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ORIGINAL ARTICLE

Process of becoming a mother for Iranian surrogacy-commissioning mothers: A grounded theory study

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Abstract

Aim: Little knowledge is available about the experiences of the commissioning mothers during the process of surrogacy; thus, the present study was conducted in order to explore and analyze this process.

Methods: This study was conducted in a referral institute in Tehran with a qualitative approach and using grounded theory methodology. The data were collected through 39 unstructured, in-depth interviews that were conducted with 15 gestational commissioning mothers, two of their husbands, four surrogates, and five of the personnel at centers for assisted reproduction (some participants were interviewed more than once). Sampling started purposively and then continued theoretically.

Results: The analysis revealed the main concern of these mothers to be the feeling of "insecurity about becoming a mother" and their predominant strategy for dealing with it to be "seeking security about becoming a mother," which emerged as a core concept. The consequences of the mothers' adopted strategies and the effects of the intervening factors included "reaching a state of relative peace," "a continuing threat to one's identity," and "mental and physical exhaustion."

Conclusion: Identifying the demands of this group of mothers can help medical personnel, particularly nurses, adopt better plans for the future and to optimize the care they provide to these patients.

Key words: assisted reproductive technologies, becoming a mother, commissioning mother, grounded theory, surrogacy.

INTRODUCTION

In societies such as Iran, where child bearing is considered to be a part of women's identity and a source of power for them in the family and society, due to the existing social prejudices, infertility is thought to be a woman's problem (Abbasi-Shavazi, Asgari-Khanghah, & Razaghi-Nasrabad, 2005), regardless of the fact that women and men almost equally experience infertility (McDonald Evens, 2004); therefore, women who are struggling with infertility encounter more family and social problems than men. Today, with the development of modern technologies in the field of medical sciences, humans are presented with new potential and facilities (Nosarka & Kruger, 2005). Surrogacy is a viable and practical treatment of infertility (Constantinidis & Cook, 2012) and is considered to be one of the methods that is available for becoming a mother.

Surrogacy refers to a third person's agreement to carry and give birth to a child for an infertile couple and to surrender the newborn to the commissioning

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[Correction added on 17 February 2017, after first online publication: in the Methods section of the Abstract, 'four of the personnel at centers' has been corrected to 'five of the personnel at centers'.]

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couple after birth (Baykal, Korkmaz, Ceyhan, Goktolga, & Baser, 2008; Strathern, 2002). Surrogacy is classified under two general categories: (i) full gestational surrogacy, in which the surrogate is not genetically related to the child; and (ii) partial surrogacy, in which the surrogate donates her oocytes and becomes the genetic mother of the child (Brinsden, 2003). In Iran, surrogacy arrangements were first implemented in 2001 by a number of fertility clinics (Hamdolahi & Roshan, 2009). As the cases of gestational surrogacy were more easily accessible, all of this study's participants were selected within the category of gestational surrogacy.

In the absence of a proper referral system for surrogacy, Iranians often seek medical help and ask for diagnostic, therapeutic, and screening procedures at physicians' offices, infertility centers, and hospitals and at their discretion. There is a lack of a central recording system and precise statistics on the number of surrogacies in Iran. The large number of patients who are admitted to the fertility clinics across the country prevents these centers from providing adequate support services to couples seeking surrogacy. Finally, under Iranian law, the woman who gives birth to an infant (the surrogate in this case) is regarded as the infant's mother in the issued birth certificate (Zandi, 2013).

LITERATURE REVIEW

Numerous studies that have been conducted on mothers who are experiencing motherhood for the first time have shown the importance and the challenging nature of the experience of becoming a mother for the first time (Nelson, 2003, 2004; Nystedt, Hogberg, & Lundman, 2008; Russell, 2006; Tarkka, 2003). However, a review of previous studies shows the lack of studies that have been conducted that describe the process of surrogacy motherhood. The only grounded theory study that has been conducted on surrogacy is Kleinpeter's (2002) study, which described the experiences of 26 surrogacy-commissioning couples but did not describe the process. The theories and models that have been developed to describe the process of becoming a mother have not discussed surrogacy (Barclay, Everitt, Rogan, Schmied, & Wyllie, 1997; Fontenot, 2007; Mercer, 1995).

The main theories on becoming a mother include Rubin's (1967a and 1967b) theory of maternal role attainment and Mercer's theory of becoming a mother, which cannot cover surrogacy motherhood due to a number of reasons. Rubin (1967a) proposed the process of maternal role attainment as the mental experience of mothers during natural pregnancy until 1 month after childbirth. She identified four tasks for the duration of pregnancy, including securing a safe pregnancy for both the mother and child, ensuring acceptance of the child, forming the mother's attachment to her unknown child, and the mother becoming confident enough to carry out self-care [Correction added on 17 February 2017, after first online publication: the citation 'Mercer (2004)' in the preceding sentence has been changed to 'She'. The corresponding reference in the reference section and its citation throughout the article have also been removed.]

Rubin's student, Mercer, extended these concepts to the duration of pregnancy until 1 year after childbirth and also emphasized the role of the mother's partner (i.e. the father), the mother's own diseases and the likelihood of a high-risk pregnancy (Tomey & Alligood, 2006). According to Mercer (1995), maternal role attainment begins with pregnancy and becoming a mother occurs within four stages that span different periods and potentially overlap each other. These stages include: (i) commitment, attachment, and preparation (pregnancy); (ii) acquaintance, increasing attachment to the newborn, learning to care for the newborn, and physical restoration (first 2–6 weeks after childbirth); (iii) moving toward the new normal conditions (2 weeks to 4 months after childbirth); and (iv) achieving a maternal identity (around the age of 4 months). Attachment is a process that begins during pregnancy and forms a strong emotional component of maternal identity that helps to motivate mothers to acquire maternal competence and gain satisfaction with their role (Mercer). As noticed, the four tasks that were identified for the duration of pregnancy in Rubin's theory and the first stage of Mercer's theory of becoming a mother take on an ambiguous meaning when dealing with commissioning mothers, given that these mothers enter their maternal role and adapt to it without having experienced the physical changes that are caused by pregnancy. The commissioning mothers might find the sudden transition to their maternal role very challenging and might have a completely different experience of becoming a mother.

During pregnancy, mothers establish a deep emotional bond with the embryo. A great part of the mother–child emotional bond thus is developed during pregnancy (Aramesh, 2008); however, in the case of surrogacy, establishing a bond with the embryo is difficult for the commissioning mothers during their surrogate's pregnancy. Surrogacy motherhood has its particular set of problems and the mother's handling of

these conditions should be examined in depth. According to Mercer (2006), identifying mothers' particular concerns and available resources to address these concerns and enhancing their care-providing capabilities is critical to developing their feelings of maternal competency and maternal identity attainment. Nurses are strategically positioned to exert consistently positive effects on these mothers during their transition to the new maternal role (Mercer). A review of the literature shows the dearth of information about the process of becoming a mother for commissioning mothers. Acquiring a fuller understanding of this process and the factors that affect it could empower nurses in the care services they provide to these mothers.

METHOD

Aim

The present study was conducted in order to explain and analyze the process of becoming a mother for surrogacy-commissioning mothers and used a qualitative grounded theory approach that facilitated the acquisition of comprehensive subjective data in order to make up for the lack of research on the unique nature of commissioning mothers' experiences during the process of becoming a mother.

Study setting

The process of recruiting the participants started from the center in which the researchers worked (a major fertility referral center in Tehran, Iran) and continued in other fertility clinics, hospitals, and physicians' offices that offered surrogacy services. Commissioning couples and surrogates tend to frequently visit these settings and receive diagnostic, therapeutic, and care services from their healthcare personnel.

Participants

As the process of surrogacy motherhood, unlike natural motherhood, begins with a woman's firm decision to use surrogacy, the study's participants were chosen from among commissioning mothers who had decided to use gestational surrogacy and were at any stage of the process (i.e. the stage of choosing a surrogate, therapy, embryo implantation, the surrogate's pregnancy, and the surrogate's delivery of the newborn), who spoke Persian, and who were willing to participate in the study. Those women who were not certain about their decision to use surrogacy and who had not started the stages of treatment yet were excluded from the study.

Data collection

The data were gathered through interviews and field notes. In compliance with the principles of grounded theory research, the selection of the study's participants began with purposive sampling and continued with theoretical sampling in order to aid the selection of the individuals who adhered more closely to the concepts that were being developed and the theory being formed. The institute's designated social worker, who was well known and trusted by the infertile couples who had been admitted, contacted the eligible candidates, briefed them on the objectives of the study and its methodology, and inquired whether they were willing to participate or not. The first author obtained the consenting women's phone numbers. Then, the women were contacted and briefed again on the study's objectives and they were ensured of their right to withdraw from the study at any point in time and of the confidentiality of their information. The consenting participants next were asked to set a suitable time and location for holding their interviews. During the interview sessions, the participants first were requested to sign an informed consent form that allowed for the recording of the interviews. All the interviews were successfully recorded with the participants' consent, with the exception of one case in which the participant did not allow a recording and instead consented to the researcher taking notes of her interview session.

The formal interviews were unstructured and began with the general question of: "What made you decide to use surrogacy?" and continued, if necessary, with more in-depth exploratory questions, such as "How?," "Why?," "Can you elaborate?," and "What was the outcome?," based on the participants' responses.

Overall, 39 unstructured formal and informal interviews were carried out. The informal interviews were unplanned encounters or phone calls during which the researcher obtained additional information. The formal interviews were conducted wherever the participants recommended and felt comfortable (including the participants' home, workplace, or park near their home or the fertility center). The interviews were conducted with 15 commissioning or genetic mothers, four surrogates, two husbands or genetic fathers, and five fertility center personnel who counted as a crucial source of information for the theoretical stage of sampling. Approximately seven interviews were conducted first with the

commissioning mothers. Following the analysis of the data that were obtained and the emergence of a number of subthemes (such as the surrogate's lack of trust and concerns, which will be elaborated in the findings of the study), the other participants, including the surrogates and some of the fertility centers' personnel who were in close contact with the mother and the surrogate and acted as their mediator for forming an acquaintance and resolving potential conflicts, were recruited for theoretical sampling and to discuss the connection between the concepts being formed. Moreover, some of the participants were interviewed more than once. For instance, some participants talked well and enthusiastically, but due to the lack of their time, the author stopped the interview and scheduled another interview or after transcribing and reflecting on the interviews, new questions were raised for the authors and another interview was scheduled. Each interview lasted from 0.5 to 3 h, with a mean duration of 57 min.

Field notes were used to describe the actual processes and events and also to complete and validate the interview data. The recorded field notes concerned mostly the interaction between the medical personnel and the mothers, the interaction among the mother, the child, and the family, and any other event that took place during the interviews and pertained to the objectives of the study. The study began in October 2011 and continued until June 2013.

Data analysis

The data were analyzed concurrently with their collection and were based on the three-stage method of Strauss and Corbin (1998) of open, axial, and selective coding. The first author had received instructions on the research methodology that had been adopted for this study and the process of conducting interviews during her PhD course and prior to beginning this study and then was evaluated by the second and third authors, who had long-term experience in qualitative research.

Each interview was transcribed as detailed as possibly immediately after their completion and then was reviewed several times. The participants' non-verbal forms of communication, such as their facial expressions, laughs, cries, pauses, and emphases, also were recorded in parentheses along with their statements. The interviews were typed into MAXQDA 2007 (Berlin, Germany) and reread line by line and then broken into semantic units (codes). The semantically similar codes were classified under one primary category. The primary categories then were consistently reviewed and gradually led to more abstract concepts. This process continued until the integration of the categories was no longer possible and concept saturation had occurred. The process of axial coding ultimately led to the formation of nine axial categories.

The storyline-writing method was used to identify the core concept; during this process, the participants' problems also were identified and the core concept or category that defined the participants' manner of dealing with, and gradually solving, their main problems then emerged. With the emergence of this core concept, the formulated theory was re-articulated by using the emerged concepts, rather than the raw data. In total, 324 memos were drafted from the first interview through to the final stages of writing and then were recorded in MAXQDA-2007.

Trustworthiness

The study was validated based on the five evaluative criteria that were proposed by Lincoln and Guba in 1994 (as cited in Polite & Beck, 2010), including credibility, confirmability, dependability, transferability, and authenticity. In order to establish these five criteria, a number of measures was adopted, including a prolonged engagement of >2 years with the research topic, validation through five participants (member check), verifying the process of analysis with members of the research team who had long-term experience in qualitative research, using the comments made by external observers (external check), data triangulation (through sampling the mothers, husbands, surrogates, and fertility centers' personnel), time triangulation (through sampling the mothers at different points in the process of becoming a mother), and the minute recording of the data.

Ethical considerations

The present study complied fully with the ethical principles of conducting qualitative research, including obtaining separate permission from the authors' universities and the referral center in which they worked, briefing the participants on the importance, objectives, and methods of the study and the recording of the interviews, reserving the participants the right to refuse to participate in the study at any point in time, to refuse the recording of their interview sessions and to determine the place and time of the interviews, and ensuring the participants of the confidentiality of their information.

Table 1 Demographic characteristics of the commissioning mothers who participated in this study

Characteristic	Mean or N (%)
Mother's age (years)	
20–29	Mean: 33
20–47	3 (20.1)
30–39	10 (66.6)
40–47	2 (13.3)
Educational level	
Below high school diploma	4 (26.7)
High school diploma	1 (6.7)
Associate's degree	1 (6.7)
Bachelor's degree	7 (46.7)
Master's degree	1 (6.7)
PhD	1 (6.7)
Relationship with the surrogate	
Family and relatives (mother in one case and sister in another)	2 (13.3)
Without a former acquaintance	13 (86.7)
Reason for using surrogacy	
Rokitansky syndrome	7 (46.7)
Frequent abortions for various reasons	5 (33.3)
Emergency hysterectomy	2 (13.3)
Infertility with an unknown cause	1 (6.7)
Number of children	
Singleton	10 (66.7)
Twins	2 (13.3)
Triplets	1 (6.7)
Under treatment	2 (13.3)

Table 2 Demographic characteristics of the surrogates who participated in this study

Characteristic	Mean or N (%)
Surrogate's age (years)	
26–40 years	Mean: 34.75
Educational level	
Below high school diploma	2 (50)
High school diploma	2 (50)
Surrogate's relationship with the commissioning mother	
Family, relative, or acquaintance (a mother of the commissioning couple)	1 (25)
Without a former acquaintance or familial relationship	3 (75)
Number of children	
1	2 (50)
2	1 (25)
3	1 (25)

RESULTS

Tables 1 and 2 present the commissioning mothers' and the surrogates' characteristics, respectively. The analysis of the data resulted in nine axial categories, including "cultural impasse," "insecurity about becoming a mother," "seeking security about becoming a mother," "reaching a state of relative peace," "a continuing threat to identity," "mental and physical exhaustion," "sources of support," "the manner of interaction between the parties," and "personal–environmental attributes."

According to the study's findings, "insecurity about becoming a mother" was the commissioning mothers' main concern. These mothers adopted various strategies to cope with this issue, including seeking support and information, trying to gain security in relation to the surrogate, constant protection and monitoring of the embryo and the surrogate, and achieving a maternal identity. The core concept of "seeking security about becoming a mother" then emerged.

In order to elaborate on the commissioning mothers' process of becoming a mother, the authors explained the relationship that developed between the axial categories that were based on the paradigmatic model of Strauss and Corbin (1998).

Contextual and causal conditions

Cultural impasse

Once they were fully determined to use surrogacy, "cultural impasse" awaited the mothers first and foremost (contextual conditions). "Cultural impasse" involved the mothers' encounter with the practices, rules and regulations, values and beliefs, and knowledge and ideas that are held by the public that contradict the use of surrogacy. Cultural impasse consisted of three subthemes: (i) the "lack of cultural preparation;" (ii) the "improper attitude of society toward surrogacy;" and (iii) "legal impasse."

The "lack of cultural preparation" referred to the inadequacy of knowledge in society about surrogacy and its taboo status, leading to the "improper attitude of society" toward the issue. This attitude then resulted in the mothers' feeling of "insecurity about becoming a mother:"

> *You know, my biggest concern in this period is, and I didn't even see bad reactions, but still, my problem is with the reactions, with people's reactions, my biggest concern of all …* (Mother 12)

"Legal impasse", which was another subtheme of "cultural impasse", referred to the participants' position

in a complicated situation where surrogacy laws are non-existent and the legislative system has failed to take into account laws on surrogacy arrangements. Despite the growing trend in the use of surrogacy in Iran, no surrogacy law has yet been formulated in the country's legal system. Under the current laws, the surrogacy child's birth certificate is issued under the name of the surrogate, which is problematic for the genetic parents of the child and leads to a "feeling of insecurity about becoming a mother" in the commissioning mothers:

> *Then, I was also worried about his birth certificate because, at that time, they had told us that we might face difficulties, like my name would not be on it, so I was very worried about this too. It was very problematic for me, I wondered what if they don't accept. What will I do then?* (Mother 10)

Therefore, it can be argued that being positioned in a cultural impasse has led to the emergence of "feelings of insecurity about becoming a mother."

Main problem or concern

Insecurity about becoming a mother

The analysis of the findings showed that "insecurity about becoming a mother" was the main concern of the commissioning mothers through combining a sense of uncertainty, distrust, and concern about not being recognized as the mother either by themselves, their husband, their relatives, or society in general and also about not being able to play their maternal role competently (Fig. 1).

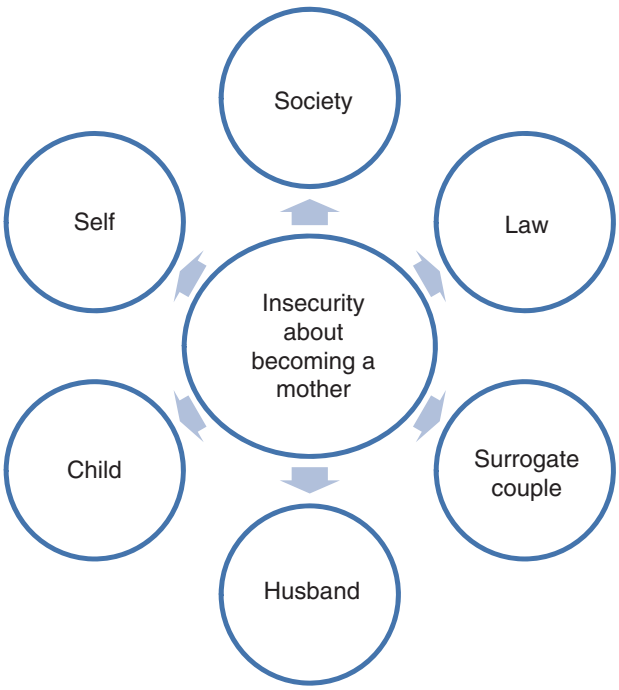

Figure 1 Sources of the feeling of "insecurity about becoming a mother" (main concern).

The mothers perceived their feeling of insecurity about becoming a mother through six sources: (i) society (for instance, people's attitude toward the use of surrogacy and their different outlook on the genetic parents and the child, the risk of other people's accidental disclosure of the surrogacy arrangement to the child, in disagreement with the parents' desire, and a general threat on the part of society regarding the identity of the parents and the child); (ii) the law (for instance, the lack of specific surrogacy laws and the likelihood of issuing the child's birth certificate under the surrogate couple's name); (iii) the surrogate couple (proper care for the embryo and avoiding harm to it, the possibility of attachment between the surrogate and the embryo, and a failure to hand over the child after birth); (iv) the husband (the risk of being abandoned by the husband in case of embryo implantation failure, his developing an affair with the surrogate during the process, and his failure to accept the child); (v) the embryo or child (the embryo's health and termination of the waiting period, being accepted as the mother and father by the child in the future, and the manner of disclosing the arrangement to the child); and (vi) the mother herself (the ability to establish an emotional bond with the child after birth and the ability to play the maternal role competently):

> *You're worried about what happens if everybody finds out; for example, what if (the surrogate) doesn't hand over the baby to you? Or what if nobody in the family wants to even look at the baby? Too many worries! Because it's not only me and my husband, we're living with our family and with the society. And if somebody doesn't respect my child and looks at him like he's a foster child, then what? These are all my concerns.* (Mother 6)

Actions and interactions

Seeking security about becoming a mother

The commissioning mothers who were surveyed projected different actions and interactions toward their main problem (their insecurity about becoming a mother), which formed the core concept of this process, namely "seeking security about becoming a mother." This concept emerged with subthemes, including

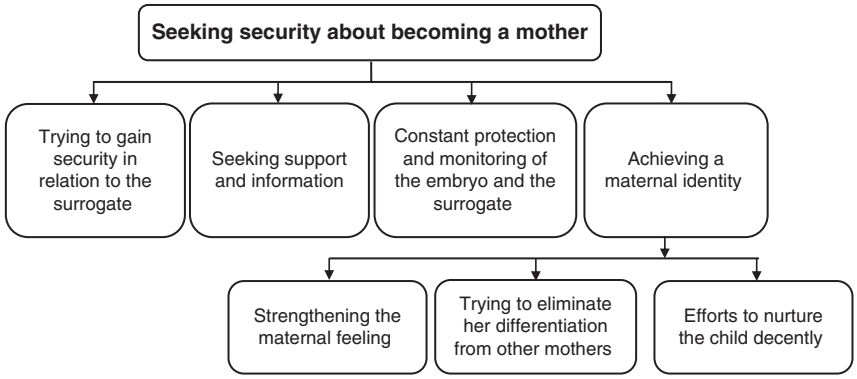

Figure 2 Formation of the "seeking security about becoming a mother" concept.

"seeking support and information," "trying to gain security in relation to the surrogate," "constant protection and monitoring of the embryo and the surrogate," and "achieving a maternal identity," which are briefly explained (Fig. 2).

1 *Seeking support and information*. Support and information comprised the most crucial needs of these mothers in the process of becoming a mother. The commissioning mothers tended to obtain their information from reliable sources, such as social workers and physicians' infertility clinics, and consulted with them about different matters:

I was studying all the time, reading different books. Both me and my husband. Then, we were asking others, for example, how should it be? What types of food should we provide [for the surrogate and the fetus]? (Mother 6)

2 *Trying to gain security in relation to the surrogate*. Gaining security in relation to the surrogate involved a collection of measures that was taken by the mother in order to relieve her feelings of insecurity toward the surrogate, including an attempt to determine a trustworthy surrogate, being over-sensitive about the selection of the surrogate, establishing long-term family relations with the surrogate and evaluating her prior to signing the contract, an attempt to formulate clear, comprehensive agreements, the selection of a mediator for potential disputes, and the discontinuation of relations with the surrogate after the birth of the child. One of the mothers, who was herself a medical practitioner, said of the selection of a surrogate:

Well, her appearance didn't matter to me at all. I just wanted her to be very religious, very faithful I mean, so she wouldn't try to deceive us all the time in the future! [Although she did.] I wanted her to be from a religious family. That was very important to me. (Mother 9)

3 *Constant protection and monitoring of the embryo and the surrogate*. The protection measures that were taken by the commissioning mothers included their efforts to create a suitable environment for the growth of the embryo and for the surrogate's pregnancy. They therefore adopted strategies, such as providing financial, mental, and physical support, providing constant companionship to the surrogate and ensuring proper care and follow-up of the embryo's and the surrogate's health, and frequent contact with the surrogate, either in person or over the phone:

I give her [the surrogate] a lot of hope. She's a very personable woman. Every time something happened, like when she was in pain or was bleeding, she'd phone me so that I'd talk to her. The more I talked to her, the more she calmed down. (Mother 4)

4 *Achieving a maternal identity*. Achieving a maternal identity was another subtheme of seeking a feeling of security about becoming a mother and included activities that the mother carried out in order to be able to competently play the maternal role, keep society, her husband, her child, and herself happy, be accepted by them as a real mother, and experience the real feeling of motherhood herself. In surrogacy, achieving a maternal identity consisted of three subthemes:

a. *Trying to eliminate her differentiation from other mothers*. This was achieved through such strategies as concealment, seeking to make the process of becoming a mother look natural, highlighting her maternal role and minimizing the role of the surrogate, and making efforts to issue her child's birth certificate under her own name. One of the mothers who was still in her waiting period said:

The word "mother" is far beyond a 9 month pregnancy, far greater than 9 months of pregnancy to even think of crediting the surrogate with the child! … I never like to be differentiated from a normal mother. (Mother 12)

b. *Efforts to nurture the child decently*. This was achieved through providing selfless physical and mental care to the child and providing him or her with comfort.
c. *Strengthening the maternal feeling*. This was achieved through measures that were taken by the mother to compensate for her inner deficiencies, to enhance her maternal feelings, form a bond with her child, and generally to achieve a maternal identity through acts, such as touching the embryo in the surrogate's womb and talking to her or him, establishing an emotional bond with the child after birth, trying to experience breast-feeding, showing affection toward the child, and playing with her or him. One of the commissioning mothers who was completely decided about preparing herself for the experience of breast-feeding said:

My doctor argued with me and told me I bother myself too much to breast-feed the child, that her own daughter didn't breast-feed her child. But, sometimes when you feel weak in some way, then you want to fill the gap with something else. (Mother 12)

According to Straus and Corbin (1998), intervening factors are factors that can either contribute to the discussed strategies or hinder their progress.

Intervening conditions

Manner of interaction between the parties

This involved the communication between the commissioning couple and the surrogate couple and consisted of two dimensions. In some cases, these interactions were undesirable and inhibiting; in some others, they were desirable and facilitating and involved a relative degree of trust and mutual understanding of each other's circumstances. One commissioning mother who was under constant pressure by her surrogate said:

She bothered me a lot about the money. She had a new demand every day, though we had made an agreement with her, she almost took 10 million Riyals (almost $3000) from me every month, besides the money specified in the contract. (Mother 9)

Personal–environmental attributes

This involved the mother's personality, her personal experiences, and the immediate environmental conditions that affected her selection of strategies and they could be either facilitating or inhibiting on their own. The personal attributes connoted the mother's experience of recurrent abortions and difficult pregnancies or multiple negative embryo implantations, her confrontations with inappropriate surrogacy candidates and her stressful or relaxed personality, self-confidence and inclination to establish extensive social relations, or else the lack of them. For instance, having confronted inappropriate surrogacy candidates made the mother more cautious and sensitive about selecting a surrogate and made trusting the new surrogate much more difficult.

The environmental conditions that affected the strategies that were adopted by the mothers included being near or far from her own or her husband's family, being employed or unemployed, others' awareness or unawareness about the couple's underlying problem of infertility, close or distant relations with relatives, access to a trusted person or the lack of it, the reactions of others, and the family's and society's culture and level of education. For instance, being far from one's family could be a facilitator for concealment when the mother intended to conceal the truth about the surrogacy; otherwise, it was an inhibitor because the mother lost access to a major source of support. One of the mothers who was inherently inclined toward concealment and found being far from relatives a facilitator of this strategy said:

I didn't want my family to find out. Because we live alone here. Our families (both mine and my husband's) live in another city. And we go visit them every month or other and then come back. (Mother 1)

In another interview, the same mother, who had a 16 month old child, found being far from her family led to a lack of support with child care and fatigue and said:

I just feel lonely and tired. I wish there was someone who could help me. Then, I don't think someone living close to their relatives would have any problems. (Mother 1)

Sources of support

This comprised another important intervening factor that could be experienced in two ways: "enjoying support", which was a facilitator, and "having ineffective support", which was an inhibitor of the process. "Enjoying support" was enjoying formal and informal sources of support by which the mother felt supported,

in which she could trust to maintain her confidentiality, and on which she could rely. Examples of this support included support from her husband, the family, and others, the surrogate's fidelity and cooperation, support from her peer group, support from fertility centers, and perceiving spiritual support. Support from fertility centers comprised a series of supportive activities with a counseling and instructional nature that were mostly carried out in a number of public fertility centers. The husband of one participant said:

> *We were unhappy about the trip she [the surrogate] wanted to take to see her mom [the surrogate's mother.] So, we told the social worker and she said that we can't get in the way of her normal life, but they gave her a lot of advice …* (Husband/Genetic Father 1)

However, the commissioning mothers who were surveyed believed that such sources of support were not sufficient and that at times the mother was not even aware of the availability of support. "Ineffective support" referred to the mothers' receiving of inadequate support and their unfulfilled needs, which acted as inhibitors of the process of seeking a feeling of security about becoming a mother and were usually present in the following three forms: (i) the absence of formal and informal sources of support (formal sources included exclusive surrogacy laws and insurance and informal sources included financial support from the couple's family); (ii) the mother's reluctance to use the sources of support that were available to her due to her concealing intentions; and (iii) the inadequacy of the support systems that were available (such as inadequate support from the fertility and medical centers that did not really facilitate the process of becoming a mother). The commissioning mothers tended to experience a combination of two or three of the discussed forms.

The inadequate support from the medical care systems that were experienced by the mothers included the personnel's lack of commitment and responsibility, the failure of some medical centers to respect the human dignity and privacy of the commissioning mothers, insults and humiliations, negligence in care, setting wrong appointments, a failure to coordinate the services that were provided, unsatisfactory hygienic conditions, particularly in the private centers, a failure to respond to the patients' questions, the lack of a follow-up system after childbirth, and the lack of a central monitoring system controlling the centers that were providing surrogacy services. One mother with a 3 year old child complained about the center's failure to provide information throughout all the stages of the treatment:

> *The doctors didn't explain it to us, like, what size it should be before they can remove the eggs … I mean, it's hard to get any word out of them, it's like they mean to surprise you with whatever happens! Like that! They continually cut you off, and finally, when you're fed up with this, they tell you to come in on Wednesday for retrieving eggs. Come in, so we can do this or that.* (Mother 11)

Consequences

The commissioning mothers' use of strategies in response to their feelings of insecurity about becoming a mother and the impact of the intervening factors eventually could result in positive consequences, such as "reaching a state of relative peace," and negative consequences, such as "a continuing threat to identity" and "mental and physical exhaustion."

Reaching a state of relative peace

Certain efficient strategies that were adopted by the commissioning mothers, such as resorting to spirituality, brought them a greater peace of mind; however, since the stressors never entirely disappeared, this peace was only relative. Among the list of items that made the mothers reach a state of relative peace was receiving support from significant others, gaining spiritual peace through resorting to spirituality, gaining trust in the surrogate and the embryo or child, proving maternal and parental identity (through issuing the child's birth certificate under the genetic parents' name, the child turning out to look like the parents, getting positive DNA test results, and proving genetic ownership), and the realization of the dream of becoming a mother (on positive embryo implantation and subsequent childbirth). One of the mothers with a 2 year old child said of her spiritual peace and its impact on her anxieties:

> *I'd read the Quran and resort to it. Well, I'd get very relaxed. Then, my sister told me something very beautiful, she told me: "Entrust your child to God. Then, stop being worried. If He wills, it'll be, if He doesn't will, it won't be, no matter what you do. So, don't beat yourself up too hard." Then, I'd entrust it to God and I'd suddenly start feeling such deep peace. Then, I'd become very relaxed and say "Okay, I've entrusted my child to God. There's nobody greater than God, He'll take care of it." … And then in about 2 h, I'd become worried all over again.* (Mother 2)

A continuing threat to one's identity

In some cases, the inefficient strategies that were adopted, the impact of the underlying conditions, and the intervening factors resulted in "a continuing threat to identity;" for instance, despite concealing the use of surrogacy, the mother was still worried about its disclosure to others and to the child, which prevented her from reaching a state of profound peace. One commissioning mother who had concealed her use of surrogacy said:

> *I hadn't told my family, I was stressed out about them finding out, and I still am. I can't believe they haven't found out. You may not believe it, but my child went into his 16th month today and I'm still worried about that! Like, what if something happens and they find out that I haven't told them the truth?* (Mother 1)

Physical and mental exhaustion

This type of exhaustion referred to the reduced physical and mental abilities and increased feelings of fatigue and exhaustion that emerged as major consequences of seeking a feeling of security about becoming a mother. The main features of physical and mental exhaustion included: (i) the mother's "reduced threshold of tolerance" in dealing with daily affairs, including problems related to her husband, children, and others, due to having coped with great amounts of tension in the past; (ii) the "feeling of mental fatigue and physical inability," which did not occur only after the birth of the child, but also sometimes from the very beginning of the process; that is, from the time the mother began to seek a surrogate and thus had to undergo a lot of tension; and (iii) the "feeling of regret" (regretting not being able to use certain strategies against feelings of insecurity, such as disclosing the use of surrogacy to people, regretting getting mad at her husband and children, and regretting becoming a mother at an old age); and (iv) the mother's "dissatisfaction with the role," which implied her inner dissatisfaction with her roles as mother and wife, which could be related to a number of reasons:

> *Like, there are a lot of things I can't tolerate anymore today. Even my family has figured this out. I was their confidant in many matters, but now they mostly don't talk of any of their problems. Because they know I can't tolerate anything anymore.* (Mother 10)

Figure 3 displays the final diagram of the "seeking security about becoming a mother" theory.

DISCUSSION

The objective of the present study was to explore and analyze the process of becoming a mother in surrogacy-commissioning mothers, which resulted in the emergence of the theory of "seeking security in becoming a mother." Seeking security was influenced by cultural factors and was, in fact, the mothers' conscious efforts that issued from feelings of insecurity about becoming a mother that emerged in multiple forms. Some of the strategies (such as seeking support and information) were effective and helped the mothers to reach a state of relative peace, along with the positive effects that were exerted by other facilitators; however, some other strategies (such as concealment) were not effective and resulted in a continuing threat to identity and physical and mental exhaustion, along with the negative effects that were exerted by other inhibitors.

A review of the literature on becoming a mother through a normal pregnancy (Barnes *et al.*, 2008; Mercer, 1995; Nelson, 2003; Russell, 2006; Tarkka, 2003) revealed the lack of studies that have been conducted on the feeling of insecurity about becoming a mother, which demonstrates that the main concern of commissioning mothers is different from that of typical mothers and that it requires further attention. As noted in the findings, seeking security was a mother's natural reaction when presented with feelings of insecurity and was projected in various ways, including "seeking support and information," "trying to gain security in relation to the surrogate," "constant protection and monitoring of the embryo and the surrogate," and "achieving a maternal identity." As previous studies on this subject do not discuss "seeking security in becoming a mother," this study addressed the four subthemes of the core concept.

"Seeking support and information" was a common strategy that was used by the commissioning mothers who were studied in the present research, and although useful on its own, it sometimes did not entail satisfactory consequences for the mother, as they sometimes sought this information in sources that were not valid and, more importantly, because competent sources failed to provide clear and sufficient information. The fertility centers and medical centers that were visited by

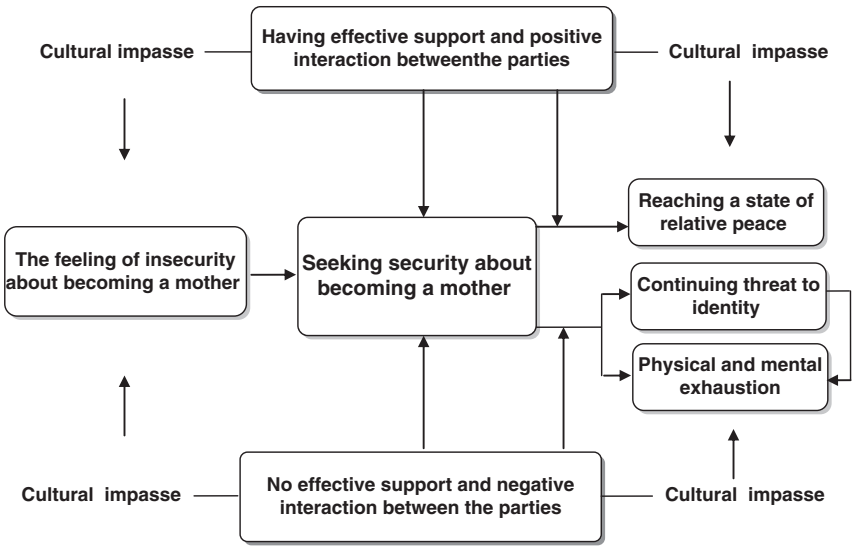

Figure 3 Final diagram of the "seeking security about becoming a mother" theory.

the commissioning mothers counted as the main sources of providing instructional and support services. As according to the findings of other studies, the patients took their receiving of information from the nurses and healthcare teams to indicate caring behaviors and to constitute one dimension of support (Hershberger & Kavanaugh, 2008) and the patients using assisted reproductive technologies (ART), including surrogacy, expected medical centers to provide them with adequate information and support (Dancet *et al.*, 2011; Kleinpeter, Boyer, & Kinney, 2006; Payne & Goedeke, 2007). Hershberger & Kavanaugh (2008) claimed that providing patients with accurate information and allowing them to ultimately make their own decisions made them feel in control (Hershberger & Kavanaugh). However, the present study revealed the failure of health centers to provide families with clear and sufficient information and the experiences of the commissioning couples who were surveyed were not indicative of having received sufficient support. "Trying to gain security in relation to the surrogate" was another strategy that was adopted by the mothers in different ways in order to seek security and to eliminate the feeling of insecurity in relation to the surrogate. According to the participants' experiences, the commissioning couples were often themselves responsible for finding a surrogate. In Iran, except for a few reputable fertility centers that take on the responsibility of finding a surrogate for the commissioning couple (although these centers have rather long waiting lists), no organization exists that is responsible for finding a surrogate (Zandi, Vanaki, Shiva, & Mohammadi, 2012). In the UK and the USA, however, specialty centers exist that provide the service of finding a surrogate (Brinsden, 2003; Griswold, 2006; Ragone, 1994); in other countries, surrogates must be altruistic volunteers (Constantinidis & Cook, 2012). As shown, benefiting from sources of support is crucial in relation to the selection of a surrogate and the proper selection of a surrogate can, in fact, make the mother feel largely secure in relation to the surrogate. There is no support center to help couples to find a surrogate in Iran.

Another strategy that was adopted by the commissioning mothers who were surveyed in the present study was "constant protection and monitoring of the embryo and the surrogate," which often was realized through continuous interaction with the surrogate over the phone or in person and in response to the mother's feeling of insecurity in relation to the embryo and the surrogate couple. This strategy was tremendously effective in helping the mother to reach a state of relative peace and therefore can be considered as an effective strategy in the formulation of mother care programs. In the study that was conducted by MacCallum, Lycett, Murray, Jadva, and Golombok (2003), most of the mothers met with the surrogate at least once per month during the surrogate's pregnancy, although the number of visits increased if the surrogate was an acquaintance (MacCallum *et al.*). However, given the study's quantitative approach and use of structured inventories, no information on the effect of this relationship on the mother's peace of mind was provided. Undoubtedly, adopting this strategy can result in favorable consequences if managed properly, such as facilitating the transition into the maternity role.

"Achieving a maternal identity" was a strategy that was used by the mothers in their search for feelings of security. A significant concern of the mothers who were using ART was society's differentiated view of the parents and children who are created and born in this way, which has been noted also in other studies as being seen as out of the mainstream (Ardekani, Abbasi-Shavazi, Nasrabad, & Akhondi, 2007; Kirkman, 2008). However, the participants' manner of dealing with this concern differed from one study to another and depended mainly on the sociocultural context in which the studies have been conducted. For instance, one strategy to eliminate this distinction that was adopted by the commissioning mothers who were surveyed in this study was to conceal the use of surrogacy. In the study by Pashmi, Tabatabaie, and Ahmadi (2010) in Iran, the main concern of the mothers was the attitude of society toward surrogacy, which led to the concealment of the use of surrogacy in more than half of the participants, which is in line with the results of the present study. The studies that were conducted in the UK reported that the commissioning couples in that country tended to not conceal their use of surrogacy (MacCallum *et al.*, 2003; Readings, Blake, Casey, Jadva, & Golombok, 2011; van den Akker, 2000). Nevertheless, the studies that were conducted in the USA resembled the results that were obtained in Iran and reported that the commissioning couples revealed only those parts of their experiences that were similar to the experiences of typical families and they avoided discussing the parts that are not culturally pleasant for people (Ragone, 1994). In Australia, the commissioning mothers face little of this discrimination, with >80% of the population approving of gestational surrogacy (Constantinidis & Cook, 2012).

The mothers who participated in the present study concealed their use of surrogacy due to the undesirable social context and their concern about others' reaction to their surrogacy arrangements and about the invalidation of their identity as a family; yet, concealment only led to more problems, such as a continuing threat to identity.

Another strategy to achieve a maternal identity was the parents' efforts to issue their child's birth certificate under their own name, which helped to prove their identity as their child's parents. Zandi *et al.* (2014) described the experiences of Iranian families who were using surrogacy, with respect to the legal conundrums that were encountered by them, and compared the Iranian laws that applied to this issue with the laws that have been established in other countries (Zandi *et al.*, 2014). In Iran, commissioning couples have to resort to illegal actions in order to evade the legal conundrums of using surrogacy services and to be able to obtain their child's birth certificate under their own name as genetic parents, which then puts a lot of financial and mental pressure on them and aggravates their feelings of insecurity about becoming a mother.

Moreover, in order to strengthen their maternal feelings and achieve a maternal identity, the commissioning mothers used different strategies, such as making efforts to establish a good bond with the embryo through various methods and to also experience breast-feeding. Nevertheless, medical centers did not provide them with support measures that were specifically planned for commissioning parents. Supporting women in their transition to their maternal role is a principal duty of health professionals (Barnes *et al.*, 2008). No study has yet been conducted on ART, especially on surrogacy and the carrying out of interventions that are aimed at facilitating the mothers' transition into their new maternal role; these interventions could form the basis of further studies on surrogacy. In her review article, Mercer (2006) examined several articles and defined the status of nursing strategies that are effective in the process of becoming a mother through normal pregnancy and 4 months after childbirth and concluded that most of the studies that have focused on the process of becoming a mother have been unsuccessful so far. The limited success of many of the interventions that have been carried out suggests that major areas of becoming a mother have not been addressed yet, either as part of the intervention content or process. Although the interventions were effective in promoting maternal skills and knowledge about the different aspects of infant care, they did not contribute to an increase in the mother's inner resources, such as resilience, self-confidence, comfort in the maternal role, or self-image as a competent mother, except in the long term and in the form of interactive nursing interventions. Moreover, in order to assess the consequences of nursing strategies, the instruments that are used should be appropriate for the culture of the given population (Mercer & Walker, 2006).

Commissioning mothers all experience becoming a mother for the first time and are faced with the particular challenges of this experience, in addition to their own problems. As surrogacy has particular features that might be less commonly experienced in other ways of becoming a mother, including being away from the growing embryo and not experiencing the physical changes of pregnancy, it should receive special attention in programs that prepare mothers for playing their

maternal role. For instance, breast-feeding and establishing a bond and attachment between the mother and the embryo are especially pleasant experiences for these mothers and can be effective facilitators for the mothers who are transitioning into their maternal role.

Furthermore, the provision of physical care to the surrogate during her pregnancy is another task of nurses. Holistic care for the clients of ART requires team work and nurses can play the role of contributors, coordinators (for all the members of the healthcare team and the client), or security providers. The role of nurses in facilitating the process of becoming a mother for commissioning mothers has been explained in detail and designed as a care model in another article that was published, based on the second phase of the first author's PhD. thesis (Zandi, Vanaki, Shiva, Mohammadi, & Bagheri-Lankarani, 2016).

Moreover, the participants of the present study were considered to be representative of Iranian women because Royan Institute is a major referral center in the country that admits clients of different ethnicities and from different socioeconomic backgrounds from across the country.

The present study did not have significant limitations. Nevertheless, future studies are recommended in order to examine the process of becoming a mother for commissioning mothers using partial surrogacy and to compare the results that are obtained with the results of the present study.

CONCLUSION

According to the findings of this study, women's efforts and strategies to seek security were not always effective and, at times, had unfavorable consequences that possibly affected the family's quality of life and were in conflict with the underlying goal and philosophy of ART, which is helping families to promote their quality of life and to reduce the personal and social pressures of infertility. The identification of these needs can help nurses to plan their future care and optimize their provision of care to these patients.

The strategies that nurses can adopt, with the help of other healthcare personnel, as a means of helping these mothers to make a more peaceful transition into their maternal role include emotional support, physical support, legal support, empowerment (in various fields, such as establishing a bond with the embryo or child, breast-feeding, and child care), being a comforting presence, advocating for the clients, and managing the relationship between the parties. These strategies have been defined within the framework of a new role for nurses; that is, "giving security in becoming a mother."

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CONFLICTS OF INTEREST

None is declared by the authors.

AUTHOR CONTRIBUTIONS

M. Z. undertook the data collection, data analysis, and prepared the manuscript; Z. V., E. M., and M. S. supervised the analysis and research process; all the authors read and approved the final manuscript.

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