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P-507 Psychosocial and motivational drivers of the increased IVF engagement of infertile couples following Covid-19

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Study question: What are the main psychosocial motivational factors behind the increased IVF adoption during the Covid-19 Pandemic?

Summary answer: During the Covid -19 Pandemic more time invested in marital relationships prompted infertile couples to act and engage in IVF treatments.

What is known already: The Covid 19 Pandemic has generated a sense of lack of control and fear for the future in many individuals. However, like several life-threatening events, it could also have positive effects, motivating people to take significant actions for their life course. Little has been reported on the consequences that the Pandemic has generated on the infertile couple's attitude toward reproduction, IVF treatments engagement and childbearing desire. We aimed to address if during the Pandemic, there was an increase of IVF demand and what motivational factors prompted infertile patients to pursue IVF as compared to the pre-pandemic.

Study design, size, duration: This is a prospective multicenter observational control-case study assessing the relational, emotional, and environmental motivational factors driving infertile couples to pursue their first IVF treatment during the Covid-19 Pandemic in different IVF clinics as Valencia, Madrid, Rome, and Chile. To assess the growth rate in IVF activity at recruiting sites, number of cycles was compared over a 18 months period between the pre-pandemic and pandemic. The survey was run between September 2021 to January 2022.

Participants/materials, setting, methods: An ad hoc survey was developed to explore the main relationship, emotional and socioeconomic factors responsible for the IVF engagement. The electronic survey was delivered to 13585 patients attending the recruiting clinics from December 2018 to March 2020 for Prepandemic and from March 2020 to December 2021 for the Pandemic ones, and they were asked to rate their agreement for each answer on a five-points Likert scale.

Main results and the role of chance: For most clinics, data derived from national patients only showed a significant IVF demand increase (5.5-8.7%) for all indicators (number of started ovarian stimulations, oocyte pickups, and embryo transfers). Of 13685 patients receiving the survey only 1556 (810 prepandemic, 746 pandemic, response rate: 11%) completed it. Demographic and infertility history data (including male/female, infertility length, previous children and miscarriages, ethnicity) were homogeneous between two groups. However, the infertility length and the proportion of donation cycles were slightly lower in the pandemic group (2.3 vs 2.1) years and 24.1% vs 19% for pre-pandemic and pandemic, respectively; $p < 0.001$). Only 25.34% (95%CI: 22.2-28.6) of Pandemic patients experienced their referral clinic closing, and 19.17% (95% CI: 16.4-22.1) public hospital closing, and 30.56% (95%CI:27.2-34.01) valued the use of telemedicine in the IVF positively. Interestingly, over 90.21% (95%CI:87.8-92.2) of pandemic patients started childbearing desire before the Pandemic, and about 68.63% (95%CI:65.1-71.9) knew already about their infertility. This suggests the Pandemic had represented a strong trigger for infertile patients to reframe their reproductive intention. Among all the motivational factors addressed in the survey, the increased time to invest in marital relationship was the stronger driver for pursuing IVF for Pandemic patients (OR:1.48; 95%CI: 1.16-1.89; $p < 0.01$).

Limitations, reasons for caution: Not all potential drivers for IVF attainment have been included in the survey and unexplored factors might have played a role. Other reasons for caution include the possibility of response bias. However, the prospective design and the large multicentre/international setting of the study helped mitigating the effect of specific/local confounding.

Wider implications of the findings: The knowledge gathered here will be crucial to design more effective strategies to cope with patients' needs during the pandemic. Furthermore, this study can provide a valuable resource for understanding psychosocial factors responsible of the ongoing decline in the natality rate in many developed countries, such as disincentivizing couples' relationships.

Trial registration number: not applicable