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THE MEANING OF CHILDBEARING AMONG IVF SERVICE USERS ASSESSED VIA LADDERING TECHNIQUE

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The psychosocial issues related to infertility have been widely researched. However, the meaning a couple gives to childbearing remains a relatively unexplored area. This study explores the meaning making of Hong Kong Chinese couples who had received in-vitro fertilization (IVF). Eleven IVF-successful and seven IVF-unsuccessful informants were assessed using two complementary constructivist methods: laddering technique and constructivist-grounded theory analysis of in-depth interviews. Findings revealed four aspects of symbolic meaning of childbearing focused on the informant's sense of self, cultural values, existential purpose, and relations with others. The results also depicted infertility as a form of disenfranchised grief, following ambiguous loss, underscoring the need for counselors to explore the meaning of childbearing among IVF service users and the impact on their self-narratives as a function of treatment outcome.

Fertility remains highly prized among Asians in general. There are cultural expectations of married couples to give birth to new members to continue the family name. In traditional Chinese societies, multiple generations living under one roof was a much preferred way of living (Ng et al., 2003). Children (especially sons) are seen as a necessity because they signify personal

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filial role fulfillment and pride, extension of the family tree, and having an heir in the family (C. L. W. Chan et al., 2002; Ko, 1995). Correspondingly, the failure to bear a child is often seen as a major personal failure from the perspective of the couple, the extended family, and significant others within the social network and community (Wong, 2000).

Procreation is seen as the central objective of marriage (Lee & Kuo, 2000), and successful reproduction is “a fundamental gauge of one’s man- or womanhood” (Diamond, Kezur, Meyers, Scharf, & Weinshel, 1999, p. 78). It is even equated with “male strength and energy in life” in Chinese society (C. L. W. Chan et al., 2002, p. 427). Failure to have children is thus threatening to the masculinity of the male partner. It is also seen as a disgrace to one’s ancestors and considered unfilial (Ng, Chan, & Chan, 2004), when filial piety has been practiced as a principle governing the Chinese patterns of socialization (Ho, 1996). From the perspective of Confucianism, there are eight virtues; filial piety is ranked first. As stated by the classical Confucian writer Mencius: “There are three vices that violate the principle of filial piety, and the biggest is being without [an] offspring” (Qiu, 2001, p. 77).

Given the cultural importance of having a child, it is not uncommon to find Chinese married couples making tremendous efforts to seek help to resolve an infertility problem (Qiu, 2001). There are three main classes of causes of infertility: male factors (e.g., low sperm count, mobility and morphology, impotence, delayed ejaculation, and hormone deficiency), female factors (e.g., endometriosis, ovulatory dysfunction, polycystic ovary syndrome, and tubal problems), and combined male–female factors (Lytleton, 2004). Unfortunately, the majority of involuntarily childless couples are unable to conceive even with the assistance of advanced reproductive technologies (ART), such as in-vitro fertilization (IVF). The average success rate of an IVF treatment is actually quite low, only about 25% (Verhaak et al., 2005), and the success rate in Hong Kong is 29.4% per initiated cycle (Department of Obstetrics and Gynecology, 2005). The loss of a dreamed-of child has the potential to precipitate a crisis of meaning for the involuntarily childless couples. Existing studies have concentrated on examining the psychosocial factors involved in infertility, such as the negative emotions of those who are involuntarily childless, which

include feeling shocked, disappointed, denied, threatened (Diamond et al., 1999), or even guilty and ashamed (Watkins & Baldo, 2004). Other research has investigated the meaning of infertility, such as the perceived benefits or gains identified by IVF service users despite an unsuccessful IVF treatment (Lee, Hui Choi, Chan, Chan & Ng, 2009) as well as the psychosocial consequences commonly associated with prolonged pursuit of fertility resolution, such as the impact on the marital relationship (Boivin, Takefman, Tulandi, & Brender, 1995). Emotional burden, psychological stress, anxiety, and depression have been found to be common reasons why couples decided to discontinue IVF procedures after a cycle of unsuccessful treatment (Domar, 2004; Olivius, Friden, Borg, & Bergh, 2004; Smeenk, Verhaak, Stolwijk, Kremer, & Braat, 2004; Verhaak et al., 2005).

However, there are few studies that examine the meaning of childbearing among involuntarily childless couples; that is, the meaning a couple gives to having a child that has motivated them to seek repeated cycles of IVF. To the best of the authors' knowledge, ours was the first empirical study conducted on the topic in Hong Kong. One early European study was conducted by Chelo, Noci, and Barciulli (1986), which reported that the meaning men gave to having a baby was associated with traditional conceptions of masculinity. For instance, childlessness was perceived as the result of male impotence.

The objective of this article is thus to examine the meaning of childbearing as perceived by Hong Kong Chinese couples who had received IVF. Our choice of Hong Kong as the study site followed from our interest in Chinese people's attitude toward infertility in view of the strong cultural emphasis placed on the value of bearing children. IVF service users were selected as the sampled informants because they were likely to have an intense desire for biological parenthood, insofar as their motivation for childbearing superseded their concern for the financial cost, psychological hardship, and physical pain of treatment. The study was guided by one research question: What are the meanings of childbearing held among the Hong Kong Chinese couples who had received IVF?

Traditional models of loss and grief tend to define loss as death, but in more recent work the concept has expanded beyond death to include nondeath-related loss (Boss, Roos, &

Harris, 2011). In this study, infertility is conceptualized as a hidden and silent loss (Applegarth, 1999; Mahlstedt, 1985), a disenfranchised grief (Doka, 1989; Walter & McCoyd, 2009). Based on the perspective of meaning reconstruction (Neimeyer, 2001; Neimeyer & Sands, 2011), grieving fertility loss is conceptualized as an active process that entails interpretation of the loss and meaning reconstruction in its wake. From this constructivist vantage point, it is therefore critical to assess the impact of infertility on an individual's self-narrative, and thus the meaning of childbearing. In seeking to understand this personally and culturally relevant concept, the personal construct technique of "laddering" (Hinkle, 1965) was incorporated in an individual qualitative interview with members of couples who had undergone IVF procedures.

The Study

This study was a follow-up to an earlier, large-scale, randomized, controlled study of women undergoing IVF procedures (Chan, Ng, Chan, Ho, & Chan, 2006). Letters were written to 377 women and their partners to invite them to participate in the follow-up study, which included a questionnaire and face-to-face qualitative interviews, as a couple and individually. Initially, 128 women responded to the letter and questionnaire, but only 37 gave initial consent to the interview. Eventually 19 women and 9 of the spouses were successfully recruited for the study based on the inclusion criteria: (1) they had at least one stimulated IVF cycle, (2) they had no other biological child prior to IVF, and (3) their last treatment cycle was more than six months ago but no more than three years before the commencement of the project. The overall aim of this qualitative study was to examine the subjective experience of infertility among women and men, and examining the meaning of childbearing among these informants was one aspect. The data reported in this article focused on meaning of childbearing through the narrative data collected by the laddering technique during the individual interview. An approval from the institutional review board of the University of Hong Kong/Hospital Authority was obtained.

Method

Informants

Among the 28 sampled informants interviewed, laddering was successfully performed with 18. The remaining 10 informants were not able to complete the exercise. Of the 18 informants who completed the exercise, eight women and three men had experienced positive IVF treatment outcome, whereas five women and two men had experienced negative IVF treatment outcome at the time of interview. Among the seven IVF-unsuccessful informants, one conceived naturally after treatment, two adopted a child, and the other four remained childless at the time of interview. Table 1 gives a summary of the demographic profile of the informants.

Research Interview

The constructivist-grounded theory approach was applied in this study (Charmaz, 2000, 2001, 2003). This version of grounded theory research implied some flexibility of methods, rather than

TABLE 1 Summary of the Demographic Profile of the Informants

Characteristics	Women (N = 13)	Men (N = 5)
<i>Age</i>		
Range, years	31–42	35–46
Mean, years	36.8	38.6
<i>Number of years of marriage</i>		
Range, years	5–12	5–12
Mean, years	10.3	9.1
<i>Children status</i>		
Child conceived through IVF	8	3
Child conceived naturally after IVF	1	0
Adopted child	1	1
No child	3	1
<i>Number of IVF cycles attempted</i>		
1	5	2
2	4	2
3	3	1
>3	1	0
Mean, frequency	2	1.8

implementing a structured interview in a rigid or prescriptive manner in order to elicit subjective meanings of the experience (Charmaz, 2000). An example was the way laddering technique was introduced during an individual interview when the topic of the importance of childbearing was raised by the informants. Thus, laddering could be performed toward the beginning, middle, or end of an interview. Furthermore, the data were considered reconstructions of experience, which resulted from the interaction between the interviewer and the informant. One assumption of constructivist theory is that individuals are in a continuous process of development and change, so that their construction of reality may change over time (Neimeyer & Neimeyer, 1993). Hence, member check with the informants was conducted during the interview to ascertain that the meaning was understood clearly and accurately. Reflexive journals were also kept by the first author, which allowed self-examination of the nature of actions, beliefs, and emotions.

QUALITATIVE INTERVIEW

The semi-structured interview was the main data collection strategy used in this study. Qualitative interviews were conducted in a dyad and individually. The focus of the dyad interview was to explore how the informants made sense of their lived experiences of infertility as a couple. The focus of the individual interview was to explore how the informants made sense of their lived experiences of infertility as individuals and their personal meaning of childbearing. Informants were encouraged to narrate their experiences as a means to make sense of them, find benefit in them, and identify change in their identity that resulted (Neimeyer & Anderson, 2002). Three questions were asked in each interview.

1. When you look back over the last few years, what have you gone through in dealing with infertility? How would you describe this period of time? How do you make sense of it?
2. Having gone through this significant life event, what are the changes you see in yourself as a result, as a person and as a couple?
3. Are there any other significant issues that you think deserve attention, but we have yet to talk about?

LADDERING TECHNIQUE

The aim of using laddering technique was to help elicit core constructs, beliefs, values, and preferences held by the informants in relation to the idea of childbearing. A series of straightforward, recursive questions (by use of contrast) were raised in such a way that constructions created moved from more circumscribed behavioral constructions to more abstract values (Neimeyer, 1993, pp. 59–63; Fransella, 2003). The exercise began with the first author posing a question: “Between ‘having a child’ and ‘not having a child,’ what would you prefer?” Upon receiving a response (e.g., “Having a child”), the interviewer followed with the question, “Why? What is the benefit or advantage of that?” After the respondent provided a response (e.g., “It creates a real family”), he or she was asked, “What is the opposite or contrast to that?” The interviewer then recorded the respondent’s preference (e.g., “Just being a couple”) and again solicited the respondent’s preference (e.g., “To be a real family”), *why* he or she selected it (e.g., “To extend the family line”), and so on. The inquiry into preferences continued until the informant began repeating responses or found it difficult to formulate a further construct. Neimeyer, Anderson, and Stockton (2001) provided validation of laddering as a measure of construct subsystems that move from relatively concrete choices or behaviors to constructs bearing on personal characteristics, values, and existential concerns (see also Hardison & Neimeyer, 2007). Both of these sources as well as Fransella (2003) offered a series of recommendations on the administration of laddering technique and guidelines for its interpretation.

Data Collection

All of the ladders were collected during the individual interview sessions—13 with the women and 5 with men. All of the interviews were conducted by the first author.

Interviews with women who came alone to the session lasted longer, an average of 99.4 minutes (range, 59–140 minutes). When they were accompanied by their husbands, interviews averaged 65 minutes (range, 80–145 minutes for a joint interview and 14–73 minutes for an individual interview). One possible explanation for the difference in the average duration of an interview

between the two groups of informants is that women who turned up alone were those with relatively less social support. Thus, they might have taken the interview as an opportunity to express their feelings about their infertility, responding to the accepting presence of the researcher. The data discussed below come from a total of 30 hours of individual interviews. All interviews were conducted in Cantonese.

Data Analysis

QUALITATIVE INTERVIEWS

The qualitative interview data were transcribed verbatim and verified for accuracy before being translated into English to be presented in this article. In accordance with usual grounded theory procedures, the transcripts were analyzed using initial coding (i.e., word-by-word coding and line-by-line coding), focused coding (i.e., categorizing significant and/or frequent initial codes), and axial coding (i.e., synthesizing and reassembling the data to give coherence to emerging analysis; Charmaz, 2006). Illustrative quotes were used to substantiate the findings and were edited for ease of reading, without compromising the content. Repeated words were deleted and grammatical inconsistencies were corrected, which are frequently found in all spoken language. Pseudonyms—‘S’ for IVF-successful case, ‘U’ for IVF-unsuccessful case, and ‘U-A’ for IVF-unsuccessful but adopted a child—have been added after quotations to clarify the status of the speaker.

LADDERING EXERCISE

Content coding of the constructs elicited from the laddering technique was performed using the Classification System for Personal Constructs (CSPC; Feixas, Geldschläger, & Neimeyer, 2002). The aim of the analysis was to elicit the informants’ “superordinate or core constructs in their personal meaning system” (Neimeyer et al., 2001, p. 85). Here, both the terms *core construct* and *superordinate construct* were used synonymously, as they referred to stable higher-order constructs that relate to a person’s identity. Shifts in the content of the construction at various hierarchical levels as the interview evolved were also examined.

TABLE 2 Distribution of Informants on the Meaning of Childbearing

Perspectives	Frequency	
	IVF-successful	IVF-unsuccessful
<i>Self</i>	7	2
A form of richness	1	
A happy experience	2	
A sense of life goal	2	
State of mind is old*	1	
A sense of 'completion'	1	1
No personal freedom*		1
<i>Chinese values</i>	3	2
Continuation of family line	3	1
A sense of security		1
<i>Existential purpose</i>	1	1
Peacefulness & calmness	1	
A sense of hope		1
<i>Relations with others</i>	0	2
Parents & child as complete family		1
Unnecessary confrontation*		1
Total	11	7

*Not a preferred meaning of childbearing.

Findings

The Meaning of Childbearing

Examination of the narratives and the ladders revealed that a child carries symbolic meaning from various perspectives, concerned with (1) the self, (2) traditional Chinese values, (3) existential purpose, and (4) relations with others (see Table 2). Each theme is discussed using one case example.

FROM THE PERSPECTIVE OF SELF

The constructs in this category referred to characteristics pertaining to the informants' personality, character, or personal priorities in life. Having a child meant self-fulfillment, self-satisfaction, life completion, and having a life goal to approximately half of the informants. This was well illustrated by Betty, aged 38 at the time of interview, who suffered from female infertility. Betty had tried all medical means—including ovulation pills, intrauterine insemination (IUI), and eventually IVF—before she

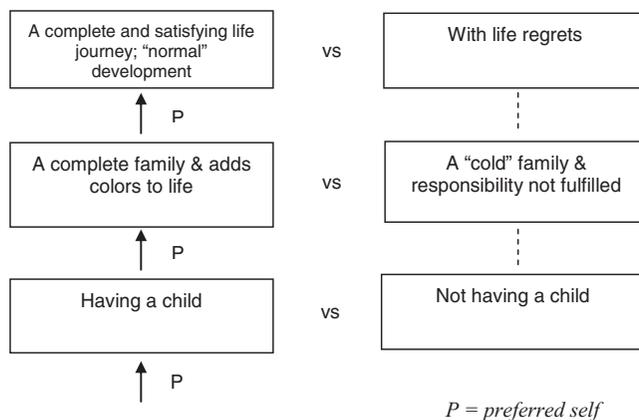


FIGURE 1 Betty's core constructs concerning the meaning of childbearing.

succeeded in bearing a child through IVF. In fact, Betty suffered a miscarriage before she managed to conceive again via a second IVF attempt. Her pregnancy was full of tension and anxiety as she was diagnosed as belonging to the high-risk group, with a high probability of giving birth to a child with Down Syndrome.

As shown in Figure 1, Betty began the first rung of her ladder by announcing her preference for having a child. According to Betty, having a child implied a complete family and colorful family life:

First, I feel that it is a complete family. Second, we would be bored if there were only two persons in this lifetime marriage. I wonder if I sound selfish, but this is a fact. The presence of a child in the family does good things for the marital relationship in many different aspects . . . it adds colors. (Betty, S)

The opposite of her preference was said to be a "cold" family, as well as her inability to fulfill her responsibility as a wife. In fact, inability to bear a child implied a sense of inferiority and incompleteness to Betty.

[In the past], my heart would sink and I became unhappy when I heard that my friend was pregnant. Instead of feeling happy for her, I felt inferior. That is, I felt that I could not make it, could not complete this thing [childbearing], and I was an incomplete woman. I could not overcome this negative thought at all before I had my own baby. (Betty, S)

An adopted child was also given a different and nonpreferred meaning compared to bearing her own biological child.

I have traditional thoughts. This is after all an adopted child, not my biological child. . . . I am worried that I might not treat the child as I would my own child. As you know, people have emotions. I am worried I will hurt him when my mood is very bad. (Betty, S)

Finally, it was revealed at the highest rung of Betty's ladder that her core identity construct centered on *completion*, which was also commonly heard in her narratives.

To me, [childbearing] makes my whole life journey come to a completion. . . . It is perhaps a normal life journey because everyone wishes to have children, raise up children after marriage . . . have grandchildren; that is, a happy family tree shooting all the way up. (Betty, S)

INFLUENCE OF CHINESE VALUES

The desire for social perpetuity and the perception of children as a form of protection and security during old age were two aspects of Chinese values that were found to remain strong among five informants. In the case example, Nancy was 39 years old at the time of interview; had been married for 10 years; and, like Betty, was unable to conceive. In the early years, Nancy had tried easier treatments, such as ovulation pills and traditional Chinese medicine before she pursued IVF. When every medical treatment failed to help her, Nancy even went to a *feng-shui* master for guidance. Nancy had her third and last treatment cycle 10 months before the interview, which ended unsuccessfully. Nancy began the first rung of her ladder expressing her preference for having a child. The reason was that she wanted to "win," especially after having exerted great effort toward this outcome (Figure 2).

Human beings love to outshine others. You want to win, you don't want to lose. . . . I wish to prove to myself and [others] . . . that I not only can bear a child, I also can raise him, giving him a good education. This is because I have seen too many spoiled children. . . . I always feel that, "Hey, you are given such a good opportunity, give you a child, and yet you don't know how to teach him. You don't know how to treasure [the chance] but I will. I think I can do better." (Nancy, U)

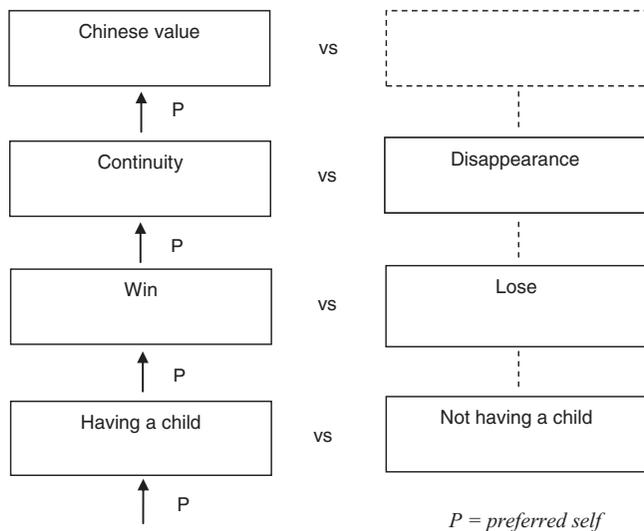


FIGURE 2 Nancy's core constructs concerning the meaning of childbearing.

Nancy elaborated further on the concept of winning, in particular her frustration over having to lose to people whom she considered less desirable.

I consider myself good in everything, except for this [childbearing]. Moreover, I lose out to those women whom I would consider as poor in manner, low in intelligence . . . or poorly educated. . . . The problem is I am unable to reconcile with the fact that I lose out to these three types of women, though I know childbearing has nothing to do with these characteristics. (Nancy, U)

Going deeper into the meaning of winning, Nancy expressed her wish to continue her life rather than totally disappear. More importantly, she had the urge to prevent the family tree from becoming extinct, as she is an only child.

I wish to extend myself, [otherwise] I will disappear from this world totally. . . . As I am the only child, I do not want my whole family to collapse without my continuation. . . . That is to say, there are too few people in my family and I hope to make use of myself to continue [the family line]. (Nancy, U)

Eventually, it was found that her core construct was based on the wish to preserve Chinese values, particularly the belief in the inheritance of genes.

We Chinese always love to continue the family name, and I also love this idea. . . . Why do you want to continue into the next generation? This is because you do not wish to lose your genes. If [I] look at this issue objectively, [I] will compare [my] genes with others. I will feel that my genes are not bad. I think if my character is being inherited, I don't think the world will be in chaos as I am a peaceful person. . . . If I am a bad person, it is all right if I don't have children. I strongly believe in inheritance. (Nancy, U)

FROM THE PERSPECTIVE OF EXISTENTIAL PURPOSE

The constructs in this category referred to the informants' personal sense, purpose, or meaning of life. A child meant peacefulness or a sense of hope in the view of two informants. In the case example, Andrew was 36 years old at the time of interview and suffered from infertility due to the interaction of problems experienced by him and his wife. The couple had made many futile attempts using IUI, and it was when they were about to give up seeking help totally that they were offered IVF. They were delighted to succeed at the first IVF attempt. Andrew began his ladder indicating his preference to have a child, and the benefit indicated at the second rung was to bring happiness to the family, including both families of origin (see Figure 3)

[The child] makes the whole family very happy. Yes, to the whole family and not just me alone. That is, this happiness belongs to my wife, me, my

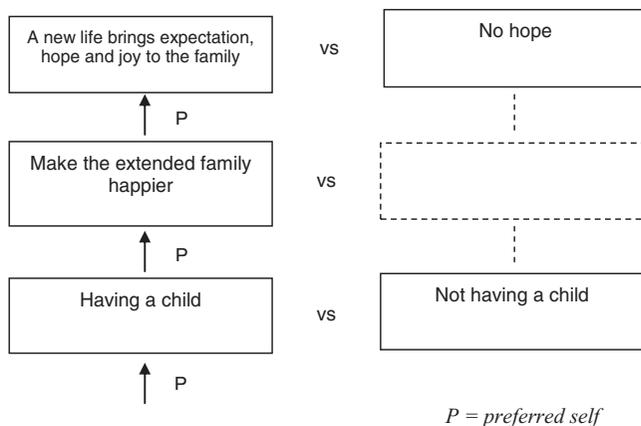


FIGURE 3 Andrew's core constructs concerning the meaning of childbearing.

family of origin. Many people are very happy . . . my family, her family.
(Andrew, S)

At the highest rung of the ladder, Andrew elaborated on the hope a child brings to the family. To him, a child not only serves to continue the family name but, more importantly, embodies a new beginning and a future hope for the family.

I feel that a new life actually brings hope to a family. . . . He or she [a child] has a kind of hope there. When everyone's youth is gone, and we are aging slowly, there tends to be a greyish feeling. Why? It is because we know that a life is coming to an end soon. When life is reaching the end, there is no hope. The hope is no longer there. However, when there is a new life, you will have hope . . . he or she [a child] is a kind of energy, a kind of joy, a kind of hope. He or she is a kind of future hope. (Andrew, S)

Andrew elaborated further on the concept of hope that a child embodies, which is more than just a continuity of family lineage.

It [childbearing] is not about expanding the family tree or producing a male heir to continue the family line. I do not have such an idea. It is about a newborn . . . like a growing plant. The leaves below will wither and drop onto the earth, while new sprouts will continue shooting out at the top of the plant. That is, new leaves will be developed to replace the old ones . . . a new life means a new beginning, a new hope. (Andrew, S)

FROM THE PERSPECTIVE OF RELATIONS WITH OTHERS

The constructs in this category described the types of relationship a child has with the others. Having a child was said to bring positive meanings to the family and marriage. Although it did not occur as a common core construct, many informants reported during the interview that the birth of a child made a family complete, strengthened a marriage, and symbolized a continuation of the couple or an expression of love for the spouse. As a case example, Richard was 37 at the time of interview, and his wife's inability to conceive was the cause of their infertility problem. Richard and his wife were realistic about the minimal chance of conception even with the help of IVF. They eventually adopted a child after two unsuccessful stimulated cycles of IVF. As shown in Figure 4, Richard began his ladder by indicating his preference

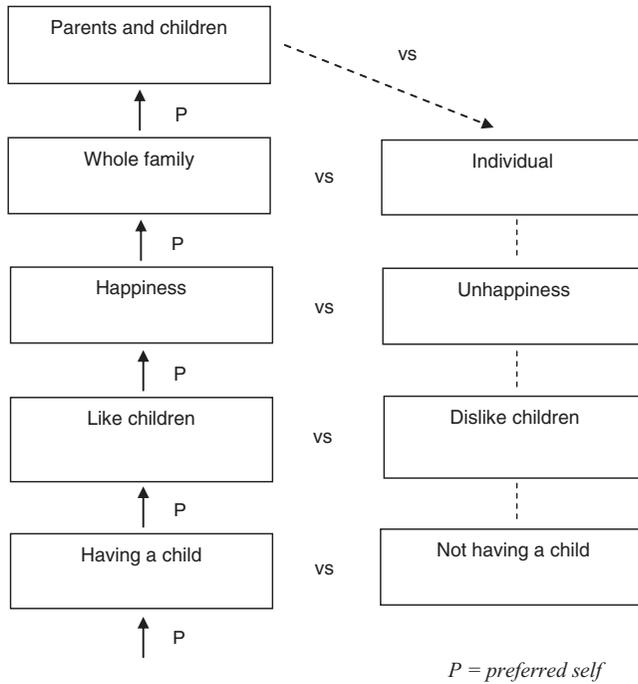


FIGURE 4 Richard's core constructs concerning the meaning of childbearing.

to have a child, and the reasons were that he likes children and children bring happiness. More importantly, children symbolize purity, as reflected in the excerpt below:

It is happiness to play with children. I have always liked children since I was young. It remains the same now, without much difference. [I] am very happy and joyful when I am with children. . . . It is happiness to see them growing up and to play with them. They have no hidden agenda; they are happy because they are happy. (Richard, U-A)

As reflected in the fourth rung of the ladder, Richard further expressed that the happiness was a result of the bountiful interactions between the child and parents, and happiness belonged to the whole family rather than to anyone as an individual.

[I] can see the child growing up, bringing much happiness. I also give him [the child] happiness when he gives us his. There are actually a lot of interactions when we play together, be it hide-and-seek or fighting. That

is, all of us will be happy; not just [the child] but the whole family will be happy. (Richard, U-A)

At the highest rung of the ladder, Richard claimed that the family becomes complete only if it consists of parents and children. Otherwise, it is only composed of individuals.

Right from the start, to me, a complete family did not consist of only two persons. It should include a baby. A family is normal only when there are children; [we] watch them growing up, coach them . . . everyone defines a family differently, but we will define [a family] as parents and children. (Richard, U-A)

Discussion

The study used the personal construct laddering technique to examine the meaning of childbearing among women and men after they had undergone IVF, with 11 IVF-successful and 7 IVF-unsuccessful informants. Several themes were identified in relation to the symbolic meaning the informants had given to childbearing focused on self, Chinese values, existential purpose, and relational categories.

Close examination of the data revealed that the impact and consequences of fertility loss on informants' self-narratives could differ, depending on the core constructs they ascribed to childbearing. For example, the perceived need to continue the kin-based extended family systems remained strong in Nancy. The inability to bear a biological child signified that her family lineage would be extinguished, and this prospect caused grief for Nancy. The finding concurred with the value that traditional Chinese culture places on children, who are perceived as a necessity for extension of the family tree and ensuring an heir for the family (C. L. W. Chan et al., 2002; Ko, 1995). However, this was different for Richard, who did not find it necessary to expand the family tree through inheritance of genes. He was equally comfortable with social parenthood; the emphasis was on the parent-child relationship. The finding was somewhat similar to the Chinese cultural perspective, whereby the parent-child relationship is regarded as the most important form of relationship among Chinese people (Li, 2001). Simultaneously, the data seemed to suggest a

growing trend toward the perception that having children is a form of self-fulfillment, be it as a form of life completion, life direction, or validation of self-worth. There seems to be a moderation of traditional worldviews in recent years. This is congruent with a review conducted by Ho (1996), who suggested that having children is seen as only one form of expression of filial piety. Even if the desire for children remains embedded in the Chinese culture, Ko (1995) suggested that the traditional value of having sons and many children may no longer be relevant.

Although findings were tentative, they suggested a major difference in the types of personal construct ascribed to childbearing by informants who ultimately were successful and unsuccessful in having a child. This difference was found in the greater emphasis placed by unsuccessful informants on relations with others. In contrast, the successful informants put an emphasis on self. In future research, such possible differences could be further explored with a larger sample size.

The findings from this study also supported the interpretation that infertility is experienced as a hidden loss, a disenfranchised grief (Doka, 1989) that lacks social validation. Infertility can be a complex, multifaceted phenomenon, as the meaning of childbearing involves psychological, social, cultural, and spiritual dimensions. We believed that the informants were likely to share a similar set of core values regarding childbearing along with others who could parent a child naturally without difficulty. However, these informants experienced grief in a loss that is not publicly recognized or socially supported (Sewall, 1999; Walter & McCoyd, 2009), and they were unable to have a ritual or to publicly mourn for their loss in similar manner to death-related losses (Diamond et al., 1999). Unfortunately, grief remained private for the informants. From the vantage point of a childless woman, infertility might create a major disruption in her projected course of life: She would be unable to lead a life within normative expectations (Dykstra & Hagestad, 2007). She viewed herself as an “incomplete” woman and might sense that the quality of her marital relationship and social relationships were undermined by her “inferiority.” All of the factors—interpersonal, psychological, social, and physiological—that normally influence grief may have an impact on the well-being of a person who suffers from a hidden loss.

In terms of clinical implications, the findings suggested that there are variations in the meanings attached to childbearing. There is thus a need for counselors to assess and reassess IVF service users' values regarding childbearing over time. More importantly, counselors must be mindful of the possibility of loss and grief that is not readily observable, especially when there is a lack of social sanctioning and social support. The bereaved person may become alienated from the community, and his or her pain is likely to be aggravated on a special occasion such as the full-month celebration of a newborn within his or her social network. To some extent this invalidation might be offset by forming support groups for couples experiencing infertility or seeking difficult or disappointing procedures, providing a context in which their experience can be shared and affirmed by those who can understand.

Second, the laddering technique as a constructivist clinical assessment could help identify certain individuals who may be more likely to require counseling, particularly if their coping patterns were ineffective. As an extension of this basic idea, laddering could also be helpful in working with couples in a counseling context, perhaps by interviewing them separately and then sharing their respective meanings of childbearing with their partner. This could help sensitize each spouse to the issues implied in conceiving a child or failing to do so for one another, increasing their empathy for one another's private pain and hopes.

In terms of implications for research, the study confirmed the usefulness of the laddering technique as a tool to identify an individual's core constructs regarding childbearing. However, this technique comes with its own difficulties. Problems sometimes occurred when the first author tried to encourage the informants to develop and complete their ladders. As shown in Andrew's ladder (Figure 3), the second rung of the ladder was incomplete, as was the highest rung in Nancy's ladder (Figure 2). In both cases this seemed to reflect the struggle these informants had in verbalizing their thoughts, particularly as it seemed more difficult to put superordinate constructs into words. In such circumstances, Neimeyer and his colleagues (2001) suggested encouraging interviewees to consider an image or metaphor that conveys a sense of what they have in mind. For example, had Nancy been encouraged to visualize someone who did not adhere

to Chinese values, she might have visualized an arrogant Westerner or someone who wandered in isolation through the streets, disconnected from his or her society. Likewise, asked for an image that contrasted with making the family happy, Andrew might have volunteered an image of a scowling Buddhist deity or a song of lament from a Chinese opera. Fostering creative figurative depiction of sensed meanings seems especially helpful at the level of core or superordinate constructs, which tend to be less word-bound than those at more concrete levels of the system (Kelly, 1955; Neimeyer et al., 2001).

Finally, as is evidenced in all research projects, this study had its limitations. The first and most obvious has to do with use of a relatively modest sample from a single clinic, although small “purposeful” samples are common in qualitative research using grounded theory methods. Nonetheless, we attempted to recruit a larger number of informants to increase confidence that the results adequately reflected the meaning of infertility in this cultural group, and met with only partial success. The reluctance of some couples to participate might reflect the sensitivity of the topic, which as the interviews suggested, often touched on significant feelings of disappointment or failure to meet a personal and cultural goal. Related to this is the possibility that those informants who did take part might have differed from others who did not in some unmeasured way that could limit the generalizability of the results, although this is usually not a central goal of qualitative research of the kind reported here, for which a sample of 18 informants would be considered substantial. However, it is still possible that the themes identified might not be exhaustive and new themes might appear with additional informants interviewed. Finally, although considerable time was spent with the average informant, the study by design did not attempt to trace meaning making or meaning reconstruction about childbearing or infertility across time or as a result of participation in or the outcome of particular procedures. It could therefore be valuable to use laddering and other constructivist measures with documented validity and reliability (Hardison & Neimeyer, 2007) to assess the vicissitudes of meaning making or the success of therapy to engender more viable meanings of adult life without children for those whose lives or choices preclude parenthood.

Conclusion

Overall, the study generated interesting information about the various core constructs bearing on the meaning of childbearing for Chinese seeking to become parents, a research area that was relatively unexplored in a population that suffers from fertility loss. The findings suggest that the meaning of childbearing involves psychological, social, cultural, and existential dimensions, which in turn implies that infertility can be a complex, multifaceted phenomenon. The meanings held by the informants were not likely to be different from culturally similar adults who were able to parent a child naturally without difficulty. Yet infertility is a loss that is not generally socially validated, supported, or empathized. The use of constructivist methods to elucidate some of the personal meanings of infertility takes a first step toward articulating and appreciating the experience of those who struggle with this condition.

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