INTRODUCTION

- Feelings of isolation are common among people with infertility
- Online forums and chat rooms allow people to exchange information and experiences and to receive empathetic reactions from others who understand the medical and emotional challenges of infertility
- Infertility is a mobile health app developed by researchers and fertility health care professionals to provide information and support to fertility patients.
- The app includes a forum monitored by peer supporters with experience of infertility and its treatment.
- Little is known about the relationship between psychological distress and infertility patients who use and experience the Infotility forum.

OBJECTIVES

1. To compare the mental well-being of active posters on the Infotility forum, lurkers who read messages but did not post, and people who did not use the forum.
2. To analyze users’ experiences on the forum through their responses to two open-ended questions.

METHODS

189 women and 73 men (n=262) were recruited at fertility clinics in Montreal and Toronto to test Infotility.

Study Design:
- Pre-app use questionnaires
- Background
- PSS-4
- GAD-7
- Post-app use questionnaires and open-ended questions

PATIENT DEMOGRAPHICS

Distressed participants were more likely to post on the forum.

Table 1: Comparing mental health characteristics to use of the Infotility forum

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>% or Mean (SD)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>35.6 (4.8)</td>
<td>259</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>72.1</td>
<td>189</td>
</tr>
<tr>
<td>Male</td>
<td>27.9</td>
<td>73</td>
</tr>
<tr>
<td>Immigrant Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immigrant</td>
<td>41.8</td>
<td>107</td>
</tr>
<tr>
<td>Born in Canada</td>
<td>58.2</td>
<td>149</td>
</tr>
<tr>
<td>Annual Household Income (CAD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $80,000</td>
<td>38.3</td>
<td>98</td>
</tr>
<tr>
<td>$80,000 and more</td>
<td>61.7</td>
<td>158</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>62.0</td>
<td>160</td>
</tr>
<tr>
<td>Non-white</td>
<td>38.0</td>
<td>98</td>
</tr>
<tr>
<td>Language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>71.4</td>
<td>187</td>
</tr>
<tr>
<td>French</td>
<td>28.6</td>
<td>75</td>
</tr>
<tr>
<td>Months in fertility treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.0 (21.5)</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Infertility diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female-factor only</td>
<td>29.5</td>
<td>77</td>
</tr>
<tr>
<td>Male-factor only</td>
<td>24.9</td>
<td>65</td>
</tr>
<tr>
<td>Mixed-factor</td>
<td>15.3</td>
<td>40</td>
</tr>
<tr>
<td>Unexplained / still testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.3</td>
<td>79</td>
<td></td>
</tr>
</tbody>
</table>

MAIN FINDINGS

Infertility patients appreciated the peer-monitored forum as part of a mobile app.

Participants reported that the forum:
- Reduced stress and social isolation
- Normalized the experience of infertility
- Provided useful information

"What I benefited from was the opportunity to read how other people were coping with their situations and to be able to post my own thoughts/feelings. I felt less alone knowing I could contribute to the forum."

"I was able to express myself without judgment and get answers to questions I had."

"This app made me feel that I’m not the only one going through an infertility problem and gave me confidence and comfort."

"I liked the peer support very much, it helped me calm down and feel like I have someone I can vent to."

"Knowing there are real people going through the struggles of fertility. Although, I didn’t use it as many of my own soundtrack, I sought comfort in reading the support given to others."

"This sample was a mobile health app.

The PSS-4 is a self-report measure of the amount of stress encountered in daily life in the past month.

The GAD-7 assesses symptoms of anxiety in the past two weeks.

For each scale, answers were summed to create total scores. The higher the score, the more stress or anxious symptomatology the participant expressed.

Infertility users were divided into three unique groups (determined by Google Analytics):
- active posters on the forum (15.3%),
- lurkers who read messages but did not post (24.8%), and
- non-users of the forum (59.9%)

One-way analysis of variance and post hoc Bonferroni tests were used to compare the PSS-4 and GAD-7 scores of these 3 groups.

After using Infotility, participants answered follow-up questionnaires including two open-ended questions:
- Please tell us what you liked best about the app, and why.
- Please tell us what you liked least about the app, and why.

The responses that pertained to the forum were examined for general themes.

DISCUSSION

- The Infotility forum was of particular interest to users experiencing psychological distress. Participants who used the forum perceived it as comforting, supportive, and reliable. It provided participants a way to share their own experiences, and communicate with others in similar situations.
- This study highlights the importance of monitored forums and peer support for those undergoing fertility treatment, particularly for those experiencing distress.
- Furthermore, the fact that those with higher rates of distress were significantly more likely to use the peer support forum suggests a need within the community for forms of social support such as the Infotility forum, which has been lacking in the past.
- Infotility was designed to provide support to all those undergoing fertility treatment. Future research should examine whether this type of intervention may serve to reduce stress and improve quality of life among people undergoing fertility treatment.

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