7,8,9,10,11,12]

Long-term issues of disclosure to the child born

Research has recommended that the child born out of such treatments should be appropriately informed about its birth.[2] Core principles of disclosure involve sharing age-appropriate information, honesty, and conveyance of positive messages about how the family was created, acceptance of the total child, acceptance of the donor as a good person, and recognizing that the mode of conception is basically “one person helping others to become a family.” Most important, throughout all discussions and all stages of the child's development is the need for parents to recognize and acknowledge their children's feelings. Studies have shown that intended mothers using gestational surrogacy (and their own oocyte) are much more likely to tell the child.[4,7,8,9,10,11,12] Selective data reports that ART mothers are more willing than the adoptive mothers to tell the child on how it was conceived.[12]

Studies on parenting styles of intended parents[13,14,15,16]

Golombok *et al.* conducted the first UK study of 1-year-old surrogate children's relationships with their (intended) parents.[13] Their work reported good family functioning and child development in their intended mothers sample compared with naturally conceived families. Most mothers reported good mental and physical health and good development in their children. Parenting by intended mother is accompanied by higher levels of emotional over-involvement. At age 2, the mothers again showed more positive parent-child relationships, i.e., higher levels of joy and competence, and lower levels of anger and guilt. At age 3, these mothers showed higher levels of warmth and interaction than mothers with a naturally conceived child. Parenting difficulties and the presence of psychological problems in the children may have been played down by intended mothers (IMs) who may wish to present their child in a favourable light either as a reaction to the stigma that is associated with these assisted reproductive procedures. Intended mother also believed that as they had a unique opportunity to parent a child they must live up to it. They carried high expectations of themselves as mothers given the difficulties they had to face.[13,14,15,16]

THE SURROGATES IN THE SURROGACY CYCLE

Intentions of going in for surrogacy

Hanafin *et al.* were among the firsts who conducted doctoral dissertations in the 1980s that attempted a broader explanation of the psychological dynamics on the motivations and the demographics of surrogate mothers.[17] Their investigation revealed that surrogate mothers in the United States had one of the following intentions: they desired to do something important in their lives, had higher empathy for the childless couple and they enjoyed experiencing pregnancy or wanted financial gains. Typically, these women were in their late twenties, most often married, and had an average of two children.

Ragoné's in 1996 and Imrie and Jadva, Golombok, 2014, claimed that surrogates undertaking multiple surrogacy arrangements are primarily motivated by the desire to help a couple and to “complete a family.”[18,19] Altruistic reasons for surrogacy were the most common.[20] Most surrogates enjoyed pregnancy and childbirth. Additionally, many of them said their job fulfilled or added something to their lives (increased feelings of self-worth and self-confidence, and the led to development of intense and unusual friendships with the intended parents, particularly the commissioning mothers.[9,11,12] Studies have suggested that GCs demonstrate a personality profile characterized by “high psychological resilient, ego-strength, emotional hardiness, strong self-worth, self-contentment, capacity for handling emotional conflict, responsibility taking as well as low traits of anxiety, obsessive compulsive tendencies, and addiction potential.”[19,21]

Liberal feminists typically characterize surrogacy “as a natural extension of women's reproductive liberty and personal autonomy.”[22] They propose that surrogacy has “the potential to reduce the implicit economic inequalities for women and build new familial models that challenge the traditional hetero-patriarchal family.”[22] Others suggest that new reproductive technologies have the potential for alleviating class differences.[22]

Issues faced

The lack of equivocal support for surrogacy, has been previously reported by a number of studies irrespective of sociocultural setting in which the arrangement is made.[12] Social stigma as well as discrimination has always been high.[12,23] Lack of stigma and support are reasons that predispose the surrogates to emotional problems, psychological vulnerability as well as financial exploitation or embarrassment by family members.[7,10,20] Literature highlights that "Contract motherhood is dehumanizing because it commodifies birthing, reduces women to incubators, and alienates surrogate mothers from their reproductive labor." [22] By contrast, radical libertarian feminists urge that "surrogacy was not reproductive slavery." [22] Women opting for Surrogacy should not be "alienated from the 'products' of their reproductive labor." [22] [Figure 2] presents the psychological conflict related to the sense of connection versus separation which surrogates have been known to face.[9,11,23,24]

THE EMOTIONAL EXPERIENCE

Most of the women experienced surrogacy positively; [2,12] however, a minority of them were at a high risk of developing psychopathology. Emotional conflict reported by some of the surrogates in literature [25] were related to:

1. Feelings toward pregnancy: Coercion to have no feeling to baby
2. Fear and worry about the baby being abnormal/baby's health
3. Relationship with family, relatives, and the main parents of fetus: Fear of their own husband's reactions in marital and sexual relationship
4. No enough payment for expenses by the main parents
5. Doubts about informing her own children of the pregnancy type
6. Worries and concerns about informing the relatives, in-laws, and friends
7. Consequences of surrogacy: The complications of pregnancy, hospital stay, C-section, postdelivery recovery period
8. The religious and financial problems of surrogacy: Having no obvious religious legitimating and social acceptability.

Surrogate and intended mothers appear to reconcile their unusual choice through a process of cognitive restructuring based on one's personal willingness to be open and honest about their choices as well as priorities.[12]

Outcomes in women who underwent surrogacy in the western context

Some of the immediate outcomes in surrogates were: postpartum depression in 0%–20% cases, relinquishing difficulties in 35% of cases, guilt/doubts/despair over their decision to go in for surrogacy in 39% of cases, 33% were at risk posttraumatic stress disorder, depression or anxiety disorders and a substantial stress was observed in 65% of cases if IVF outcomes were negative.[26,27] A recent study reports that Surrogates had higher levels of depression and factors such as low social support during pregnancy, hiding surrogacy, and criticism from others were found to be predictive of postpartum depression. Regarding prenatal bonding, surrogates interacted less with the fetus but adopted better eating habits and were more likely to avoid unhealthy practices during pregnancy, than expectant mothers. No associations were found between greater prenatal bonding and greater psychological distress during pregnancy or after relinquishment.[26,27,28]

Frequency of contact between surrogacy families and their surrogate mother decreased over time, particularly for families whose surrogate was a previously unknown genetic carrier. Most families reported harmonious relationships with their surrogate mother.[6,18,29]

Five to ten years after birth was a crucial period in the surrogate–couple relationships.[30] Ciccarelli and Ciccarelli and Beckman 2005 became increasingly dissatisfied with the surrogacy arrangement over this period, as contact with the couple tapered off.[30] Surrogates remained in more frequent contact with IMs than with either children or fathers, suggesting that the IS-IM relationship that is central to the surrogacy experience.[6,18] Longitudinally, in most surrogacy arrangements, surrogates felt contented with the choice they had made back then.[29]

Indian literature on commercial surrogacy practices and its psychosocial impact

Literature from the Indian context on the psychosocial outcomes of surrogacy practice mainly exists in the form of cross-sectional studies, qualitative investigations, case-series, commentaries, review-articles primarily been conducted by Sociologists, Anthropologists and Public health experts.

[31,32,33,34,35,36,37,38,39,40,41,42,43] Evidences in the form of clinical investigations, randomized controlled trials, systematic and meta-analytical studies are scarce.

Research data from India depicts that at one point in time, it was one of the most popular global destinations for commercial surrogacy and reproductive tourism.[39] Couples from several parts of the world came to India to seek good quality and low cost IVF and Surrogacy. Researchers report that during the 1990s, over three thousands clinics across the country offered Commercial surrogacy,[44] thereby making India a famous “baby-outsourcing destination.”[45] This practice had its highlights as well as pitfalls.

Indian surrogates reveal that their intentions of going in for surrogacy were primarily financial. [35,38,42,46] Surrogacy as a profession also gave a chance for the women to establish their sense of worth, power, authority and liberty. It gives a platform for impoverished women to take control over their bodies and reproduction through decisions about their fertility, sterilization and abortions.[46] Moreover, Surrogacy provided the women with the opportunity of decentering and walking out of the marriages in which the women were trapped as sufferers of domestic abuse/violence/husband's alcoholism.[35] In literature, surrogates have been described as the “stronger women,” who resist the stigma faced by them, challenge the everyday norms, powerlessness as well as social inequalities by creating new opportunities for themselves and their families.[35] For many SMs, it was a profession in which they took great pride as it was an indicator of their productivity, value and it was one of the few jobs in which women did not face any competition from the men.[46] Research also report that the SMs used the hypermedicalization of the surrogacy birth process partly to her advantage. This was done by relieving themselves from household work and pampering, nourishing, eating, resting, and relaxing themselves during pregnancies as well as use the extended time after C-section surgeries of the babies, to take care and rejuvenate as they “deserve and have worked very hard for it.”[46] The SMs described that they were far much in control of their bodies during surrogacy than during the natural birth of their own children. As lower-class women giving birth to lower-class babies, their own pregnancies are treated as everyday occurrences that do not deserve any prenatal or postnatal care and attention. However, as SMs carrying higher social status babies, they were entitled to many luxuries such as “respite from backbreaking work, timely professional attention, better nutrition, superior health, medical care and the opportunity to spend some money on themselves.”[46] Many researchers go on to report that the IMs and SMs shared a “unique sisterly bond” with qualities of faith and admiration toward each other.[46] In brief, Vohra, 2016 pointed out that “Commerical surrogacy practices in India potentialized the bodies of Indian women who were in dire need of financial resources and had the reproductive capacity that could benefit others.[47] This reproductive capacity benefits the commissioning parents, who receive a child in exchange for a fee that is very low for the international market.

The demerits of commercial surrogacy in India were the asymmetries and social vulnerabilities in the relationship between the surrogate and the IPs. The surrogates were often from poor economic backgrounds, financial crisis, barely educated, and a large majority of them were facing a family pressure to go in for such contracts against their personal comfort and willingness.[39,43] The surrogate often had “no say in the surrogacy cycle once she signed the contract.”[39,43] The IPs had greater power and choice to decide where the surrogate will stay (in surrogate homes or her own home), what kind of interaction she will have with her own family/children during pregnancy, her diet, lifestyle restrictions, activity restrictions and behavior over the pregnancy period (especially when she is confined to surrogate homes),

care for the child after the delivery (which sometimes spanned from a few days to weeks until the IPs were willing to take the baby).^[39,43,48] Poor sanitation and nutrition were also issues with some of the surrogate hostels where they had to compulsorily stay for nine months.^[39,43,48] Surrogates frequently reported of missing their own children.^[31,32] Additionally, they would often hid their jobs as SMs from others as “moral rhetoric and stigma” were often evoked in India whenever the bodies of poor women are in focus.^[31,32] Many of the surrogate mother were unaware of their legal rights.^[39,43,48] Some of the surrogate mothers reported facing psychological difficulties, postbirth of the baby and especially during the handing over time. At times, obligatory care would be expected by the IPs for new born who were willing to pay monetary compensations for same as well. Some IPs would request that the surrogate should feed the child or reside like a nanny with them for some time. This would add an extra burden on the surrogate and her family. The greater the time and care the surrogate and their family provided to newborn, the higher would be the emotional bonding and attachment with the child. Yet many surrogates and their families would happily agree do the same, just for the sake of the baby.^[39,43,48] Most of the surrogates cherished the extra time spent with the baby. However, relinquishing difficulties and grief followed this period during the time of separation (which was often uncertain and abrupt). A few of the GCs mentioned that IPs never even cared to meet them during the handing over time.^[39,43,48] Continuity of bond between the IMs and SMs was rare, and in most cases, once the baby got delivered, the surrogate became a classic example of “alienated labor and disposal of mother–worker.”^[33] The negligence of the medical team was also highlighted in some of the statements of the surrogates where the “nurses use to reprimand the surrogates if they cried during or after the handing over of the baby.”^[39,43,48] Clearly, the child born out of surrogacy was of more value than the health and welfare of the surrogates’ bodies.^[34] Colen, 1995, criticized commercial surrogacy for being a case of “stratified reproduction.”^[49] Literature also reports that the doctors trivialized the psychological problems and ignored the emotional crisis faced by the surrogates.^[39,43,48] They felt that the monetary compensation given to the surrogate was the most vital element of her service.^[39,43,48] Some reported that the question of psychological counseling was irrelevant as in most cases money was the primary motivation to ensure that “feelings toward the baby did not develop.”^[39,43,48] The surrogate was expected to be a “timid, sacrificing, compliant lady who was in complete rationale control of her emotions during all times.”^[39,43,48] In the latter context it is also reported that “the construction of the surrogate is part of extreme representations of “commodification, exploitation, and disposability” where she is part of a plot in which she is subordinate to: the market, the family, the infertile couple and medical technology.”^[32,34]

The emotional experience in Indian setups: Commercial surrogacy in India, which entails giving away the baby as soon as it is born, reiterates the disposability of these “desperate” women and emphasizes the “unnatural” means of their motherhood. Indians equate surrogacy with sex work.^[31,32,33,50] This is partly due to a lack of information—people are not aware of the reproductive technology which separates pregnancy from sexual intercourse. SMs were perceived by others to be involved in ‘dirty work’ to refer to tasks and occupations that are likely to be perceived as degrading.^[50]

Researchers reveal that the narratives of Indian surrogates involved in Commercial Surrogacy.^[39,43,48,50] These show that they suffered various psychological conflicts:

1. “We are Not Body Sellers or Baby Sellers:” Boundary Work on constructing a sense of self-worth
2. “Prestige Won't Fill an Empty Stomach:” Downplaying “Choice”
3. “I am Special, They are Special:” Denying Disposability
4. “It May be Their Genes, but it's My Blood:” Making Claims on the genetic link and bond with the Baby
5. “I don't think there is anything wrong with surrogacy. We need the money and they need the child.” “The important thing is that I am not doing anything wrong for the money—not stealing or killing any one:” Justifying their choices and Speaking up for themselves
6. “We would pray that the clinic remained open:” Surrogacy a way out of poverty.

In the light of the above controversies the legal guidelines and regulations evolved in India. The bill was reframed several times to ensure justice, safety and protect the rights as well as welfare for all parties involved in the surrogacy cycle.[39,48,51,52,53] ICMR has proposed several revisions over the past two decades,[51,52,53,54,55,56,57] in order to regulate the medical practice and protect the vulnerable Indian citizens from falling a prey to social and financial exploitation resulting from surrogacy arrangements. The most significant stance in the recent revisions (2016 onward) is the ending of Commercial surrogacy in the social welfare of women and child at risk.[51,52,53] Altruistic surrogacy however is permitted under strict terms and conditions of the latest surrogacy bill, passed in 2018.[51,52,53]

THE CHILDREN BORN THROUGH SURROGACY: WHO ARE THESE? RESEARCH ON CONCERNS, PERSPECTIVES AND EXPERIENCES, SOCIAL CONSEQUENCES FACED BY THEM

Perinatal outcomes of children born through *in vitro* fertilization-surrogacy[58,59]

The birth weights for singleton pregnancies following IVF-surrogacy and IVF were similar, whereas the birth weights of twins and triplets born from the IVF-surrogates were significantly heavier than those delivered from conventional IVF patients. Preterm delivery was increased in twin and triplet gestations in all segments analyzed.[58,59] The incidence of low birth weight was significantly lower in children born after IVF surrogacy than in those born after IVF, for all births recorded. The incidence of congenital abnormalities following IVF and IVF-surrogacy was within the expected range for spontaneous conceptions. Speech delays were predominant in the multiple births, but neither speech nor motor delays persisted at 2 years of age in children born after IVF-surrogacy. These findings would imply that a GC would provide potential environmental benefits for the infant.

Studies reports that the occurrence of pregnancy-induced hypertension and bleeding in the third trimester was four to five times lower in the IVF-surrogates, independently of whether they were carrying multiples. [58,59] The incidence of cesarean section was 21.3% for singleton gestations, while two times higher in the IVF-surrogates carrying multiples (56.3%). Postpartum complications occurred in 6.3% of patients and the incidence of malformation was similar to those reported for the general population.

Neuromotor, cognitive, language, and behavioral outcome in children born following *in vitro* fertilization or ICSI[58,59,60]

No increase the risk for severe cognitive impairment (i.e., mental retardation) or neuromotor handicaps such as cerebral palsy (CP), the association of IVF/ Intracytoplasmic Sperm Injection (ICSI) and CP being brought about by the association of assisted conception with risk factors, like preterm birth. In general, controlled studies of good quality did not report an excess of neurodevelopmental (ND) disorders in IVF/ICSI-children. However, the majority of studies followed the children during infancy. The study precludes pertinent conclusions on the risk of ND disorders that come to the expression at older ages, such as fine manipulative disability or dyslexia. Speech delays were predominant in the multiple births, but neither speech nor motor delays persisted at 2 years of age in children born after IVF-surrogacy.[58]

Mother–child relationships and psychological outcomes

In the first UK study of 1-year-old surrogate children's relationships with their (intended) parents reported good family functioning and child development in their intended mothers sample compared with naturally conceived families.[13,14,15,16] Most mothers reported good mental and physical health and good development in their children. Compared to natural-conception parents, IP families have better relationships with their children, and their children are functioning well.[61]

Longitudinal studies on psychological adjustment in early-late adolescent childhood years[13,14]

At the age 1, greater warmth and enjoyment of the child were shown by intended mothers of children born through surrogacy in comparison with the natural conception mother, although this was accompanied by higher levels of emotional over-involvement. At age 2, the surrogacy mothers again showed more positive parent–child relationships, i.e., higher levels of joy and competence, and lower levels of anger and guilt. At age 3 the surrogacy mothers showed higher levels of warmth and interaction than mothers with a

naturally conceived child. Associated with less positive mother–child interaction at age 7. This finding may stem from the children's increased understanding of surrogacy and egg donation at this age. It is important to stress that the surrogacy and the egg donation families did not show higher levels of maternal negativity or lower levels of maternal positivity than the natural conception families. Instead, it seems that the absence of a biological link between mothers and their children may be associated with more subtle differences in patterns of mother–child interaction, i.e., in relation to responsiveness, reciprocity and cooperation. Parenting difficulties and the presence of psychological problems in the children may have been played down by surrogacy or egg donation mothers who may wish to present their child in a favourable light either as a reaction to the stigma that is associated with these assisted reproductive procedures, or because they feel they must live up to high expectations of themselves as mothers given the difficulties they had to overcome in order to have a child.

Psychological adjustment in adolescent years[15,16]

In particular, the sex of the parent and child, along with age and process of disclosure of the adolescent's conception were identified as key mediators of parent–adolescent relationships in families created by IVF-donor insemination/oocyte.

Specific role of mental health professional in surrogacy cycle[4]

- The MHP's role is to determine what is best for all of the parties involved, with particular attention to what is in the best interest of the child (created) as well as any existing children
- Apply professional skills according to the professional skills and ethical standards of his or her mental health profession as well as the standards of care in the field of third-party reproduction
- Foresee the range of problems that can potentially occur in third-party reproduction and pregnancy and intervene appropriately. The professional addresses emotional stress and (1) struggles with medical issues, (2) struggles with the relationship, and (3) struggles with logistical surprises.

Mental health professional practices with participants involved in surrogacy cycle at all stages and the core functions are[4]

1. Screening of the GC/SMs for eligibility
2. Screening the intended parents for eligibility
3. Determining the fit between both parties
4. Initial joint session and psychological preparation
5. Continued emotional care and psychological interventions for special needs of both parties during pregnancy and other critical times
6. Assisting all parties for psychological closure postdelivery
7. Assisting in parent management training of intended parents to address especially issues like stigma, disclosure, and child rearing.

CONCLUSION

The rising rates of infertility in developed and developing countries suggests that ART and even far ended treatments such as surrogacy are here to stay and bloom. Despite the popularity and controversies surrounding surrogacy, empirical research in the area is sparse. At present, most studies reporting on surrogacy have serious methodological limitations. This trend is evident in both Indian and international scenarios, primarily due to lack of government funding of research in this area, legal issues, and sociocultural stigma associated with. On a final note, the field of reproductive medicine and fertility studies is expanding as a pioneering branch of medical science. It offers novel opportunities and possibilities waiting to be explored not only by gynecologists, endocrinologists, embryologists, and microbiologists but also by medical anthropologists, sociologists, as well as MHPs (psychologists,

psychiatrists, and psychiatric social workers) who seek to venture into this area. Like in other sciences competence, legal as well as ethical conduct, openness, exploratory attitude, endurance, and malleability are human virtues integral to rigorous scientific developments in this field.

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Conflicts of interest

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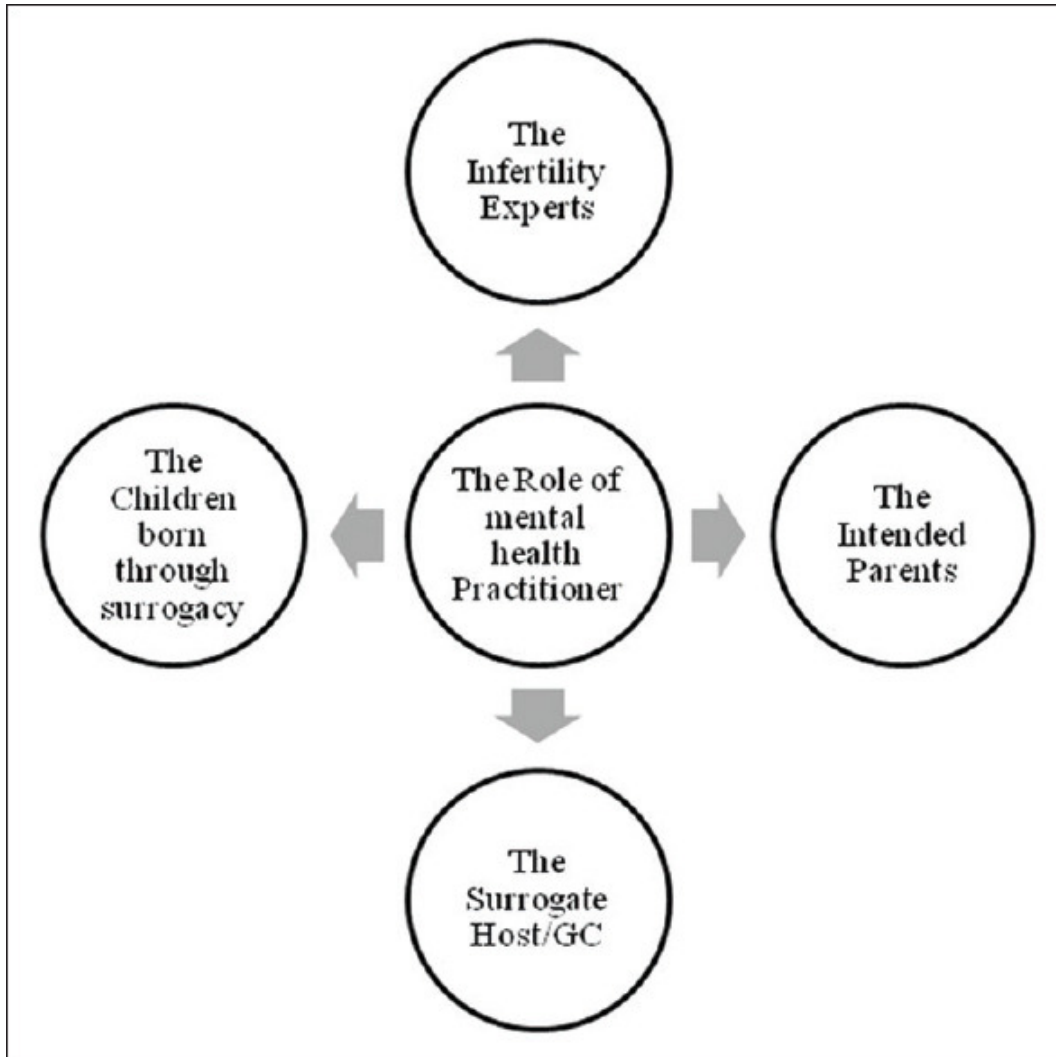
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Figures and Tables

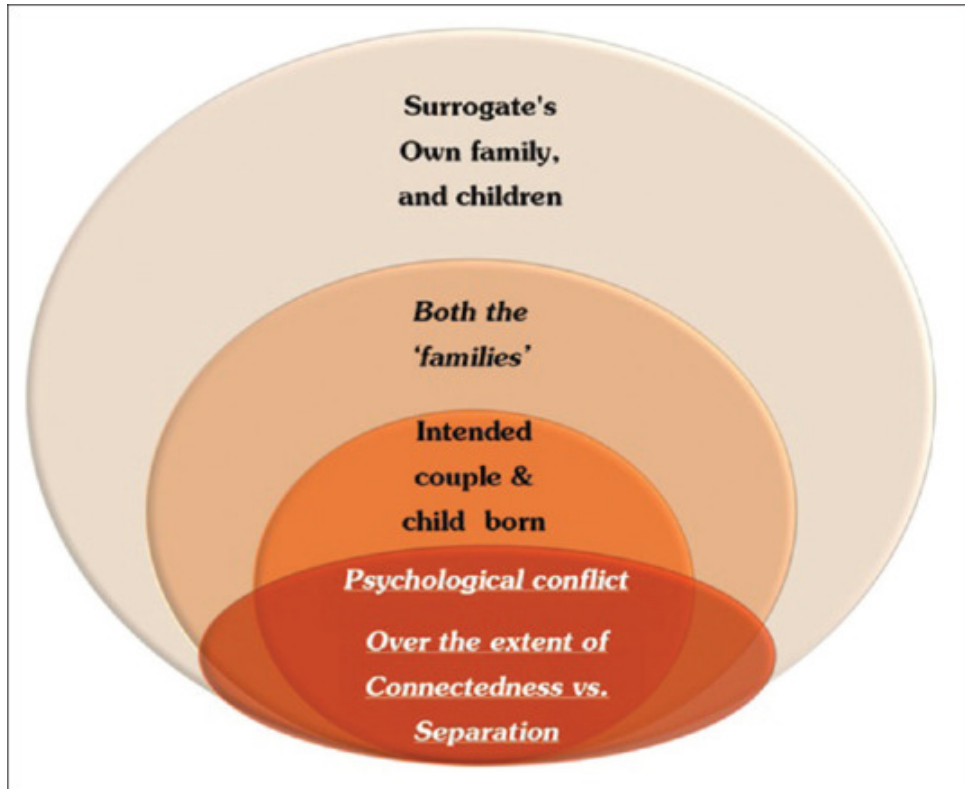
Figure 1



The surrogacy cycle

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Figure 2



Psychological conflict related to the sense of connection versus separation faced by surrogates[[9,11,23,24](#)]

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