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## **Rapid Communication**

# Chat about What Matters Most: An Analysis of Chat Contributions Posted to an Outpatient Fertility Website

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### **Abstract**

A content analysis of chat utterances generated by in vitro fertilization (IVF) patients and healthcare professionals revealed that most chat is about the treatment itself and not about childlessness; 56% discloses psychological aspects, 27% physical aspects, and 17% social aspects of the treatment; and that accounts of both external and internal coping behaviors could be identified.

### **Introduction**

**I**N VITRO FERTILIZATION (IVF) treatment is a 2-month outpatient treatment and involves self-injection of hormonal drugs, the harvesting of eggs (ovum pick-up), fertilization in the IVF laboratory, embryo transfer into uterus, waiting time, pregnancy test, and an ultrasound. IVF has considerable emotional and physical impact on patients, especially because it is almost always the last treatment option for couples with fertility problems. In general, studies indicate that despite the invasive physical aspects of IVF treatment, patients emphasize the emotional distress the treatment involves and appraise emotional aspects as more invasive than the physical ones.<sup>1</sup> The waiting time between embryo transfer and pregnancy test is experienced as most stressful. Several risk factors for maladjustment after unsuccessful treatment have been identified: high levels of pretreatment distress, lack of social support, and the evaluation of infertility in terms of feelings of helplessness and something that ruins your life instead of acceptance and something that you expect to be able to deal with.<sup>1</sup>

In the chat room of an interactive website developed at a fertility policlinic of a large University Medical Center in The Netherlands, sessions were organized in which both health care professionals (MD or nurse) and patient couples participated.<sup>2,3</sup>

### **Research Questions**

1. What topic do patient couples and health care professionals chat about?
2. How do patient couples and health care professional appraise the IVF treatment in the chat?
3. What do they say about dealing with the treatment?

### **Methods and Materials**

#### *Sample*

The sample consisted of 20 chat sessions, representing 4042 utterances made by 22 patient couples and four health care professionals. The sample represents variation in chat group composition and treatment phase (contact authors for sampling details).

#### *Analysis*

Quantitative content analysis (CA) was conducted at the level of the utterance (RQ 1) and qualitative CA at the level of the chat session (RQ 2 and RQ 3). This means that we applied topic codes in order to categorize each utterance (RQ 1; Cohen's Kappa on reliability sample of 150 utterances = 0.87) and developed codes about issues in entire chat sessions (RQ 2 and 3) by using CAQDAS Kwalitan.

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## Results

With respect to RQ1, we expected to find a substantial amount of chat utterances dealing with the topics of both childlessness and IVF treatment, as the former is the main reason for undergoing an IVF treatment, and the latter is the main reason for participating in the website. Contrary to this expectation, we found that only 2% of the utterances are about childlessness whereas 58% of all utterances are about the IVF treatment itself (see Table 1 for subcategories). With respect to RQ2, our expectation that patient couples would emphasize psychological aspects of the treatment was confirmed as from the codes assigned to chat sessions 56% refers to *psychological* aspects, 27% to *physical* aspects, and 17% to *social* aspects of undergoing the treatment. Chat referring to the person engaging *psychologically* in the treatment ranges along a mental strength dimension. On the one hand, patients define the treatment as something that asks for moti-

vation and discipline. On the other hand, patients talk about the treatment as something that requires emotional resilience (see Table 1 for illustrations from the chat). Chat utterances referring to the person engaging *physically* in the treatment reflect on the one hand, patients' active involvement in the treatment (for instance, traveling long distances in order to visit the clinic or injecting medication into one's own body at fixed hours), and on the other hand, patients' passivity of being subjected to medical treatment, enduring its inconvenient consequences. Appraisals of the treatment that emphasize *social components* are accounts that reflect a balancing between being receptive of support and advice on the one hand, and avoiding rude reactions or disregard on the other. In order to address RQ3, we categorized the chat sessions in terms of how patients talked about dealing with the treatment in every day life outside the chat setting.

We identified four types of external behavior (i.e., social activities that are observable by others). First, patient cou-

TABLE 1. CHAT TOPICS, DEFINITIONS OF IVF, AND ACCOUNTS OF DEALING WITH IVF

Topics (% <sup>1</sup> )	Definitions of IVF (% <sup>2</sup> )	Dealing with IVF
IVF	Psychological (56)	External coping
(58)	Discipline <i>Now I feel ready again. Before I felt like not wanting all of this anymore: All those abdominal pains and nausea and then the failure. . .</i>	Continuation of routines <i>Work is good distraction. I scheduled myself for the entire next week.</i>
Everyday life	Resilience <i>But anyhow, it failed.</i>	Disruption of routines <i>Our holidays definitely were a proper way in order to forget our first unsuccessful trial.</i>
(15)		
Comment on chat behavior	Physical (27)	Tailor the treatment <i>First, I took a test from [name druggists']. I didn't really trust it so I did another test. And now, in a minute I am going to do one more.</i>
(13)	Activity <i>I feel like a junk taking all those shots.</i>	
Salutations	Passivity <i>The embryo transfer was even worse than the ovum pick up.</i>	Refrain from doing things <i>[Name] feels fine, and therefore she does not want to join the chat right now.</i>
(12)		
Childlessness	Social (17)	Internal coping
(2)	Receptiveness <i>My colleagues morally support me and bear with me.</i>	Expressing optimism <i>We are both 32, so relatively young.</i>
	Avoidance <i>Do a lot of people know that you are in the middle of an IVF treatment? In our case only our parents and my husband's superior at work know about it.</i>	Backing up oneself <i>Until now I don't feel anything, so I recon that it didn't work out.</i>
		Coming to terms <i>Nature takes its course now, and one can only hope for the best. All things have their ground I believe.</i>

Note 1: 100% = total number of utterances (N = 4042).

Note 2: 100% = total number of definition codes (N = 246) assigned to chat sessions.

ples describe that they benefit from *continuing everyday routines*. Patient couples talk, for instance, about doing their jobs, making jokes, or remain joyful in order to handle the treatment. On the other hand, patient couples describe activities that *disrupt everyday routines*. Examples vary from taking a day off from work, going shopping, or seeking help from a social worker. A third strategy includes *tailoring the treatment* in concert with one's own temperament and needs, for instance, by adapting the treatment's fixed schedule to personal everyday routines. The fourth strategy reflects *refraining from doing particular things* that other patients normally would do, such as choosing not to take pain medication. We identified three types of internal behavior (i.e., cognitive activities aimed at reducing negative thoughts and feelings that are related to the treatment). A first type is *expressing optimism* regarding the treatment's outcome, such as holding on to positive exceptions, or interpreting symptoms in a positive way. A second strategy is *backing up oneself* against disappointment, illustrated by expressing 'expecting the worst' or by presenting having a child already as some kind of buffer against the possibility of treatment failure. A third strategy is *coming to terms* with one's own situation, (i.e., recognizing that a wait-and-see-attitude is the only option).

### Conclusion and Discussion

First, our findings indicate that the IVF treatment itself is the most intensively discussed topic in the chat, compared to the topic of the threat of childlessness. Second, our findings show that central aspects of a human being (physical, psychological, and social aspects) are involved in the treatment, reflecting its invasive character and the need for physical, psychological, and social strengths in order to handle the treatment. Third, we identified accounts of external versus internal coping behaviors. The external behaviors vary according to direction being *towards* or *away* from the treatment itself. The former type may contribute to a sense of being in control. Accordingly, the treatment itself provides patients an opportunity to control their childlessness, which, besides engaging in a fertility treatment as IVF, is a rather uncontrollable stressor. In internal coping, some of the strategies involve mental constructions by which patients allow themselves illusions in that explicitly (too) positive thoughts regarding treatment outcomes are expressed. This has been described earlier in literature on the benefits of denial and of illusory glow.<sup>4</sup> Fourth, the chat has substantial potential with respect to reducing a lack of social support. The chat room itself is a social meeting place where at any time like-minded patients can talk about what matters most, given the

situation they are in. In addition, social aspects of undergoing the treatment are discussed. Patient couples appeared to discuss explicitly the risk factor of a lack of social support, and although entirely speculative, this may weapon them against the risk factor's detrimental effects. Furthermore, reading about how other patients deal with the treatment in everyday life may also be a valuable form of social support. With respect to 'evaluating infertility' the value of the chat is perhaps not fully exploited yet, as most chat is about the treatment itself and very little about the problem of childlessness that lies behind. Our analysis shows that patient couples say very little about what a life without being a parent would mean, whereas healthcare professionals do not take up (the few) chances to talk about this possibility, even though the chances for a successful outcome are rather low. On the one hand, this may be a natural consequence of patients' situation: being in the middle of the treatment and motivated to focus exclusively on that. On the other hand, the chat could possibly contribute more to acceptance regarding infertility if healthcare professionals were trained to act upon the opportunities for discussing treatment failure.

### Disclosure Statement

The authors have no conflict of interest.

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