

## ***In Vitro* Fertilisation: Women's Questions and Concerns in a Malaysian Online Forum**

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### **ABSTRACT**

Studies have shown that infertility may be caused by male factors, female factors, a mixture of both male and female factors, or due to unexplained reasons. Nevertheless, in some societies, infertility is frequently seen as solely a woman's problem and women with infertility problems are often forced to suffer blame and humiliation in silence. For example, in Malaysia, a barren married woman is looked down upon, has a lower status, and may be divorced from her husband. Infertility becomes a taboo topic and therefore, not much is known about Malaysian women with infertility problems. However, with the anonymity afforded by computer-mediated communication (CMC), these women are now turning to the online medium for help. This study uses the web content analysis method to investigate the inquiries made by Malaysian women over *in vitro* fertilization (IVF), a type of infertility treatment, in a local online forum. The findings revealed that the questions asked by women in the forum were primarily concerned with seeking information about IVF. Other types of questions asked include opinion-seeking and questions requesting experience-sharing. These women were also found to use various solidarity strategies to support and encourage one another in persevering with their treatment.

*Keywords:* Infertility, *in vitro* fertilization, Online, Questions, Solidarity, Women

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### **INTRODUCTION**

Producing progeny is important, more so in some societies than others. In the Malaysian society, progeny is considered so important that women with infertility problems feel it is taboo to let anyone know of their predicament lest they be blamed, ostracized, or worse, abused. An infertile

woman is looked down upon (Akhtar, 2011), and is it also common for an infertile wife to suffer abuse and assault by her husband, sometimes divorced to enable the man to marry another wife on the grounds of preserving the family lineage (Sabki, 2010).

Consequently, many Malaysian women with infertility problems are likely to keep their problems to themselves, and are often ignorant of where or how to seek help. In a 2012 research (Starting Families Asia), it was found that about 75% of Malaysian women believed that infertility was God's will (*The Star*, 2012). It was futile to seek treatment as infertility was considered incurable without divine intervention. About 50% of them thought infertility was about luck and thus, women who were unable to conceive were just unlucky (*The Star*, 2012). For these women, they also believed they were just as powerless to initiate any change to improve their situation. The research also showed that 80% of the Malaysian women assumed infertility to be entirely the woman's fault (*The Star*, 2012), putting themselves under a tremendous amount of pressure to have children without realizing that infertility can affect both men and women.

Nonetheless, now concealment of identities is possible with the advent of computer-mediated communication (CMC) (Bae, 2016; Herring 2001; Keipi, Oksanen, & Rasanen, 2015; Misoch, 2015). Malaysian women with infertility problems are finally able to open up about their problems. They no longer need to be worried about being humiliated and degraded by people known to them.

However, as yet, not much is known about Malaysian women with infertility problems, in particular the kinds of questions they may have and would like to ask, if given the chance to openly enquire about their problems and the types of treatment available to them. This study intends to find out the types of issues that matter to Malaysian women when making inquiries over IVF, a form of infertility treatment, in a local online forum.

## LITERATURE REVIEW

### Women's Online Communication on Health Issues

In terms of seeking support on health-related issues, CMC is gaining increasing popularity as it offers participants opportunities to gain information, obtain support, and discuss on a variety of health concerns while maintaining anonymity (Hanna & Gough, 2018; Hughes, Locock, & Zibland, 2013; Mo & Coulson, 2008; Sillence, Hardy, Briggs, & Harris, 2013). Perhaps what is more important in online support groups is that interaction with other in similar predicament may help reduce feelings of loneliness and isolation in participants. According to Naslund, Aschbrenner, Marsch, and Bartels (2016), the sense of group belonging experienced by participants in online support groups could help "promote recovery, self-esteem and physical wellbeing among individuals".

In relation to men and women participants in CMC, previous research indicate that women are more likely to participate in online patient support groups compared to men (Hallyburton & Evans,

2014; Mo, Malik, & Coulson, 2009). One possible reason for the different ratio of men and women needing and seeking help could be the traditional perceptions of what defines masculinity and femininity (Courtney, 2000). Men are traditionally expected to be self-sufficient and objective while women, on the other hand, are allowed to be dependent and emotional (Murnen, Greenfield, Younger, & Boyd, 2016; Seale, 2006). As such, help-seeking may be seen as a sign of weakness in men, and thus, viewed with disapproval by society. In contrast, women who seek help do not contradict the stereotypical expectation of female behavior (Jan, 1999).

Most studies examining women communication in online support groups focused on discourse strategies of women in breast cancer (Blank & Adams-Blodnieks, 2007; Klemm, Hurst, Dearholt, & Trone, 1999; Owen, Klapow, Roth, & Tucker, 2004; Seale, Ziebland, & Charteris-Black, 2006; Sillence, 2013) and ovarian cancer online support groups (Sullivan, 2003). The findings of the studies showed that online messages written by the women were generally emotion-focused, with a higher frequency of words related to emotional disclosure (Mo et al., 2009; Owen et al., 2004). It was found that the women tended to discuss their feelings (Seale et al., 2006) and shared personal experiences (Klemm et al., 1999). Hence, these findings seemed to concur with Herring's (1996) description of typical female CMC language that inclines toward elements of "supportiveness" and "community building".

There were, however, fewer studies conducted on other types of health topics. For instance, Burri, Baujard, and Etter's (2006) study on an online forum for ex-smokers reported similar findings on women's discourse strategies that emphasized personal disclosure, sharing, reaching out, and positivity, with discussions on therapy and offering of emotional support. Interestingly, in their investigation of women's online depression support group, Salem, Bogat, and Reid (1997) found women tended to make structure or process comments, while men were more inclined to reveal and share personal experiences (Nimrod, 2012).

In short, online health support groups are more popular among women than men, and while most studies indicated women were more likely to reveal emotions and share experiences in their online messages, different medical conditions could also bring about different types of psychosocial needs. As such, this could result in varying and even possibly conflicting findings (Mo et al., 2009).

### **Infertility as a Health Issue**

A widely accepted definition of infertility is "the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected sexual intercourse" (World Health Organization [WHO], 2015). Some researchers and medical practitioners also consider infertility as the inability to maintain a pregnancy to live birth (Fidler & Bernstein, 1999).

Infertility is a global health issue. It affects more than 80 million people (Hasanpoor-Azyhdy, Simbar, & Vedadhir, 2014), which is 8% to 10% of couples worldwide (Reproductive Health Outlook, 2003; Roupa et al., 2009). However, according to the WHO, there are in fact, many more infertile couples than reported, especially in developing countries where infertility is considered taboo (Rutstein & Iqbal, 2004). As many as 186 million people have been estimated to suffer from infertility (Inhorn & Patrizon, 2015).

About 30% of infertility cases are due to male factors. Another 30% due to female factors, and the remaining 40% of the cases are caused by either a mixture of both male and female factors, or unexplained causes (LaMotte, 2015).

In cases of female infertility, problems in ovulation and in the fallopian tubes are the most common causes of infertility (Blundell, 2007). One ovulatory problem is the insufficient levels of luteinizing hormone (LH) that can delay or prevent ovulation (Blundell, 2007). The luteal phase deficiency is another ovulatory problem where the endometrium is not mature enough to support embryo implantation despite successful fertilization (Bayer, Alper, & Penzias, 2002). Some women also suffer from ovulatory dysfunction such as poorly developed, genetically abnormal, or inexistent ovaries (Guyton & Hall, 2000). Problems in the fallopian tubes resulting in infertility include diseased or damaged fallopian tubes. One or both tubes may be blocked, the mucosal lining may be

damaged, and sometimes, the tubes are damaged due to pelvic inflammatory disease caused by the use of intrauterine devices (Blundell, 2007).

In male infertility, the most common cause is oligospermia, where the semen either contains too few spermatozoa, or the spermatozoa are of low quality (Blundell, 2007). Other factors are azoospermia, a medical condition whereby there is no sperm production (Leese, 1988), abnormal morphology of spermatozoa (Guyton & Hall, 2000), varicocele (dilated scrotal vein affecting sperm production) (Bayer, et al., 2002), and genetic defects (Blundell, 2007).

It is also possible that there is infertility diagnosis in both partners, that is, both partners suffer from one or more reproductive problems, while some couples have no demonstrable cause of infertility in either partner (Bayasgalan et al., 2004). In cases of unexplained infertility, these couples are normally asked to resort to IVF, a type of infertility treatment that involves several procedures with fertilization taking place outside the body and later, the embryo being transferred to the uterus (Voorhis, 2007).

The effects of infertility are pervasive, extending beyond just the inability to have children. Infertility has been found to be a source of extreme stress for many couples, with infertile couples experiencing psychological and emotional distress, social stigma, isolation, a sense of role failure, and loss of control (Daly, 1999; Greil 1991; Miall, 1986). Childless couples may also feel a sense of marred identity, especially

when parenthood is considered pivotal to their marriage's experiences and identities (Hays, 1996).

In developing countries, the consequences of infertility are much worse and severe, particularly in Asia and Africa (Gerrits, 2002; Ombelet, Cooke, Dyer, Serour, & Devroey, 2008). The psychological effects of infertility like guilt, shame, depression, grief, and worthlessness are often greater in breadth and depth in couples in developing countries compared to developed societies (Dyer, Abrahams, Mokoena, & van der Spuy, 2004; Ombelet, 2011; Papreen et al., 2000). Having biological children is crucial not only to ensure marriage stability, but more importantly, to continue the family name and lineage (Dyer, 2007). Childlessness can also cause serious economic deprivation, especially in societies where parents are economically completely dependent on their children in their old age (Inhorn & van Balen, 2002), and in some cultures such as the Ethiopians, childlessness could mean total loss of social status (Deribe, Anberbir, Regassa, Belachew, & Biadgilign, 2007).

Yet, perhaps the ones who suffer the most from infertility are the women in developing countries (Ombelet, 2011). Although infertility affects both men and women, due to ignorance and social prejudices, infertility is still perceived as largely a woman's problem irrespective of which partner is infertile (Deribe et al., 2007; Van den Broeck, Emery, Wischmann, & Thorn, 2010). As a result, these women bear the brunt of the infertility

stigma, suffering from condemnation, disinheritance, isolation, neglect, and polygamy (Hollos, Larsen, Obono, & Whitehouse, 2009; Ombelet, 2011; Samuel, 2006). Some women become victims of physical and psychological violence (Dyer, 2007; Gerrits, 1997; Ombelet et al., 2008; Richards, 2002; Sundby, 1997; Umezulike & Efetie, 2004; Wiersema et al., 2006), and in some cases, even starved (Ombelet et al., 2008), killed (Times Now, 2016), and driven to suicide (Ombelet et al., 2008; Springen, 2008; Times of India, 2009).

Consequently, the psychological distress experienced by women is much more severe than men (Greil, 1991). A study by Freeman, Boxer, Rickels, Tureck, and Mastoinni (1985) showed approximately half of the women receiving infertility treatment considered infertility as the most stressful experience of their life, as opposed to only 15% of men. Domar, Zuttermeister, and Friedman (1993) even found that the levels of anxiety and depression among women with infertility problems were comparable to those with cancer.

The gravity of childlessness to a woman's self-worth and psychological balance, coupled with their fear of societal condemnation and possible abuse, has led to women being secretive about their infertility problems. Consequently, women, especially those in developing countries, are often ignorant of their problem and the possible forms of treatment (The Star, 2012). Even if these women seek medical care, not much is about their concerns due to the taboo nature of the problem and the social stigma associated with it.

However, identity anonymity on the Internet (Morahan-Martin & Schumacher, 2003) can now give people with potentially embarrassing problems a chance to express themselves uninhibitedly and to seek help (White & Dorman, 2001). Subsequently, women in societies where infertility is a taboo topic can now turn to the Internet for information, help and emotional support with the assurance that their identities remain hidden.

As yet, there is limited information on how Malaysian women make inquiries on infertility when contemplating, or undergoing IVF treatment. Thus far, a recent study on Malaysian women with infertility problems only reported on the advice-seeking strategies used by the women, focusing on the overall organization of messages and the syntactic structures of the advice sought (Jan & Pung, 2016). This study aims to look at a different aspect of Malaysian women with infertility problems by investigating the kinds of questions asked, and how these questions reflect the women's concerns on IVF treatment.

## **METHODS**

### **Research Site**

The online forum, namely *Malaysian Motherhood* (<http://www.malaysianmotherhood.com>), was used as the research site for the study. It is text-based, asynchronous, open-accessed, and is one of the most popular online forums targeted at Malaysian women.

While anybody is free to go into the forum, registration is still required if one wants to participate in the discussions. However, the forum makes no imposition on applicants to disclose their personal details during the registration process. Subsequently, it is still possible to conceal one's true identity if the applicant wants to, thereby safeguarding privacy.

The role played by the researchers in the study was that of a "guest." The researchers did not post a single message to communicate with any forum member throughout the duration of time in which the data were collected. Forum members interacting in the forum were oblivious to the fact that their messages were read and would be used for a study. This preserved the authenticity of the data, which was crucial so that the data consisted of women's interaction in an environment where they felt safe, secure and assured of their anonymity.

The forum was also user-led whereby members were free to start any discussion topic and post messages in the forum. Consequently, it was possible for forum members to discuss and share their opinions in an uninhibited, spontaneous manner. This implied that the nature of the interaction was peer-to-peer.

Most of the topics in the forum were related to women's issues such as a woman's reproductive system (e.g., "Health Issue and Exercise during Pregnancy", "In Vitro Fertilization", "Trying after a Loss"), childbirth (e.g., "Gynaecologists and Obstetricians", "Confinement Period"), and childbearing (e.g., "First Time Mommy",

“The Full-Time-Working-Moms Club”, “Your Parenting Style”). Nonetheless, infertility issues seemed to be the most popular topic with the forum members, in particular, IVF. Out of the 1,292 messages posted during the 6 months, 52 topics were devoted to IVF with 762 messages. Hence, the number of messages on IVF took up 58.98% of the total number of messages posted in the forum.

### **The Participants**

The participants of the study were members who posted questions pertaining to IVF from February 2012 to July 2012. Although it was not possible to verify the identities of the participants due to the anonymity afforded by computer-mediated communication, the participants could be regarded as Malaysian women on the basis that they were the targeted participants as specified in the forum title, the Malaysian Motherhood forum. Being Malaysians, the participants comprised either, the Malays, the Chinese, or the Indians, who made up the primary ethnic groups in Malaysia (Index Mundi, 2012).

As participants did not need to disclose their personal details on registration in the forum, it was not possible to find out their age. However, in a few of the messages where the participants revealed some of their medical histories and infertility problems, majority of these disclosures indicated the participants' age range that was between late twenties to late thirties.

### **Data and Analysis Procedures**

As in previous research on online messages (Kouper, 2010; Locher, 2006), the research method for the present study was also web content analysis method. Web content analysis is an expanded form of the traditional content analysis research method, where it allows “a broad range of content” to be analyzed, including “systematic identification of patterns in link and interactive message content” (Herring, 2010). Researchers are also given the options of a variety of “sample types (e.g., time-based, event-based, participant-based) and coding categories (e.g., pre-existing or emergent from the data)” depending on the research questions and the data being examined (Herring, 2010). Methodological approaches could also be grounded in linguistics, or in sociology.

In this study, the objective was to find out the types of issues that matter to Malaysian women when asking questions on IVF in a local online forum. The focus, therefore, was on the topics or themes of the questions asked, as well as the context(s) in which the questions were asked. As such, the data that were analyzed in the present study was textual data, specifically 6 months of messages related to IVF posted from February to July 2012. Analysis involved identifying questions in the messages, categorizing the questions into broad topics or themes, and relating the questions to the context of the messages in order to investigate the women's concerns.

The messages were first examined using Locher's (2006) system of message-coding. This involved analyzing the content employing features of computer-mediated discourse analysis method for their discursive moves. A discursive move is a "kind of contribution that the entry made to the ongoing interchange" (Miller & Gergen, 1998). If someone says "I am sorry," then, that statement can be labeled as an Apology discursive move, or if someone writes "Thank you for your help," that part of the message can be coded as the Appreciation discursive move.

In the present study, the Question move was identifiable using Kouper's (2010) classification of questions. An interrogative was labeled as a Question move if it is a question that asks for information or opinion. The question may be asking for information or opinion about either, the inquirer herself, the message-recipient, or certain aspects of the IVF treatment. For instance, an interrogative that asks for information such as "Do you know any other fertility specialists besides Dr. X in Z Hospital?", or the interrogative "What do you think of me going for the treatment?" which asks for opinion, would be classified as a Question move. However, inquiries that were direct requests for advice, although phrased in an interrogative structure, would not be considered as a Question move. For example, an interrogative such as "Can I have your advice on this?" is an explicit request for help or advice, and therefore, would be more appropriately labeled as a Request Advice move rather than a Question move.

Following the coding of the discursive moves, the Question move was further examined for the function it served. Specifically, the move was analyzed to find out what the women's concerns were when questions were asked pertaining to IVF. To fulfill this aim, the questions were categorized into broad topics or themes, and examined for their functions or associations in relation to the overall context of the message.

In order to ensure that the research met the recommendations of Ess and the the AoIR Ethics Working Committee (2002), all personal information about the participants remained undisclosed. Even the pseudonyms used by the participants were changed to maximize their anonymity.

## RESULTS AND DISCUSSION

The findings of the study revealed that there were 1,292 messages posted in the forum from February 2012 to July 2012. During this time, 217 IVF-related questions were asked. These were questions that either asked for information or for opinion as a way to seek advice.

### Message 1

How is your pregnancy treating you? All good I hope... Wanted to check with you since we are seeing the same doctor. I opted for the long protocol...**how long is the 'long protocol'? Whats the duration? How long you need to take the injections for?**

Further examination of the questions revealed that they were mostly information-seeking, particularly on the IVF treatment. For instance, in Message 1, the inquirer was asking about the long protocol of IVF (“how long is the ‘long protocol’? What’s the duration?”) and the injections necessary during the treatment (“how long you need to take the injections for?”).

Message 2

Hi, Priceless, Congratz on ur pregnancy... **May I know how come cannot consume Royal Jelly and bird's nest after ER, ... when can we continue to eat? After ET? Awaiting your reply, Thanks**

The questions asked in Message 2 were also information-seeking that were related to the IVF treatment. The questions illustrated the inquirer’s interest to know the reason why it was not advisable to take Royal Jelly and bird’s nest after the Egg Retrieval (ER) procedure (“May I know who come cannot consume Royal Jelly and bird’s nest after ER”), and when (“When can we continue to eat?”) or whether taking these foods after the Embryo Transfer (ET) procedure would be safe (“after ET?”).

Message 3

I've been think so much since this morning... the failed treatment... **is it because I don't really rest?...**

One possible reason why questions pertaining to the IVF protocol were especially common in the forum was

because the women associated familiarity with the IVF protocol with treatment success. As shown in Message 3, it was implied that the inquirer failed her IVF treatment due to her inadequate knowledge of the treatment to maximize its success. She believed that if she had known about the importance of adequate rest during the 2-week waiting period of the treatment (“is it because I don’t really rest?”), the treatment could have been successful.

As such, the inquirer in Message 1 might also want to be informed on what the long protocol constituted so that she would be better prepared for it, thereby, increasing the likelihood of treatment success. Similarly, the inquirer in Message 2 sought for information on why taking Royal Jelly and bird’s nest was not advisable after ER, and whether taking these foods after ET would be safe so that she would not unnecessarily jeopardize her chances of conceiving due to the wrong timing of ingesting such foods during the treatment.

Nonetheless, it was also peculiar that the women made use of the forum to find out more about the IVF treatment. Most of these women were already contemplating to undergo IVF, or were already undergoing the treatment. Furthermore, some of these women had already completed at least one IVF cycle and were trying their luck in another IVF cycle. The answers to their questions would either have been answered if they had asked their doctors.

The women’s attempts to garner as much information as they could about IVF from their peers in the forum could indicate

their ignorance of IVF despite undergoing or having undergone the treatment. This augmented the sensitivity and negativity surrounding the infertility problem, where the women could have felt more at ease seeking information from peers in an anonymous platform instead of their own doctors who knew their identities and their problems.

In addition, the women's need to ask questions on the IVF treatment could also indicate the women's lack of trust in their doctors. They could have felt it essential to verify the information they had received from the doctor with other women undergoing the treatment.

#### Message 4

Hi Ikan

I am going to be 38 end of this year. I did my 1<sup>st</sup> IVF with alor setar hospital, recommended by doctor who knows me well, it was a short protocol, where I only had 6 embryos and only 3 fertilised. 3 was transferred by none survived. I was only given jabs like that for abt 12 days only. So I wasn;t happy as I preferred to a longer protocol. I have done IUI for at 2 times but IUI success rate is only abt 20%, **How old are you**, if u don't mind... Thanks for the info abt Dr. X.

#### Message 5

Hi ajaib

How is your OPU on last Saturday? **How many egg has been retrieved?**...

The women also asked questions that concerned their fertility profile, namely, quantity of eggs (Message 4) and age (Message 5). For example, the question "How old are you" in Message 4 and the question "how many egg has been retrieved" in Message 5 were messages pertaining to the message-recipients' fertility profiles. In Message 4, the inquirer was curious about the message-recipient's age while in Message 5, the inquirer was interested to know the number of eggs the message-recipient produced during the Ovum Pick Up (OPU) procedure. As infertility is not openly discussed in the Malaysian culture due to its taboo nature, the women in the forum probably found it liberating to have this anonymous online platform to find out and discuss how different fertility profiles might be associated with various infertility issues and treatment success.

#### Message 6

...Im 35 tis yr, **do u think I'm too old? After all I only produced 10 eggs**, but I notice some people produce more than 20!!...

#### Message 7

**You are younger than me! I'm 36** and only able to produce **ONE egg in my previous IVF**, luckily the only egg fertilised and implanted and I'm at my 10 weeks of pregnancy now. Quality is more important than quantity, dun be upset with the number o egg. **I think 10 eggs is more than enough...**

Nevertheless, knowing other women's fertility profiles could also serve another function. For some women, knowing other women's fertility profiles could help boost their optimism level. This is especially so if they knew that their fertility profiles were better than others who still could be successful in the treatment. For example, the inquirer in Message 6 lamented that she only managed to produce 10 eggs ("I only produced 10 eggs") and so she sought the opinion of others whether she was too old to hope for a positive outcome from the treatment ("do u think I'm too old?"). The response she received was that her profile was not only better than others (Message 7), but she was also younger ("you are younger than me!") and that she produced sufficient eggs ("ONE egg in my previous IVF...I think 10 eggs is more than enough"). This knowledge about others' fertility profiles and their successful treatments could act as a big boost to women suffering from infertility morale to encourage them to stay positive and keep persevering in the IVF treatment. The online forum not only serves as a source of information for women with infertility problems, but also a place where they could find encouragement and inspiration to continue their treatment with optimism.

Message 8

**How is your treatment going on?...**

The questions asked in the forum may not necessarily be related to the inquirer's situation. Some questions were asked out

of concern for the message-recipient as in the question "How is your treatment going on?" in Message 8. This type of questions is significant because the questions were not aimed at garnering information for the inquirer's benefit, but they functioned to foster close relationship among the women in the forum. For example, in Message 8, by asking the question "How is your treatment going on?", the question not only allowed the message-recipient to describe the treatment and express herself, but also to initiate communication with her so that there was connection between the inquirer and the message-recipient. In this way, questions like this are a form of solidarity strategy.

Message 9

**Anyone have OHSS? How did u deal with it?** The bloating tummy make me very uncomfortable. I just discharge after admitted 2 nights. No improvements but doc say at least no increasing.

Solidarity was also seen in questions that were open to everyone. In Message 9, the question "Anyone have Ohss?" was not addressed to a specific forum member, but to all members in the forum. It was an inclusive strategy that attempted to connect with anybody in the forum who could share their experiences on Ovarian Hyperstimulation Syndrome (OHSS) caused by high hormone levels (Nargund, Hutchison, Scaramuzzi, & Campbell, 2007).

Furthermore, the inquirer's request for information in Message 9 sought a personal response ("How did u deal with

it?”), rather than an objective answer to the problem. Subsequently, this type of questions indicated how the online forum functioned as a platform for women with infertility problems to seek and share personal experiences, as well as to obtain various information on how other women deal with complications resulting from the treatment.

#### Message 10

Congrats on your success & wow its twins...nice. If yours the long or short protocol? **How much did you spend in IVF Hospital?** Any symptoms on TWW? Take care & enjoy your pregnancy...

#### Message 11

Hi Permaisuri, I'm from Penang too. I have seen Dr. Ting in XYZ. He sounds very confident with my case if doing IVF but my hb is worries with the painful process that I have to go through as well as the potential side effects. Hence, we will go to see Dr. Z for second opinion. I heard that Dr. Z is very impatient and cool type. Is that true? **How much is the IVF cost in ABC?**

There were also questions pertaining to the cost of the treatment, as in the question “How much did you spend in IVF Hospital?” in Message 10, and “How much is the IVF cost in ABC?” in Message 11. These questions showed that money was one consideration of the women undergoing IVF treatment. This is probably because it costs around RM 20 000 to complete one cycle of

IVF (Arjunan, 2016), and it is common for most couples to require more than one IVF cycle to be able to conceive successfully (Meldrum, Silverberg, Bustillo, & Stokes, 1998). As such, going for IVF can be a strain on couples of mediocre financial standing.

#### Message 12

Dear Tetra,  
Tx a lot for the info, appreciate your response...**how is Dr Ghandi's success rate?** In this forum, most of them usually mention abt Dr Bee from IVFCity or Dr Bong from IVF Hospital...

Besides questions about the cost of the treatment, there were questions related to the quality of a clinic's or hospital's service as well as its doctors. For instance, in Message 12, the inquirer was asking for information on Dr Ghandi's success rate in IVF treatment. The women in the forum were particular about which clinic or hospital to go to, as well as which doctor to seek treatment from. They were concerned about success rates, and thus, were careful with their choices of clinics, hospitals, or doctors so that they could maximize their chances of being successful in the treatment. This implied that the forum not only enabled the women the opportunities to discuss their infertility problems with other women with the same predicament. On the other hand, the forum was also an information bank where women with infertility problems could garner enough information to make informed choices on where to go for their treatment, as well as who to seek treatment from.

## CONCLUSION

Although the study investigated only one research site, it has unraveled several notable aspects of inquiries related to infertility treatment in an online environment. The analysis of the messages showed that asking questions which sought information related to procedures of IVF was the most prevalent. The type of information the women were interested in could range from details on the IVF protocol, to the complications arising from the treatment, the cost of the treatment, and where or whom to seek treatment from.

To the women, the forum functioned as an important reservoir of information on IVF treatment. It was a place where they could direct any query, clarify their doubts, and seek further explanation to enhance their knowledge on IVF. The forum has provided the women a safe sanctuary to obtain as much information as possible without the fear of identity exposure. This indicated that despite consultations with the doctors, these women were still largely ignorant about the treatment and it was only in an anonymous setting, would the women be able to equip themselves with the necessary knowledge on the treatment. In addition, having adequate knowledge about the treatment was crucial to help boost the women's confidence that they desperately need in their current plight.

Some of the questions asked by the women in the forum also seemed to suggest that the women were concerned about making sure that they would succeed in their treatment. Questions related to dietary restrictions revealed the women's anxieties

that they might unknowingly ingest certain foods that could jeopardize the chances of succeeding in the treatment. Similarly, questions about doctors and clinics or doctors accentuated the women's concern about undergoing their treatment with reputable doctors so as to have an accurate diagnosis of their infertility problem and subsequently, proper treatment that matched their problem. To these women, it was especially vital to maximize their likelihood of success in the treatment not only because they were desperate for a child, but it was also equally important for them to require as few IVF protocols as possible due to the prohibitive cost of treatment.

Another prominent concern of the women was their need for solidarity, support, and encouragement from other women with similar predicaments. Questions were asked about other women's fertility profiles, signaling not only their curiosity in other women, but also an invitation for others to open up and share intimate details about their infertility problems. This helped to foster a strong sense of camaraderie among themselves, providing crucial solace, and support to encourage the women to persevere in their treatment. Solidarity was also seen in the women's questions that were asked out of consideration for the message-recipients rather than the advice-seekers, in inclusive questions that invited responses from any member of the forum, as well as in questions that specifically sought the personal experiences of the message-recipients.

To summarize, the study has shown how women with infertility problems are generally in need of information on IVF treatment, regardless whether they are new to the treatment or have undergone the treatment before. This suggests how infertility is still a taboo topic in Malaysia, whereby women with infertility problems may be reluctant to ask professional advice even from doctors due to embarrassment and the social stigma surrounding the infertility issue.

An anonymous interaction setting such as in CMC is, therefore, extremely crucial for women with infertility problems to discuss, to find information on infertility treatment, as well as to bond with other women in the same predicament as they are in. Women with infertility problems need to feel that there is an avenue for them not only to seek further information regarding treatments available for them, but also to seek it in an environment that they feel secured, safe, and assured of their anonymity from their fellow peers who are emotionally supportive, helpful, and empathetic to their plight. Future studies on this area, however, could incorporate more online forums for a more comprehensive understanding of the needs and concerns of women with infertility problems.

## REFERENCES

- Akhtar, A. (2011). *Remaining childless: Why is it a cultural taboo?* Retrieved July 20, 2017, from <http://www.onislam.net/english/family/husbands-and-wives/fertility/453782-remaining-childless-why-is-it-a-cultural-taboo-.html>
- Arjunan, A. (2016). Save on fertility fees. *The Star*, June 12, pp. 10–11.
- Bae, M. (2016). The effects of anonymity on computer-mediated communication: The case of independent versus interdependent self-construal influence. *Computers in Human Behavior*, 55, 300–309.
- Bayasgalan, G., Naranbat, D., Tsedmaa, B., Tsogmaa, B., Sukhee, D., Amarjargal, O., ... & Rowe, P. J. (2004). Clinical patterns and major causes of infertility in Mongolia. *Journal of Obstetrics and Gynaecology Research*, 30, 386–393. doi:10.1111/j.1447-0756.2004.00217.x
- Bayer, S. R., Alper, M. M., & Penzias, S. S. (Eds.). (2002). Overview of infertility. In *Handbook of infertility: A practical guide for practitioners who care for infertile couples* (pp. 1–23). Nashville, USA: The Parthenon Publishing Group Ltd.
- Blank, T. O., & Adams-Blodnieks, M. (2007). The who and the what of usage of two cancer online communities. *Computers in Human Behavior*, 23, 1249–1257.
- Blundell, R. (2007). Causes of infertility. *International Journal of Molecular Medicine and Advance Sciences*, 3(1), 63–65.
- Burri, M., Baujard, V., & Etter, J. F. (2006). A qualitative analysis of an Internet discussion forum for recent ex-smokers. *Nicotine & Tobacco Research*, 8, 13–19.
- Courtney, W. H. (2000). Constructions of masculinity and their influences on men's well-being: A theory of gender and health. *Social Science & Medicine*, 50, 1385–1401.
- Daly, K. (1999). Crisis of genealogy: Facing the challenges of infertility. In H. I. McCubbin, E. A. Thompson, A. I. Thompson, & J. Futrell (Eds.), *The dynamics of resilient families* (pp. 1–40). Thousand Oaks, USA: Sage.

- Deribe, K., Anberbir, A., Regassa, G., Belachew, T., & Biadgilign, S. (2007). Infertility perceived causes and experiences in rural south west Ethiopia. *Ethiopian Journal of Health Science*, 17(2), 1-9. Retrieved July 20, 2017, from [https://www.researchgate.net/publication/233341624\\_INFERTILITY\\_PERCEIVED\\_CAUSES\\_AND\\_EXPERIENCES\\_IN\\_RURAL\\_SOUTHWEST\\_ETHIOPIA](https://www.researchgate.net/publication/233341624_INFERTILITY_PERCEIVED_CAUSES_AND_EXPERIENCES_IN_RURAL_SOUTHWEST_ETHIOPIA)
- Domar, A. D., Zuttermeister, P. C., & Friedman, R. (1993). The psychological impact of infertility, a comparison with patients with other medical conditions. *Journal of Psychosomatic Obstetrics and Gynaecology*, 14, 45–52.
- Dyer, S. J. (2007). The value of children in African countries: Insights from studies on infertility. *Journal of Psychosomatic Obstetrics & Gynecology*, 28(2), 69–77.
- Dyer, S. J., Abrahams, N., Hoffman, M., & van der Spuy, Z. M. (2004). “You are a man because you have children”: Experiences, reproductive health knowledge and treatment-seeking behaviour among men suffering from couple infertility in South Africa. *Human Reproduction*, 19, 960–967.
- Ess, C., & the AoIR Ethics Working Committee. (2002). *Ethical decision-making and Internet research*. Retrieved July 20, 2017, from <http://www.aoir.org/reports/ethics.pdf>
- Evens, E. M. (2004). *A global perspective on infertility: An under recognized public health issue*. Chapel Hill, USA: The University of North Carolina at Chapel Hill. Retrieved July 20, 2017, from [http://cgi.unc.edu/uploads/media\\_items/a-global-perspective-on-infertility-an-under-recognized-public-health-issue.original.pdf](http://cgi.unc.edu/uploads/media_items/a-global-perspective-on-infertility-an-under-recognized-public-health-issue.original.pdf)
- Fidler, A. T., & Bernstein, J. (1999). Infertility: From a personal to a public health problem. *Public Health Reports*, 114, 494–511.
- Freeman, E. W., Boxer, A. S., Rickels, K., Tureck, R., & Mastoinni, L. (1985). Psychological evaluation and support in a program of in vitro fertilization and embryo transfer. *Fertility and Sterility*, 43, 48–53.
- Gerrits, T. (1997). Social and cultural aspects of infertility in Mozambique. *Patient Education and Counseling*, 31, 39–48.
- Gerrits, T. (2002). Infertility and matrilineality: The exceptional case of the Macua of Mozambique. In M. C. Inhorn & F. van Balen (Eds.), *Infertility around the globe: New thinking on childlessness, gender, and reproductive technologies* (pp. 233–246). Berkeley, USA: University of California Press.
- Greil, A. L. (1991). *Not yet pregnant: Infertile couples in contemporary America*. New Brunswick, USA: Rutgers University Press.
- Guyton, A. C., & Hall, J. E. (2000). Endocrinology and Reproduction. In W. Schmitt, R. Grulio, & A. Norwitz (Eds.), *Textbook on medical physiology* (pp. 916–941). Philadelphia, USA: W. B. Saunders Company.
- Hallyburton, A., & Exans, L. A. (2014). Gender and online health information seeking: A five study meta-analysis. *Journal of Consumer Health on the Internet*, 18(2), 128–142.
- Hanna, E., & Gough, B. (2018). Searching for help online: An analysis of peer-to-peer posts on a male-only infertility forum. *Journal of health psychology*, 23(7), 917–928.
- Hasanpoor-Azghdy, S. B., Simbar, M., & Vedadhir, A. (2014). The emotional-psychological consequences of infertility among infertile women seeking treatment: Results of a qualitative study. *Iranian Journal of Reproductive Medicine*, 12(2), 131–138.
- Hays, S. (1996). *The cultural contradictions of motherhood*. New Haven, USA: Yale University Press.
- Herring, S. C. (1996). Gender differences in CMC: Bringing familiar baggage to the new frontier.

- In V. Vitanza (Ed.), *CyberReader* (pp. 144–154). Boston, USA: Allyn & Bacon.
- Herring, S. C. (2001). Computer-mediated discourse. In D. Schiffri, D. Tannen, & H. Hamilton (eds.), *The handbook of discourse analysis* (pp. 612–634). Oxford, UK: Blackwell Publishers.
- Herring, S. C. (2010). Web content analysis: Expanding the paradigm. In J. Husinger, M. Allen, & L. Klasturp (Eds.), *The international handbook of Internet research* (pp. 233–249). Berlin, Germany: Springer Verlag.
- Hollos, M., Larsen, U., Obono, O., & Whitehouse, B. (2009). The problem of infertility in high fertility populations: Meanings, consequences and coping mechanisms in two Nigerian communities. *Social Science & Medicine*, 68, 2061–2068.
- Hughes, N., Locock, L., & Ziebland, S. (2013). Personal identity and role of ‘carer’ among relatives and friends of people with multiple sclerosis. *Social Science & Medicine*, 96, 78–85.
- Index Mundi. (2012). *Malaysia demographic poll 2012*. Retrieved July 20, 2017, from [http://www.indexmundi.com/malaysia/demographics\\_profile.html](http://www.indexmundi.com/malaysia/demographics_profile.html)
- Inhorn, M. C., & van Balen, F. (2002). *Infertility around the globe: New thinking on childlessness, gender, and reproductive technologies*. Berkeley, USA: University of California Press.
- Inhorn, M., & Patrizon, P. (2015). Infertility around the globe: New thinking on gender, reproductive technologies and global movements in the 21<sup>st</sup> century. *Human Reproduction Update*, 21(4), 411–426.
- Jan, J. M., & Pung, W. C. (2016). Strategies used and cultural considerations in seeking advice on *in vitro* fertilisation online: A case of Malaysian women. *3L: The Southeast Asian Journal of English Language Studies*, 22(2), 1–16.
- Jan, J. M. (1999). *Malaysian talk shows: A study of power and solidarity in inter-gender verbal interaction* (Unpublished Doctoral thesis), University of Malaya, Kuala Lumpur, Malaysia.
- Keipi, T., Oksanen, A., & Rasanen, P. (2015). Who prefers anonymous self-expression online? A survey-based study of Finns aged 15-30 years. *Information, Communication, & Society*, 18(6), 717–732.
- Klemm, P., Hurst, M., Dearholt, S. L., & Trone, S. R. (1999). Cyber solace: Gender differences on Internet cancer support groups. *Computers in Nursing*, 17, 65–72.
- Kouper, I. (2010). The pragmatics of peer advice in a LiveJournal community. *Language@Internet*, 7. Retrieved July 20, 2017, from <http://www.languageatinternet.org/articles/2010/2464>
- LaMotte, S. (2015, November 30). Infertility: Causes, remedies and options. *CNN*. Retrieved July 20, 2017, from <http://edition.cnn.com/2015/04/22/health/infertility-5-questions/>
- Leese, H. J. (1988). Infertility. In J. J. Thompson (Ed.), *Human reproduction and in vitro fertilisation* (pp. 37–40). London, UK: MacMillan Education Ltd.
- Locher, M. A. (2006). *Advice online*. Amsterdam, UK: John Benjamins.
- Meldrum, D. R., Silverberg, K. M., Bustillo, M., & Stokes, L. (1998). Success rate with repeated cycles of in vitro fertilization – embryo transfer. *Fertility and Sterility*, 69(6), 1006–1009.
- Miall, C. E. (1986). The stigma of involuntary childlessness. *Social Problems*, 33, 268–282.
- Miller, J. K., & Gergen, K. J. (1998). Life on the line: The therapeutic potentials of computer-mediated conversation. *Journal of Marital and Family Therapy*, 2(22), 189–202.
- Misoch, S. (2015). Stranger on the internet: Online self-disclosure and the role of visual anonymity. *Computers in Human Behavior*, 48, 535–541.

- Mo, P. K. H., & Coulson, N. S. (2008). Exploring the communication of social support within virtual communities: A content analysis of messages posted to an online HIV/AIDS support group. *CyberPsychology & Behavior, 11*, 371–374.
- Mo, P. K. H., Malik, S. H., & Coulson, N. S. (2009). Gender differences in computer-mediated communication: A systematic literature review of online health-related support groups. *Patient Education and Counseling, 75*, 16–24.
- Morahan-Martin, J., & Schumacher, P. (2003). Loneliness and social uses of the Internet. *Computers in Human Behavior, 19*, 659–671.
- Murnen, S. K., Greenfield, C., Younger, A., & Boyd, H. (2016). Boys act and girls appear: A content analysis of gender stereotypes associated with characters in children's popular culture. *Sex Roles, 74*, 78–91.
- Nargund, G., Hutchison, L., Scaramuzzi, R., & Campbell, S. (2007). Low-dose HCG is useful in preventing OHSS in high-risk women without adversely affecting the outcome of IVF cycles. *Reproductive BioMedicine Online, 14*(6), 682–685. Retrieved July 20, 2017, from [www.rbmonline.com/Article/2843](http://www.rbmonline.com/Article/2843).
- Naslund, J. A., Aschbrenner, K. A., Marsch, L. A., & Bartels, S. J. (2016). The future of mental health: Peer-to-peer support and social media. *Epidemiology and Psychiatry Sciences, 25*(2), 113–122. doi: 10.1017/S2045796015001067.
- Nimrod, G. (2012). Online depression communities: Does gender matter? *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 6*(1). doi: 10.5817/CP2012-1-6
- Ombelet, W. (2011). Global access to infertility care in developing countries: A case of human rights, equity and social justice. *Facts, views & vision in ObGyn, 3*(4), 257–266.
- Ombelet, W., Cooke, I., Silke, D., Serour, G., & Devroey, P. (2008). Infertility and the provision of infertility medical services in developing countries. *Human Reproduction Update, 14*(6), 605–621. doi: 10.1093/humupd/dmn042
- Owen, J. E., Klapow, J. C., Roth, D. L., & Tucker, D. C. (2004). Use of the Internet for information and support: Disclosure among persons with breast and prostate cancer. *Journal of Behavioral Medicine, 27*(5), 491–505.
- Papreen, N., Sharma, A., Sabin, K., Begum, L., Ahsan, S. K., & Baqui, A. H. (2000). Living with infertility: Experiences among urban slum populations in Bangladesh. *Reproductive Health Matters, 8*(15), 33–44.
- Reproductive Health Outlook. (2003). *Infertility: Overview and lessons learned*. Retrieved July 20, 2017, from [www.rho.org/html/infertilityoverview](http://www.rho.org/html/infertilityoverview)
- Richards, S. C. (2002). "Spoiling the womb": Definitions, aetiologies and responses to infertility in North West province, Cameroon. *African Journal of Reproductive Health, 6*, 84–94.
- Roupa, Z., Polikandrioti, M., Sotiropoulou, P., Faros, E., Kuolori, A., Wozniak, G., & Gourni, M. (2009). Causes of infertility in women at reproductive age. *Health Science Journal, 3*(2), 80–87.
- Rutstein, S. O., & Iqbal, H. S. (2004). *Infecundity, infertility, and childlessness in developing countries*. DHS Comparative Reports No. 9. Calverton, USA: ORC Macro and the World Health Organization.
- Salem, D. A., Bogat, G. A., & Reid, C. (1997). Mutual help goes online. *Journal of Community Psychology, 25*(2), 189–207.
- Samuel, N. O. (2006). Extramarital sexual activity among infertile women in southeast Nigeria. *The Journal of Obstetrics and Gynecology of India, 56*(1), 72–75.

- Seale, C. (2006). Gender accommodation in online cancer support groups. *Health, 10*, 345–360.
- Seale, C., Ziebland, S., & Charteris-Black, J. (2006). Gender, cancer experience and Internet use: A comparative keyword analysis of interviews and online cancer support groups. *Social Science & Medicine, 62*(10), 2577–2590.
- Sillence, E. (2013). Giving and receiving peer advice in an online breast cancer support group. *Cyberpsychology, Behavior, and Social Networking, 16*(6), 480–485.
- Sillence, E., Hardy, C., Briggs, P., & Harris, P. R. (2013). How do people with asthma use Internet sites containing patient experiences? *Patient Education and Counseling, 93*, 439–443.
- Springen, K. (2008, Sept 14). How women around the world cope with infertility. *Newsweek*. Retrieved July 20, 2017, from <http://www.google.com/amp/www.newsweek.com/how-women-wround-the-world-cope-with-infertility-89405%>
- Sullivan, C. F. (2003). Gendered cybersupport: A thematic analysis of two online cancer support groups. *Journal of Health Psychology, 8*(1), 83–103.
- Sundby, J. (1997). Infertility in the Gambia: Traditional and modern health care. *Patient Education and Counseling, 31*(1), 29–37.
- The Star. (2012, December 16). An issue on infertility. *The Star*. Retrieved July 20, 2017, from <http://thestar.com.my/health/story.asp?file=/2012/12/16/health/12445900&sec=health>.
- Times of India. (2009, Mar 5). Infertility problem drives woman to suicide. *Times of India*. Retrieved July 20, 2017, from <http://www.mtimesofindia.com/city/bengaluru//Infertility-problem-drives-woman-to-suicide/articleshow/422.8827.cms>
- Times Now. (2016, July 9). Woman strangulated to death for infertility, husband arrested. *Times Now*. Retrieved July 20, 2017, from [www.timesnow.tv/india/article/woman-strangulated-to-death-for-infertility-husband-arrested/45839](http://www.timesnow.tv/india/article/woman-strangulated-to-death-for-infertility-husband-arrested/45839)
- Umezulike, A. C., & Efetier, E. R. (2004). The psychological trauma of infertility in Nigeria. *International Journal of Gynecology & Obstetrics, 84*(2), 178–180.
- Van den Broeck, U., Emery, M., Wischmann, T., & Thorn, P. (2010). Counselling in infertility: Individual, couple and group interventions. *Patient Education and Counseling, 81*(3), 422–428.
- Voorhis, B. J. V. (2007). In vitro fertilization. *The New England Journal of Medicine, 356*, 379–386.
- White, M., & Dorman, S. M. (2001). Receiving social support online: Implications for health education. *Health Education Research, 16*(6), 693–707.
- Wiersema, D. J., Drukker, A. J., Dung, M. B. T., Nhu, G. H., Nhu, N. T., & Lambalk, B. (2006). Consequences of infertility in developing countries: Results of a questionnaire and interview survey in the south of Vietnam. *Journal of Translational Medicine, 4*, 54–61. doi:10.1186/1479-5876-4-54
- World Health Organization. (2015). *Health topics: Infertility*. Retrieved June 23, 2015, from <http://www.who.int/reproductivehealth/topics/infertility/definitions/en/>
- Sabki, Z. A. (2010). Psychological distress among infertile women: Exploring biopsychosocial response to infertility. *Malaysian Journal of Psychiatry Ejournal, 19*(2). Retrieved July 20, 2017, from <http://www.mjpsychiatry.org/index.php/mjp/article/view/101>