

COVID-19 Vaccine and Fertility: The Male Perspective

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Abstract

Aims

The expedited development of multiple COVID-19 vaccines has raised concerns for some, with vaccine hesitancy described in many populations. A U.S. study assessing fertility patients attitudes towards the COVID -19 vaccine revealed that over half were unsure, or would not accept the vaccine if offered. Only 7.4% of participants in this study were male. We therefore sought to assess the perspective of male fertility patients towards COVID-19 vaccination.

Methods

Men with a fertility appointment were invited to complete an anonymous 21-item questionnaire.

Results

Willingness to accept the COVID-19 vaccination was influenced by stage of fertility journey. Overall, 76% (n=102) of participants were willing to receive the COVID-19 vaccine. Men with a pregnant partner were most likely to accept or have already accepted the vaccine (97%, 30/31).

Conclusion

Although concerns around COVID-19 vaccines persist, this study demonstrates the growing rate of acceptance and engagement among the male fertility population.

Keywords: Fertility, COVID-19, vaccine, SARS-CoV-2, assisted reproduction

Introduction

Over the last year, we have experienced immense change due to the necessary but unprecedented measures implemented in a concerted effort to contain COVID-19. Vaccine rollout in Ireland commenced in January 2021, and national uptake has since remained above European average. The expedited COVID-19 vaccine development however, has raised concerns with “vaccine hesitancy” described in many populations. A U.S. study assessing fertility patients revealed that over half of participants would refuse or were unsure whether to accept the COVID-19 vaccine¹. Only 7.4% of participants in this study were male.

Fertility questionnaires often have predominantly female participation, leading to gender bias in the results. We conducted a study to assess the willingness of male fertility patients to accept the COVID-19 vaccine and investigate factors that influence their decision.

Methods

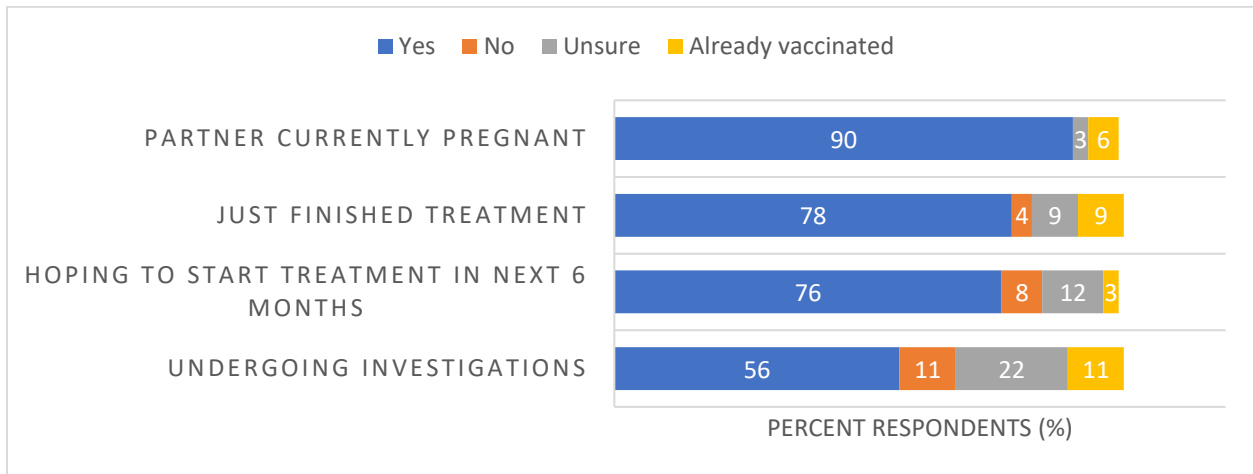
526 men with a fertility appointment (September 2020 - February 2021) were invited to participate. A 21-item questionnaire was distributed via email.

Results

The response rate was 26% (n=135). 59% (n=80) of participants were under 40 years, 59% (n=80) had no previous children and 26% (n=35) identified themselves as frontline workers. 11% (n=15) of participants had been offered the vaccine and 7% (n=10) had been vaccinated. 76% (n=102) would accept the vaccine if offered, 10% (n=14) were unsure and 6% (n=8) would not. No differences were noted in age, previous paternity, occupation, male factor infertility or experience of COVID-19.

Willingness to accept the vaccination was influenced by stage of fertility journey (Figure 1). Men undergoing initial investigations were less likely to accept vaccination (56%, 10/18) while those with a pregnant partner were most likely to accept or have already accepted the vaccine (97%, 30/31).

Figure 1: Male fertility patient willingness to accept the COVID-19 vaccine is influenced by the stage of fertility journey.



Reasons for declining included concerns regarding personal health and fertility. Over two thirds were concerned the vaccine would damage fertility (68%, 15/22), 64% (14/22) feared it would damage general health, 50% (11/22) that it could affect the long-term health of future children, 41% (9/22) that it could cause miscarriage/pregnancy complications, while 5% (1/22) did not agree with vaccines in general.

Most participants (84%, n=114) would not delay fertility treatment to receive the COVID-19 vaccine. Of those who would decline/were unsure, 35% (7/20) admitted that they would accept vaccination if recommended by their fertility physician/clinic. Interestingly, most men (76%, n=103) felt it important that their partner be vaccinated.

Discussion

Our findings show a large majority of male fertility patients were willing to receive the COVID-19 vaccine. This is a profound increase from a previously reported acceptance rate of 42% in both male and female fertility populations.¹ Following vaccination of frontline healthcare workers, national vaccine rollout proceeded based on age which is demonstrated in the low number of respondents who had been offered the vaccine at the time of response.

It is possible that vaccine acceptance in this population is increasing due to emerging safety data, concerted global vaccination campaigns and public encouragement from healthcare professionals. Previous research indicates that males are more likely than females to accept the vaccine, a potential contributory factor to the increased rate in our study². Our findings highlight the significant role of fertility doctors, with over a third of male patients stating that they would accept the vaccine if recommended to them by their fertility physician/clinic.

Multiple reproductive medicine organisations have now published statements refuting any link between the vaccine and infertility^{3, 4}. Nevertheless, leading concerns reported in our study were potential damage to fertility, concerns regarding their own general health and the health of their unborn child. Most men surveyed would not delay fertility treatment to receive the vaccine emphasising the innate human desire for parenthood, a desire that surpasses concerns regarding the long-term safety of the COVID-19 vaccine.

Reaching and engaging the male fertility population can be challenging as men often feel disconnected from the fertility process⁵. Although the response rate in this study is considered low, we would not expect a higher response rate to significantly change the results.

Further studies are needed to assess the impact of COVID-19 vaccine on male fertility. Although concerns around COVID-19 vaccines persist, this study demonstrates the growing acceptance and engagement among men seeking fertility treatment. As the COVID-19 pandemic persists, strategies around vaccine promotion messaging continue to evolve. An important future study will be to evaluate the impact of message framing and communication on willingness to accept the vaccine among the fertility population⁶.

Declaration of Conflicts of Interest:

The authors have no conflicts of interest to declare.

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