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Relational uncertainty, partner interference, and infertility: A qualitative study of discourse within online forums

Keli Ryan Steuber & Denise Haunani Solomon

Pennsylvania State University

ABSTRACT

Infertility afflicts one in six couples and confronts partners with life decisions that have long-term implications for their partnerships. The authors analyzed discourse from online discussion board strings and blogs (N = 438) to consider how this reproductive disability is both affected by and transforms the marital relationship. Specifically, a relational turbulence model lens was used to gain insight into the salient relational issues of couples coping with infertility. A qualitative theme analysis revealed two relational uncertainty themes (*relational invalidation* and *implications of blame*), two partner interference themes (*supremacy of the pregnancy goal* and *violated expectations for treatment involvement*), and two identity themes (*strengthened relational identity* and *personal identity shifts*).

KEY WORDS: couple relationships • identity • infertility • partner interference • relational uncertainty • theme analysis

Infertility, medically defined as the inability to conceive after 12 months of unprotected intercourse, afflicts one in six couples (Seibel, 1997), or 6.1 million people each year, according to the American Society for Reproductive Medicine. Because infertility increases once a woman reaches her mid to late thirties, delays in childbearing have made infertility more common

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within the United States (Schneider & Forthofer, 2005). Although the majority of research on infertility adopts a medical perspective, which views infertile individuals as patients, more studies are addressing the social and relational aspects of infertility. Although the medical perspective offers a limited definition of infertility as the inability to conceive, couples who experience chronic miscarriages also suffer social and relational consequences. Thus, we believe that a more complete understanding of infertility, broadly defined as an inability to conceive or carry a child to term, can be achieved by considering how the experience is both affected by and transforms the marital relationship.

Infertility confronts couples with life decisions that have long-term implications for their partnerships (Greil, 1991, 1997). Thousands of couples attempt to treat their condition by charting their reproductive cycle or taking ovulation-inducing hormones. Others experiment with more advanced treatments, although these procedures have only a 25% success rate and can deplete the couple's savings (Center for Disease Control and Prevention, 2004). Being diagnosed with infertility is often a turning point in the life course of an individual and a marriage, which can be a catalyst for couples to seek counseling for numerous self and relational issues (see Greil, Leitko, & Porter, 1988; Leiblum, 1997; Schneider & Forthofer, 2005). Prior research has shown that infertility can have both negative and positive effects on personal relationships, depending on how couples view and communicate about the situation (Pasch, Dunkel-Schetter, & Christensen, 2002). For example, stress from infertility is associated with lower well-being in general, and lower quality of marriage (Abbey, Andrews, & Halman, 1994; Wright, Allard, Lecours, & Sabourin, 1989). Spouses may experience conflict about whether to undergo medical treatment, which options to try, and for how long (Epstein & Rosenberg, 1997). When couples do attempt to treat their infertility, they can be overwhelmed by disruptions to their work schedules, social networks, and daily routines. Interestingly, some couples who eventually stop trying to conceive after extensive treatment reflect back on the experience of infertility and, despite struggling with many issues, perceive that it strengthened their partnership (Nene, Coyaji, & Apte, 2005; Schmidt, Holstein, Christensen, & Boivin, 2005).

To shed light on the divergent effects of infertility on marital relationships, we turned to theory and research on the processes at work during transitions in romantic relationships. In particular, we drew upon the relational turbulence model (Solomon & Knobloch, 2001, 2004) as a framework that may provide insight into infertility as a transformative event within marriage. As a foundation for this investigation, the following section reviews the claims advanced by the relational turbulence model. Then, we report a qualitative study of discourse about relationship issues posted in online venues for people coping with infertility. In the final section of the paper, we consider how this study can facilitate future efforts to understand how relationships are weakened or strengthened by the challenges that life presents.

The relational turbulence model

The relational turbulence model was developed to account for an empirical pattern observed across a variety of studies of communication in dating relationships (Solomon & Knobloch, 2001). In particular, several studies suggested that dating partners have more extreme cognitive, emotional, and communicative responses to relationship events that coincide with the transition from casual to serious involvement (e.g., Aune, Aune, & Buller, 1994; Billingham & Sack, 1987; Solomon, 1997). By focusing on the processes at work during this transition, Solomon and Knobloch (2001) proposed that the ambiguous status of the relationship and the challenges of merging independent routines caused the heightened reactivity observed in prior research. Although the theory's original focus was on reactivity to irritations (Solomon & Knobloch, 2004; Theiss & Solomon, 2007), jealousy (Knobloch, Solomon, & Cruz, 2001; Theiss & Solomon, 2006), and unexpected events (Knobloch & Solomon, 2002b) in dating relationships, the framework should provide insight into relationship transitions that occur within marriages (e.g., Weber & Solomon, in press). Thus, the following sections review the mechanisms featured by the theory and clarify how each gives rise to relational turbulence.

Relational uncertainty

The relational turbulence model positions relational uncertainty as one of the mechanisms that promote heightened reactivity to events that occur in romantic relationships. *Relational uncertainty* refers to the degree of confidence individuals have in their perceptions of involvement within a relationship, and it arises from three interrelated sources (Berger & Bradac, 1982; Knobloch & Solomon, 1999, 2002a). *Self uncertainty* involves the questions people have about their own involvement in a relationship, *partner uncertainty* addresses doubts individuals may have about their partner's level of involvement, and *relationship uncertainty* encompasses ambiguity about nature of the dyadic unit. The relational turbulence model specifies assumptions about both the causes and consequences of relational uncertainty within romantic relationships.

According to the theory, relational uncertainty increases when partners find themselves in a period of transition between familiar levels of involvement. Consider the transition from casual to serious dating emphasized in the development of the relational turbulence model. Within clearly nonintimate relationships, dating partners can rely on scripts for first dates and casual romances to guide their behavior (e.g., Honeycutt, 1993; Honeycutt & Cantrill, 2001), and establishing a mutual commitment is a turning point that can resolve questions about involvement in the relationship (Baxter & Bullis, 1986). When relationships have progressed beyond the initial phase, but lack a clear and mutual commitment, individuals may confront questions about what they want out of the relationship, how invested their partner is, and the nature of the relationship (see also Baxter, 1988). Beyond developing courtships, relational uncertainty could recur whenever changes in the

circumstances for the relationship prompt people to revisit questions about their own involvement in the relationship, their partner's involvement, and the relationship itself.

Empirical tests of the relational turbulence model have not consistently documented the increase in relational uncertainty at moderate levels of intimacy that is predicted by the theory (e.g., Solomon & Knobloch, 2001, 2004), but the effects of relational uncertainty on reactions to events have been substantiated. Research has found that doubts about the relationship correspond with polarized cognitive reactions, ranging from an inability to draw clear relationship inferences (Knobloch & Solomon, 2002a) to a tendency to appraise relationship irritations as more serious (Solomon & Knobloch, 2004; Theiss & Solomon, 2006). Relational uncertainty is also linked to more extreme emotional reactions to surprising events (Knobloch & Solomon, 2002b, 2004), jealousy threats (Afifi & Reichert, 1996; Knobloch et al., 2001), and changes in sexual intimacy (Theiss & Solomon, 2007). With regard to communication, the prevalence of relational uncertainty has been implicated in a tendency to avoid conversations about the relationship (Baxter & Wilmot, 1985), to engage in topic avoidance or withhold private information (Afifi & Burgoon, 1998; Afifi & Guerrero, 2000; Knobloch & Carpenter-Theune, 2004), and to evade discussions of surprising relationship events (Knobloch & Solomon, 2002b). Thus, previous research has documented a variety of polarized cognitions, emotions, and communication behaviors that correlate with relational uncertainty.

Interference from a partner

The second mechanism specified by the relational turbulence model emphasizes the difficulties that emerge as partners begin to integrate their daily routines. Interdependence, the extent to which partners rely on and affect each other in the pursuit of everyday goals, is often seen as synonymous with intimacy (Kelley et al., 1983). The development of interdependence requires that partners increasingly allow each other to influence or shape their activities. A partner's influence in day-to-day activities is experienced as facilitation when it allows routines to be more effective or increases the likelihood that goals will be achieved (Berscheid, 1983; Knobloch & Solomon, 2004). When a partner's influence disrupts the performance of a behavioral routine, the result is the experience of *interference from a partner* (Berscheid, 1983; Knobloch & Solomon, 2004). As in the case of relational uncertainty, the relational turbulence model forwards claims about the causes and consequences of interference from a partner.

The relational turbulence model predicts that experiences of interference from a partner increase when couples undergo changes in their patterns of interdependence (see also Berscheid, 1983). Again, consider the dynamics within developing dating relationships. Within non-intimate dyads, partners have few opportunities to affect each other's experiences, and interference is low. As partners become more intimate, they allow each other to play a role in previously autonomous routines. For example, partners might decide to carpool to work, so that they can spend time together at a coffee shop.

When a person initially permits a partner to impact an independent routine, that partner is likely to disrupt the smooth performance of the activity. In the case of our commuters, one partner might be late to work because the other person overslept or orders breakfast. Eventually, the couple will work out a joint routine that allows them to achieve their goals more effectively – perhaps the early riser will give the partner a wake-up call, they leave thirty minutes earlier to make time for breakfast, or the food is ordered to go. Although the relational turbulence model originally focused on disruptive patterns of interdependence during partners' initial efforts to coordinate their activities, the logic of the theory suggests that interference from a partner increases whenever a couple modifies pre-existing routines.

Consistent with the theory, empirical research has documented a nonlinear association between intimacy in dating relationships and interference from partners, such that partners are perceived as more disruptive at moderate levels of intimacy (Knobloch & Donovan-Kicken, 2006; Knobloch & Solomon, 2004; Solomon & Knobloch, 2001). In addition, the magnitude of interference from a partner is positively correlated with the perceived severity of relational irritations (Solomon & Knobloch, 2004; Theiss & Solomon, 2006), the intensity of emotional jealousy (Knobloch et al., 2001), and the indirectness of communication about relationship problems (Theiss & Solomon, 2006). The effects of interference from a partner on cognitive, emotional, and communicative reactions to relationship events are less well documented than those associated with relational uncertainty; nonetheless, the pattern of results suggests that goal interference is a mechanism underlying relational turbulence.

To summarize, the relational turbulence model emphasizes how transitions in romantic relationships can raise questions about the association, and disrupt everyday routines. In turn, relational uncertainty and goal disruption make people more reactive to the variety of irritations, suspicions, and surprises that might occur in a romantic relationship. Importantly, the experience of turbulence is not wholly negative. As partners resolve doubts and find ways to help each other achieve goals, they may reaffirm their commitment, clarify ambiguities, and work through challenges together (Knobloch & Solomon, 2002a). Thus, the relational turbulence model highlights how transitions require couples to establish or revisit the foundations of their intimacy in ways that can either create ongoing distress or promote relational well-being.

A relational turbulence perspective on infertility

Viewing infertility through the framework provided by the relational turbulence model highlights how difficulty conceiving a child sparks a transitional period in which couples question or renegotiate aspects of their relationship. Infertility often comes as a surprise to would-be parents, it may upset the schedule of familial development they had planned, and it can greatly influence either partner's self-concept (Greil, 1991). We elaborate on how

infertility might also contribute to relational uncertainty and the experience of interference from a partner.

Infertility and relational uncertainty

Most couples in marital relationships assume that they will have children (Greil, 1991). When this assumption is called into question, partners may experience doubts about the status of their relationship. For example, people may wonder whether their desire to have a family is worth a difficult, expensive, and uncertain course of treatment. Individuals who are the source of the infertility problem may doubt their spouse's commitment to a partnership that can no longer produce biological offspring (Greil, 1991; Leiblum, 1997). Likewise, differences in how partners outwardly respond to infertility may breed misperceptions and uncertainty within the relationship (Daniluk, 2001). In particular, the tendency for women to view infertility as devastating or life-altering while males consider it a "bad break" (Greil, 1991), different levels of involvement in medical decisions (Epstein & Rosenberg, 1997), and differences of opinion about when to stop trying to conceive may lead to relational uncertainty.

Although this brief review suggests a variety of ways in which infertility might spark doubts about the relationship, we know of no research that has explicitly examined this issue. Thus, we pose the following research question:

> RQ1: How does relational uncertainty surface within the issues that confront people coping with infertility?

Infertility and interference from a partner

Couples who plan to have children construct shared goals that accommodate children; for example, partners may tailor their career goals, finances, housing, and even plans for travel or new pets with an eye toward future children. Couples trying to conceive may also modify their health habits, their sexual routines, and their immediate future plans to facilitate that goal. Discovering infertility disrupts a couple's plans and forces them to negotiate new family development goals (Matthews & Matthews, 1986). If a couple pursues infertility treatment, partners must also find ways to coordinate their activities around medical care, prescribed sexual activity, and financial demands. Perhaps not surprisingly, then, counselors and therapist have identified sexuality, support, control, and life disruptions among the problems plaguing couples confronted with infertility (e.g., Greil et al., 1988; Schneider & Forthofer, 2005).

As this discussion illustrates, infertility requires partners to renegotiate previously settled goals and activities related to family planning. The behaviors affected range from day-to-day routines, such as scheduling appointments or managing expenses, to actions – like researching adoption or committing to treatment – that affect the future makeup of the family. Although counselors and therapists have identified sources of relational difficulty experienced by infertile couples, we know of no research that has explored how perceptions of interference from a partner may be contributing to those problems. Thus, we pose a second research question:

RQ2: How does interference from a partner surface within the issues that confront people coping with infertility?

To review, we drew upon the relational turbulence model to highlight how relational uncertainty and interference from a partner might provide insight into the experiences of people coping with infertility. By focusing not just on the effects that infertility can have on a marriage, but also on how the process transforms a couple's relationship, we hope to lay the foundation for future work that clarifies the conditions under which infertility has a positive or negative impact on partnerships. To that end, we conducted a qualitative study of discourse about relationship issues posted in online venues for people coping with infertility.

Method

To explore the issues relevant to people faced with reproductive difficulties, we examined online forums dedicated to discussing infertility; in particular, we focused on discussion boards and blogs that offered personal accounts from individuals who were experiencing infertility with their partner. In contrast to more traditional surveys or interviews, these online venues provided access to discourse that was motivated and facilitated by infertile individuals rather than guided by the researcher's agenda. Thus, these conversations may provide insight into issues that are especially salient to people experiencing infertility. The following sections describe the procedures and techniques used to analyze the online discourse.

Sample

To begin, we used an online search engine, *Google*, and performed a search utilizing the terms "infertility and discussion boards" and "infertility and blogs". Discussion boards are online venues in which individuals can post a message or comment pertaining to the topic at hand. The compilation of messages in response to the original message is called a "string" and, for the current study, each entry on a string was considered one unit of analysis. Whereas discussion comments can be posted by a variety of online visitors, blogs are online diaries posted by one individual with the knowledge that others will read the entries. In this study, each blog entry was treated as one unit. Discussion board strings or blogs that met the following requirements were included in the analysis: (i) they were written by a member of a couple experiencing difficulty with conception, and (ii) they referenced either relationship issues or partner issues. Each unit was printed, and the final sample comprised 438 units ($N = 438$).

Analytic procedures

Preliminary analysis. We first identified the topics discussed in the online forums, and then we probed those issues for themes related to relational uncertainty and partner interference. To gather a holistic view, the first

author and an independent analyst reviewed the entire data set four times with an eye toward identifying recurrent themes capturing the topics discussed by contributors. On the fifth review, the data were re-read with more attention to the topical themes that permeated the discourse; in particular, the identification of the themes was based on the frequency, extensiveness, and intensity of related discourse (Krueger, 1998). Specifically, themes were developed based on the amount of times they surfaced (frequency), the representation of an issue across different units (extensiveness), and the depth of feeling with which the view was expressed in the discourse (intensity) (Krueger, 1998; Rabiee, 2004). Following Strauss and Corbin's (1998) framework for coding, open coding was first performed to specifically identify the central concepts and their dimensions within the data. Next, axial coding was conducted to map out the relationships both within and across the most prominent themes (Strauss & Corbin, 1998). Finally, the two analysts collapsed common themes and assimilated those that were unique.

Theme analysis. Once the themes reflecting the issues discussed in the online forums were identified, the first author read the discourse again to explore the role of relational uncertainty and partner interference within the topical themes. The two-step analysis was utilized for two reasons: (i) to ensure that no assumptions were made about the topical themes infertile couples experience, and (ii) to understand which topical issues most contribute to relational uncertainty and partner interference. For relational uncertainty, the data were analyzed for signs of commitment ambiguity. With regard to partner interference, signs of daily disruptions or goal hindrance were the parameters for analysis. The results of this analysis yielded two relational uncertainty themes (*relational invalidation*; *implications of blame*) and two partner interference themes (*supremacy of the pregnancy goal*; *violated expectations for treatment involvement*).

Subsidiary analysis. In an effort to assess the reliability and prominence of the relational uncertainty and partner interference themes we identified, two independent coders read through each discussion board string and blog entry and recorded the presence or absence of each theme. Coders assessed batches of transcripts from the online venues and met to discuss discrepancies and review decision rules until an acceptable level of reliability was obtained. Then, each coder individually analyzed 60% of the units, which meant that 20% of the units were evaluated by both coders. Reliability was assessed at multiple intervals to identify and address coder drift in the application of the coding scheme.

Results

The analysis identified both topical themes and themes aligned with the parameters of the relational turbulence model. After briefly describing the

topical issues that we identified, we describe the themes related to relational uncertainty and interference from a partner that permeated those issues.

Topical themes

The prominence of infertility. One issue discussed in the postings to discussion boards and blogs focused on the extent to which the experience of infertility eclipsed other aspects of people's lives and whether partners agreed or disagreed about how to conceptualize and respond to their infertility. Many individuals voiced frustration if their spouse's perceptions on prioritizing infertility differed from their own, while others took note of how taxing the experience was on their marital relationship. For example, one woman reflected on how infertility governed her life:

> I cannot continue to allow shots, hormones, and surgeries to rule my life. I must stop dumping my every resource into this nonsense. I must stop coming to these boards and obsessing over everyone's successes and failures. My body cannot take any more. My marriage cannot take any more. My emotions cannot take anymore. (53; the numbers following the quotes reference the units they were taken from)

The repercussions of being overly proactive about infertility were severe for many couples; the obsession with parenthood dominated their lives, and their normal lifestyle and partnerships suffered from a lack of maintenance.

Where to place blame. As infertility lingered, and frustration and disappointment built, people often grappled with questions about the cause of the infertility and their own feelings of inadequacy. One man revealed how infertility weighed so heavily on his relationship that, despite efforts to avoid blame, it manifested in numerous ways:

> Flat out I'm angry. I'm angry at myself (it's male factor) even though I know I didn't DO anything to make this happen. I'm angry at God sometimes as well, why did WE have to go through this? I even get a little angry at my wife, because she never asks ME how I'M feeling. (35; emphasis in original)

Some individuals cast blame on their partner, especially if it was perceived that the reason for the infertility was something within his or her control (e.g., a previous vasectomy, poor health habits), whereas others who were medically responsible for the infertility felt guilt or self-blame when they witnessed their partners suffering due to their inability to reproduce.

Support issues. Many women commented that the amount of time they devoted to treatment far outweighed their husband's involvement. As a result, some women felt the instrumental support received from their partner was inadequate. For example, one woman reflected on her husband's failed promise to take more responsibility in planning their next cycle:

> On the fertility front? Nuthin. Absolutely . . . nuthin. Remember how Mr. P volunteered to be the one to pick up the torch of infertility and run the

> next lap of our journey? Well … um … I'm sure he'll be getting on that right quick … any time now. (5)

Instrumental support issues were often coupled with emotional support deficiencies, such that partners felt that compassion, empathy, or companionship were lacking. One woman reflected on an upsetting comment by her husband by writing, "When he says something so hurtful to me, it tells me he has no idea how much infertility hurts. Showing a little empathy wouldn't kill him" (71). This woman's irritation with her husband's inability to understand how to support her was typical of the frustrations associated with nurturance between partners.

The problem of instrumental romance. In the same way that infertility eclipsed people's lives in general, it also contaminated romantic and sexual intimacy. The discourse revealed that infertility influenced romantic qualities of sexual relations in two ways: (i) sex became scheduled around fertility treatments, and (ii) sexual intercourse was often task-oriented. One woman wrote about sex:

> It got so scheduled or at least it felt that way to me and when something happened when we couldn't do it on the right days, I was so upset. Sex was not all that fun after a while and I was stressed and depressed like never before. (38)

Similar to this woman's account, people complained of fitting sex into their "daily schedules" (37), and some husbands described themselves as "sperm donors" (67) or felt intense pressure to perform during periods of peak fertility. The temporal nature of the hormone cycles was a source of great distress for many people, especially the impact these cycles had on sexual intimacy.

Identity issues. Another topic of discussion in online forums focused on the impact of infertility on people's conceptions of their relationship or themselves. Partners referenced their identities during the infertility process in two ways: (i) identifying as a relational unit when discussing their reproductive history or medical treatments, and (ii) describing their own or their partner's desire to become and identify as a parent.

For example, many bloggers adopted a "we" approach to narrating their stories, as in the case of one woman who titled the opening biography of her blog as "*Our* history" (14; emphasis added). Identity also manifested itself with regard to the desire to be a parent. One woman wrote, "I actually never envisioned myself as a mother until the last several years. Maybe, I need to go back to that image because it was probably always correct" (54).

Thus, two identity trends surfaced from the data: (i) the collectivist orientation that some people assumed when discussing their infertility journey, and (ii) the desire to identify as parents that was expressed by some forum contributors.

Handling disappointment. The infertility process had various outcomes for the contributors to the online forums that we examined. Irrespective of

the particular outcome, many individuals demonstrated a need to come to terms with their infertility or to find closure in some way. One woman's attempt to numb herself from the constant disappointment was revealed when she wrote, "I've developed this weird sort of fatalist attitude about it all … it's so much easier to deal … with just ONE big heartbreak and move-on" (5). Another woman posted a blog entry about the lasting effect of infertility-related negativity:

> Now, I think that even if I ever do get pregnant, so much of the giddy-happiness most people experience will be gone … some lingering sadness will stay. There are some things that only have to touch us once to leave a cut so deep the scar will last forever. (29)

To further illuminate this issue, this next quote is another woman's response to the post above:

> If I were to find out I'm pregnant this very month I would not be happy completely but scared of losing this pregnancy that I've worked hard for … we lost our first baby a little over three months ago. It can't ever be "oh, I'm pregnant, yay" completely, and that's the crappy part. (29)

The struggle to lessen the frustration, heartache, or disappointment of infertility was one of the most prevalent themes within the online discourse we examined. More specifically, the inability for some individuals to celebrate the potential success of their pregnancy revealed how emotionally taxing the infertility experience can be.

To review, we conducted an analysis of the topical themes evident in postings to online forums for people coping with infertility as a foundation for investigating the role of relational uncertainty and interference from a partner in these experiences. This step in our analysis revealed six issues that emerged within the online discourse: the prominence of infertility, where to place blame, support issues, the problem of instrumental romance, identity issues, and handling disappointment. Although these themes capture the topical issues that were prevalent in the discussion boards and blogs, a closer look revealed how relational uncertainty and interference from a partner permeated these themes.

Relational uncertainty themes

Drawing upon the relational turbulence model, our first research question focused on how relational uncertainty surfaces in the issues that confront people coping with infertility. As noted previously, we evaluated this research question by rereading the discourse with an eye toward identifying references to relational uncertainty within the topical themes previously described. This step in the analysis yielded two themes that emphasized the experience of relational uncertainty: relational invalidation and the implications of blame.

Relational invalidation. This theme captures doubts about the relationship that emerged when people were confused by their partner's priorities or

behaviors. When individuals perceived that their partner viewed the infertility as more or less significant than they did, uncertainty brewed regarding both self and partner commitment to the relationship. In the following quote, one woman interprets her husband's absence from a doctor's appointment:

> So I'm currently sitting at my desk at work today trying not to cry … I think I have just figured out where I come in my husband's list of priorities. He is bailing on our doctor's appointment today because he forgot to ask for the time off … So apparently his priorities are his job, his immediate family, then me. (20)

Invalidation also emerged when individuals perceived a partner's desire to become pregnant as taking precedence over the partnership itself. In the next quote, a man responded to his wife's desire for parenthood:

> I just don't want it as bad as my wife does. I know I can never understand that maternal drive, but her intensity at this makes me feel that all I am to her is a sperm donor. I'd be perfectly happy if it was just her and me for the rest of our lives. (52)

In this case, the lack of validation stems from the perception of overprioritization of infertility and, in turn, neglect of the marriage.

Behaviors that seemed inconsistent with a partner's normal behavioral repertoire also sparked feelings of uncertainty within a marriage. In many situations, individuals would vent about a comment made by a spouse that was perceived as insensitive. People would usually then continue on with a disclaimer that the comment was not representative of their spouse's actions, but would add that it made their efforts towards or desire for parenthood feel discredited. For example, one woman discussed her husband's reaction to the news of her medical condition:

> Once he found out the problem was not him (my right tube was blocked) he told me that he shouldn't have to go to any appt's with me because 'it's your problem not mine'! … I don't understand why he is being like this, normally … he's very loving and supportive … it hurts that he is being like this since every month I die a little inside. (34)

In this case, the woman's violated expectation for support, especially given that her partner comforts her in most situations, seems to have raised questions about his dedication to their infertility goal. In addition, the woman speaks of the hurt she feels when her husband denies her support – which may ignite self-uncertainty. Similar to relational invalidation, the perception of uncharacteristic behaviors stems from the topical issue of partner support.

The relational invalidation theme captures how doubts about the relationship emerge when partners are differently invested in infertility treatments, or when prior norms for behavior are violated. In either case, people begin to wonder about their own or their partner's investment or commitment, and whether new norms are developing in the relationship. Relational invalidation, then, seemed to permeate most clearly through the topical issues

of the prominence of infertility and support issues. Specifically, individuals who felt some form of invalidation also reported prioritizing infertility differently from their partner or felt that their partner was not providing emotional or physical support in their quest to reproduce.

Implications of blame. For many individuals, infertility sparked a cycle of emotions that ranged from anger to a deep sadness. When confronted with a health issue that can derail relational development plans, partners frequently directed those emotions towards each other. In the following quote, a woman discusses blame in her relationship:

> My dh [This abbreviation stands for "dear husband" and is a term commonly used on discussion boards] and I have had our spats both of us blaming each other. But it always falls back down on my end because dh already has a child. My husband wants another one soo bad, we have been together 8yrs trying for 7yrs. I sometimes feel he doesn't want to be with me but just doesn't know how to tell me. (44)

Similarly, another woman reflects on her experience with blame:

> We have 'been at this' for 11.5 years (unexplained) and there is no doubt that we have at some points looked at each other and wondered 'is it you that has the problem' or 'is it fair that I keep you from having your biological kids (cause what if it is me)'. (44)

As implied by these two quotes, blame was more likely to surface within the discourse of people who had been coping with infertility for a long time. In addition, many individuals who experienced self-blame considered separating from their partner so that he or she could have the chance to produce a biological child. Relational uncertainty, especially when the fertile spouse was more ambitious for a child, was especially prevalent among those partners who were the source of infertility and blaming themselves for the negativity infertility brought to the marriage.

To review, our first research question queried the manifestation of relational uncertainty within issues confronting infertile couples. Our findings highlighted how relational uncertainty emerged through both relationship invalidation and the implications of placing blame. More specifically, partners who invalidate a relationship by focusing too much or too little on the infertility or by violating behavioral norms prompt questions about the relationship itself. Likewise, both self and partner blame made people question the future of the relationship.

Interference from a partner

Our second research question focused on the role of interference from a partner in the issues discussed by infertile individuals. Paralleling our analysis of RQ1, we examined the six topical themes for references to disrupted goals or routines. This reading of the discourse revealed the supremacy of the pregnancy goal and violated expectations for treatment involvement as pervasive manifestations of partner interference.

The supremacy of the pregnancy goal. Abiding by the many restrictions that are part of infertility treatment, such as hormone shots, charting cycles, and the plethora of doctor appointments, can be taxing on a couple's established lifestyle. Some people discussed career interference and travel disruptions caused by treating infertility while others described how infertility created a barrier to their goals for intimacy in their relationship. Topical issues of the prominence of infertility, support issues, and instrumental romance all contributed to the theme of the supremacy of the pregnancy goal, as well as illustrated the role of partner interference. These distinct subthemes are united by their focus on how infertility eclipsed other priorities within people's lives.

With respect to the disruption of day-to-day activities, many women noted that infertility treatment felt like a second "job" for them – it required changes in their daily routine to accommodate the appointments, it involved physical changes due to medicine, it demanded planning for treatments, and it caused absences from work. When husbands did not make sufficient changes to their own routine, their wives felt especially burdened by the disruptions to their schedules and daily responsibilities. Consider this woman's description of how much of her time was consumed by researching and planning a course of action, and her perception of the inequity inherent in the situation:

> Because even though E. might be willing, the reality is, I'm still the one who will have to do all the planning, research, coordinating, compiling of paperwork, phone calls, emails, the bulk of the appointments and the taking of time off work. (15)

The second facet of this theme addressed the impact of infertility on a couple's sex life. Many individuals found that sex became "routine" (37), "mechanical" (73) or "almost like a scheduled event" (67). Postings revealed how women meticulously planned and charted for the opportune conception time, which put a great amount of stress on the men to "perform" during the critical window of opportunity. The following quote illustrates this issue:

> But last night dh came home with a cold and did not feel like performing his part. Yeah on the most important night of the month. I lost it and just started crying and all the stress that was building up just came out. It was pretty bad. (38)

The change in partners' sex lives can dramatically alter a foundational, intimate element of their relationship. And when sex becomes instrumental to the infertility process, rather than a spontaneous expression of intimacy, the routine nature and task-orientation of the act can create a great deal of pressure and frustration. The following quote illustrates how the treatment process influenced both physical and emotional reactions to sex:

> I can't stand sex anymore. I'm under so much stress about it that it's hard for me to maintain an erection, even with medication. Forget about having sex 'for fun.' It stopped being that a long time ago. (52)

Unfortunately, the perception of sex illustrated above is representative of sexual encounters for many individuals attempting to treat infertility. Partner interference seemed to be perceived from two perspectives with regard to sex: (i) those partners who do not adhere to the schedule of sex were perceived as interfering with the goal of intercourse during opportune times, and (ii) those who only obliged in terms of the routine, task-oriented nature of sex were perceived as interfering with the romance and spontaneity that at least one partner wanted to maintain. Thus, the treatment of infertility has the potential to dramatically disrupt sexual intimacy.

The supremacy of the pregnancy goal in a couple's life clearly contributed to interference of partner goals. Specifically, the topical issue of prominence of infertility illustrated how, when couples prioritize treatment differently, each partner can feel overwhelmed by the pressure of their spouse to either contribute more to the process or to incorporate non-fertility related aspects into their lives. Similarly, when individuals perceive support issues in their relationships, they seem to consider lack of support as interference from their partner in reaching their reproductive goals. Finally, the topical theme of instrumental romance surfaced within supremacy of the pregnancy goal. Individuals often reported negative changes in their sex lives when they allowed infertility to eclipse the intimacy of their partnership.

Violated expectations for treatment involvement. A second source of interference from a partner was violated expectations for involvement in infertility treatments. Some people vented about the frustration they felt when their spouse did too little of the work involved in fertility treatment. One man commented on his discontent with his wife's efforts towards parenthood by writing, "I guess it's a real sense of frustration for me that my wife isn't willing to really 'do whatever it takes' to make this happen" (35). Similarly, a woman commented on how her aggressive approach toward treatment conflicted with her husband's dealings with infertility, "My husband is the one who internalizes things, and I'm the open one who sees it as a problem that can be fixed, and I'll do whatever it takes to fix it" (34).

More detailed accounts of interference surfaced when couples were negotiating treatment decisions. The variety of treatment options, ranging from hormone injections to adoption, was often a topic of debate for couples. Although some couples agreed on their next step, many individuals voiced this issue as a source of stress in their relationship. For example, one woman discussed her desire to pursue adoption as opposed to continuing in vitro fertilization, and she expressed irritation at her "very open minded, enlightened, supportive, educated" husband when he discounted her treatment desires, "He even has a problem with donated embryos – basically if it's not 'his' child he won't consider it" (32).

Conflicting preferences for medical treatment created interference when they delayed or impeded one partner's efforts towards becoming a parent. For example, one man voiced his frustration with the lack of progress toward parenthood when his wife refused to take fertility drugs, use donor sperm, or try in vitro fertilization:

> But then she cries … I really do KNOW how much she wants this for us … but I also know she has some real and hard limits, but then when she is upset she comes back with the "I'll do anything speech" that I know isn't really true. (35)

The frustration evident in the previous quote permeated through many other accounts addressing treatment. And dissatisfaction was most apparent when one spouse felt as though their partner's actions or thoughts were unjustified. Overall, the topical issues that contributed to violated treatment expectations were supremacy of the pregnancy goal and support issues.

To summarize, our findings with respect to RQ2 suggest that interference from a partner surfaces in experiences of infertility in two ways: (i) when fertility treatment overrides daily routines and goals for sexual intimacy, and (ii) when expectations for involvement in treatments are violated. More specifically, partner interference emerged as individuals made the necessary changes in their daily routines and sexual behaviors to accommodate infertility treatment. People also expressed frustration when their partner's approach to treatment impeded the goal of having a child. Perhaps because the goals at stake are so significant, a partner's interference in goals related to infertility was a prominent issue.

Identity development

Although our research questions focused on relational uncertainty and interference from a partner as complicating factors in infertility experiences, our analysis revealed identity development as a peripheral theme that permeated the topical issues discussed online. In particular, our findings illustrated the experience of relational identity benefits as couples persevered through the highs and lows of the infertility experience. In addition, people expressed personal growth as they accepted the prognosis of infertility and decided to end treatment.

Strengthened relational identity. For some individuals, their reproductive disability instilled the feeling of having to "work harder" for their baby. During this time, the dyadic unit was represented as a team or a "we". The following quote illustrates one man's fascination with potentially becoming parents together:

> To be standing here next to your wife and realize that we are potentially … parents, is one of the most emotional things I have ever experienced … To finally be in a position of being a parent is just mind blowing. To realize that your life is about to be completely changed forever is something that is almost impossible to comprehend. (31)

In other quotes, individuals referred to every aspect of treatment, regardless of who it directly involved, as happening to both partners. For example, one woman wrote, "We have been trying to have a baby … We had a miserable first attempt … and are now taking some time to decide how to proceed" (12). Another man commented:

> We headed in this morning to the … clinic for her pregnancy test … then we called and with a simple, 'We're sorry' we knew the worst … there is just so little to say. Just watching the one you love have her & our dream slip away. (31)

The semantic detail may or may not have been intentional, but the perception of the dyad as a team is clear by the consistent use of plural pronouns when describing infertility experiences.

Personal identity shift. Although our study only captured some individuals who abandoned their goal of biological parenthood, many of those people discoursed about their struggle with accepting their identity as, biologically, non-parents. In many situations, the decision to stop trying to conceive came through an epiphany. The following quote illustrates one woman's acceptance that she may never be a biological mother:

> And the startling truth came to me then … it's not that God CAN'T make me pregnant, that's absurd, of course. It's that He won't. And while I know that 'some day' I will understand, it feels today like a betrayal that I can't understand for the life of me … Sometimes, you know, things do not work out. The only baby T and I will ever conceive died, and there's no guarantee that things will ever be different. (29)

Although the pain was still raw for most of these contributors, their attempts to understand or accept their identity became particularly clear after a major loss or setback occurred. The following woman accepts her infertile status after her sixth pregnancy miscarried:

> This loss is hard not only because it's the sixth miscarriage … but also because it's the end of the road for us. We are done. Enough. I have pursued all avenues and done everything I could possibly do to try to sustain a pregnancy, all to no avail. I need to accept that it's not going to happen for me. I am ready to close this chapter of my life, this trying to conceive and pregnancy and miscarriage chapter. I am not giving up on my dream of becoming a mother, but I am letting go of my dream of a successful pregnancy. We are going to move on. It is time. (80)

The implied acceptance of infertility marks an important point in this couple's relationship.

In addition to the individual effects this identity shift can have, it can also greatly influence the marital dyad's perception of the infertility experience. If a couple reaches closure together, as is evident in the last quote, then it marks a point in their relationship when they decided, as a unit, to fill the void of not having a biological child through other means. When partners reach the decision to stop trying to conceive independently or at different times, those differences might seriously undermine the relationship.

Subsidiary results

The subsidiary analysis utilized independent coders unfamiliar with the research questions to evaluate the frequency of the themes within the data

set and intercoder reliability in the evaluation of each theme's presence or absence. The relational invalidation theme was observed in 38 (8.7%) of the discourse units (93% agreement; kappa = .64), and the implications of blame surfaced in 71 (16.2%) of the units (92% agreement; kappa = .60). Regarding the partner interference themes, supremacy of the pregnancy goal was present in 45 (10.3%) of the units (93% agreement; kappa = .63), and violated expectations for treatment involvement appeared in 40 (9.1%) of the cases (93% agreement; kappa = .65). We also recorded the frequency of identity development themes; however, intercoder reliability fell below acceptable standards (strengthened relational identity: frequency = 129 (29.5%), 77% agreement, kappa = .49; personal identity shift: frequency = 19 (4.3%), 95% agreement, kappa = .29).

The results of the coding exercise revealed relatively high intercoder agreement, uncorrected for chance, but marginally acceptable estimates of reliability. One explanation for the discrepancies between these indicators is the relatively low prevalence of the themes, which produced imbalanced marginal values in the confusion matrix used to compute kappa. As reported in Feinstein and Cicchetti (1990):

> [Kappa] is affected by prevalence. In the evaluation of diagnostic marker tests, certain tests that seem to have high sensitivity and specificity may have low predictive accuracy when prevalence of the disease is low. Analogously, two observers who seem to have high agreement may nevertheless emerge with low values of κ because of problems in the counterpart of prevalence. (p. 543)

In our data, the ratio of presence to absence in the sections used to establish kappa were consistently imbalanced, roughly 1:10, across the four major themes. These patterns, coupled with the high percentage agreement between coders, suggest that the estimates of intercoder reliability may have been influenced by low prevalence.

In total, the results of the theme analysis revealed six topical issues prevalent within online discourse about infertility. With respect to our research questions, these topical issues were permeated by two themes related to relational uncertainty and two themes related to interference from a partner. Our analysis also suggested a third pervasive theme, which focused on the ways in which infertility affected both relational and personal identities.

Discussion

Our goal in this study was to use Solomon and Knobloch's (2004) relational turbulence model to gain insight into infertility as a transformative relationship experience. An analysis of online forums for discussing infertility revealed six topical themes that captured issues salient to people experiencing infertility. Regarding RQ1, we found that relational uncertainty permeated these topics through themes focused on relational invalidation and the implications of blame. With respect to RQ2, interference from a

partner surfaced when infertility dominated daily life and/or sexual intimacy, or when expectations for treatment involvement were violated. Our analysis also revealed identity development in the form of a strengthened relational identity or a personal identity shift as prominent within the experience of infertility. To conclude this paper, we consider the implications of our results, directions for future research, and the strengths and limitations of the study.

Theoretical implications for the relational turbulence model

We drew upon the relational turbulence model as a framework for illuminating the relationship issues that emerge for people experiencing infertility; consequently, the results of this study point to both strengths and limitations of that perspective. Our findings highlight how the mechanisms featured by the relational turbulence model, namely relational uncertainty and interference from a partner, have applications beyond the dating context in which the theory was initially developed (see Solomon & Knobloch, 2001). In addition, the themes we identified that focused on relational uncertainty and interference from a partner captured the relational implications of the infertility experience, even more than the topical themes that were evident in the discourse. Thus, we are encouraged that the relational turbulence model offers a meaningful framework to guide future research on the experience of infertility.

Our findings also suggest two gaps in the theory as it currently stands. First, whereas the relational turbulence model positions relational uncertainty and interference from a partner as largely distinct mechanisms, our analysis suggests that they may be closely linked during turbulent periods. For example, we noted that a lack of instrumental support in treating infertility often evoked feelings of confusion or invalidation. Similarly, a partner's inability to adhere to prescribed sexual activity sometimes prompted the other partner to begin assigning blame in ways that increased relational uncertainty. Often, feelings of relational uncertainty were experienced after the partner interfered in a pregnancy-related goal, suggesting that the parameters may, at times, occur sequentially. The richness of the qualitative method we employed revealed connections between interference from a partner and relational uncertainty that have been overlooked in previous work.

Second, this investigation points to identity development as another mechanism that may be relevant to transitions within romantic relationships. Although the relational turbulence model does not address changes in relational or personal identities, conceptions of self and the relationship permeated the discourse that we examined. For example, many individuals represented their experiences as a joint, rather than individual, narrative. We also saw evidence of some people shifting their identity from a person trying to conceive to one who accepted their infertility as permanent. We consider future research on the role of identity development in people's experiences of transitions in relationships as a promising direction for developing the relational turbulence model.

Directions for future research

In addition to the incorporation of identity, the next step in addressing infertility through the lens of the relational turbulence model should include measuring the parameters of relational uncertainty and partner interference at intervals throughout the treatment experience. In particular, findings from the current study could contribute to the development of a questionnaire addressing the emotional and relational disturbances induced by infertility or miscarriages. Such a tool might be especially helpful in efforts to gather information from both partners in an infertile dyad.

Although the direct focus of the study was on uncertainty and interference while coping with infertility, our findings point towards other theoretical perspectives that can shed further light on the experience. For example, Baxter's (1988, 1990) work with relational dialectics may help to parse out the tensions contributing to relational turbulence. Baxter posited that three contradictions represent the dialectical tensions experienced in relationships: autonomy–connection, openness–closedness, and predicatability–novelty (Baxter, 1990). Although speculative, our findings hinted at the presence of these tensions in the discourse. The struggle between openness and closedness may be related to revealing information about treatment preferences. Some individuals reported keeping important opinions to themselves in fear of hurting their partners. In addition, some people experienced hurt when their partners were honest about their opposing opinions on treatment or parenthood. Similarly, adhering to the prescribed activities associated with infertility treatment creates relational tension when it overrides spontaneous romance. The root of this particular issue may be grounded in the predictability–novelty dialectic. Exploring the experience of infertility through a relational dialectic lens may be useful in clarifying the inherent tensions that infertile couples face.

Problematic integration theory may also offer insight into the communication experiences of people confronted with infertility. Problematic integration theory highlights the challenges that emerge when clarity concerning the probability of an outcome and desirability of the outcome diverge (Babrow, 1992, 2001). In the case of infertility, couples experience substantial ambiguity about the likelihood of conceiving and giving birth to a baby, but they perceive this outcome as unequivocally positive. According to Babrow (1992, p. 98), "As integration of probability and evaluation becomes more problematic, it becomes increasingly difficult to form and maintain associated cognitive, affective, and behavioral orientations". The theory further suggests that the disorientation produced by problematic integration has implications for communication experiences. In particular, Babrow (1992) argued that communication about situations where integration of the probability and desirability of outcomes is problematic can become stylized through the use of euphemisms, repetitive patterns of discourse, or constrained topic choices. When applied to experiences of infertility, problematic integration theory provides a framework for understanding the communication challenges created by experiences of infertility, as well as why interactions between partners might come to lack spontaneity and become both instrumental and routine.

In addition, the growing body of research on uncertainty and ambiguous loss offers an interesting perspective for studying infertility (e.g. Baxter, Braithwaite, Golish, & Olsen, 2002; Powell & Afifi, 2005). The term "ambiguous loss" refers to the loss of something that essentially is still there, such as when a spouse has Alzheimer's and is physically, but not psychologically, present (Baxter et al., 2002) or when couples are celebrating the birth of a child, while mourning over the complications created by premature delivery (Golish & Powell, 2003). Although speculative, our findings suggest that this perspective might benefit from also considering "ambiguous joys". In many situations, attempting to treat infertility created a lingering hope that, someday, the goal of parenthood would be attained. In essence, many couples celebrate their hope for parenthood, despite the reality that they may never have a biological child. In addition, for some infertile couples the excitement at the potential of parenthood is soured by the heartache of never conceiving or not carrying a baby to term. These situations may contribute to the inability to celebrate either their own early pregnancies, due to fear of not carrying the baby to term, or being unable to enjoy any child-related event because those events are reminders of what they do not yet have. Thus, "ambiguous joy" may address both the hope of parenthood in infertility treatment and the desire to celebrate other people's pregnancy successes, but being unable to genuinely feel happy because these events act as reminders of their inability to conceive.

Strengths and limitations

Utilizing data from discussion boards and blogs contributed both strengths and weaknesses to the study. As a benefit, the unsolicited accounts helped us to garner naturally occurring discourse about infertile relationships from both men and women experiencing infertility. At the same time, we realize that our focus on online forums restricts our generalizability to those individuals with consistent access to the internet and, most likely, excludes those of lower socioeconomic access (Calvert, Rideout, Woolard, Barr, & Strouse, 2005). Collecting data through online forums may also limit our ability to identify the demographic information from participants or control for diverse perspectives. It seemed as though many of the individuals on the discussion boards were women, which may have underrepresented the experiences of men coping with infertility. Further, our research would benefit from having the input of both partners in each infertile relationship.

The analytical procedure contributed to strengths and weaknesses as well. The two-step analysis provided a rich account of common issues experienced by infertile couples, as well as illuminated the emergence of relational uncertainty and partner interference within those issues. By allowing the data to first "speak to us" and then probing it for the parameters of relational turbulence, we avoided making assumptions about relational issues. We also realize that viewing the data through a theoretical lens, as was done on the second reading, entails some subjectivity. Researchers approaching the same data from a different theoretical framework may report results different from our own and more aligned with the core assumptions of their theory.

Another qualification to our results stems from the findings of the subsidiary analysis we conducted. Those results suggested that the implication of blame was the most frequent theme in the discourse, but it was present in only 16% of the units. In fact, our coders did not observe *any* of the themes identified in this investigation within 48% of the discourse units. On one hand, these results reflect our methodology, which focused on naturally occurring online discourse, rather than discussions that were through interview or focus group questions. On the other hand, these figures encourage caution in overstating the scope of our findings. Although the experiences captured in these themes were discussed in ways that suggest that they were intense and meaningful aspects of infertility, relationship issues capture only part of the constellation of medical, practical, personal, social network, and cultural issues that might surface as people dialog about their experiences.

Although we found the relational turbulence model to be a useful framework for reading the discourse we examined, we recognize the limits imposed by our theoretical perspective. In particular, the relational turbulence model focused on issues that arise within a couple's relationship, and neglects how the dyad is situated in a social network. Many couples are challenged with how to share information about their conception difficulties with other significant people in their lives as well. Exploring how partners, both individually and as a dyad, negotiate privacy boundaries (Caughlin & Petronio, 2004; Petronio, 2002) regarding who to and not to tell about their infertility, as well as how much detail to reveal about their diagnosis and treatment decisions, could shed light on how people's social networks may buffer or exacerbate stress within a marriage.

Conclusion

We opened this paper by highlighting the need to complement a medical perspective on reproductive difficulties with an understanding of infertility as a transformative experience within personal relationships. Although this study constitutes only a first step in that effort, the results highlight the utility of situating infertility within the relational context. In the discourse we examined, we saw how infertility could either fracture or strengthen a relationship. We also saw that an ability to coordinate activities and perceptions related to the goal of experiencing parenthood was an important part of maintaining a relational bond. Thus, we are encouraged that future research on infertility as a transformative relationship event can shed light on the significant consequences of this life experience. In particular, analyzing infertility through the lens of the relational turbulence model allows us to recognize and explore infertility not just as a medical issue in an individual's life, but as a transitional period in a relationship that has the potential to alter a couple's lifestyle and force them to renegotiate both daily and long-term goals together.

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