**INTRODUCTION**

**What is Patient Empowerment (PEmp)?**
A process through which patients gain a sense of control over their health and ability to manage their illness

**How can fertility patients benefit from PEmp?**
PEmp can help patients to feel informed, participate in decisions about their fertility care and better manage the psychological distress associated with infertility, which involves feelings of loneliness, uncertainty and loss of control.

**Why mHealth?**
Educational resources and online peer support have been shown to enhance PEmp

mHealth provides easily accessible information that is simple & targeted to patients’ needs, as well as 24/7 connection with peers

The objectives were to investigate in fertility patients:
1. How PEmp relates to quality of life and stress
2. How PEmp relates to engagement with an mHealth app
3. Whether PEmp changed during the study in relation to use of an mHealth app

**METHODS**

**A pre-post design study evaluating a new mHealth App**
- Practical information about infertility, its treatment and associated psychological issues
- A forum where users can share lived experiences and emotional support with peers.
- Participants: men and women undergoing fertility treatments in 4 clinics in Montreal and Toronto
- Google Analytics was used to track participant activity on the app during an 8-week period
- Measures:
  1. Demographic characteristics and fertility history
  2. Patient Empowerment using a 34-item adapted Patient Empowerment Questionnaire (from Chen Ryan et al. 2009)
    - Responses from 1 “completely disagree” to 5 “completely agree”
    - 7 subscale scores and a total score (0-170), with higher scores indicating greater PEmp
  3. Perceived stress using the Perceived Stress Scale (PSS-4) (Gillham et al. 1983)
    - Responses from 0 (“never”) to 4 (“very often”)
    - Total score between 0 and 16, higher = more perceived stress
  4. Fertility-related quality of life using the 36-item FertiQoL (Brunot et al. 2011)
    - 4-point Likert-type scale
    - Final scores range from 0-100, higher = better QoL

**RESULTS**

1. **How does PEmp relate to perceived stress and quality of life?**

- Women’s total PEmp was negatively related to the overall PEmp (r = -.195, p < .05) and the information EL (r = -.222, p < .05), suggesting that women with lower PEmp at Time 1 had greater engagement with the app overall, and in particular with the informational section of the app.

2. **How does PEmp relate to subsequent engagement with the app?**

- PEmp scores at Time 1 were explored in relation to 3 engagement indices (EI) developed to assess overall app usage, use of the informational content of the app, and use of the forum. These EIs were created by summing three log-transformed and standardized indices: the number of pages viewed, the number of sessions and the total time spent on pages.

3. **Did PEmp change during the study in relation to engagement with the app?**

- Change in total PEmp was explored in relation to sociodemographic characteristics, fertility history, perceived stress and quality of life to identify subgroups whose levels of PEmp may have changed during the study in relation to engagement.

**DISCUSSION**

- Promoting PEmp is becoming increasingly recognized as an important aspect of patient-centered care and patient well-being. PEmp may help fertility patients cope with the stress of treatment and impaired quality of life. In fact, this study shows that those who felt more empowered were less stressed and had a better quality of life.

- People with lower initial PEmp were more engaged with the app, suggesting that Infotility may be a helpful resource to these patients as it provides tools to better understand infertility, navigate treatment, cope and feel supported.

- Although results regarding men are exploratory due to small sample size, this study demonstrates the potential of an mHealth app to improve patient empowerment in men under stress. Stressed men may be especially empowered by mobile access to peers as it offers a safe and anonymous place to express feelings, and obtain validation, emotional support and knowledge.