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P-617 6:30 AM Wednesday, October 20, 2021

VACCINE HESITANCY AND MEDICAL MISTRUST IN WOMEN CONSIDERING OR UNDERGOING FERTILITY TREATMENTS. Luce A. Kassi, MD,[1] Shriya Shah, BA,[1] Angela K. Lawson, Ph.D.,[1] Eve C. Feinberg, MD,[1] Amelia Swanson, PhD,[2] Mary Ellen Pavone, MD, MSCI[1] [1]Northwestern University, Chicago, IL; [2]Northwestern University, Chicago.

OBJECTIVE: To evaluate perceptions of COVID-19 vaccination in women considering or undergoing fertility treatment.

MATERIALS AND METHODS: IRB approval was obtained. Cross-sectional anonymous surveys of patients were collected from a single academic fertility center. Participants were randomized 1:1 to receive a one-page graphic of supplemental education providing basic facts and benefits regarding COVID-19 vaccination based on the ASRM COVID-19 taskforce recommendations. Beliefs related to COVID-19 vaccination was assessed with dichotomous, Likert scale and multiple-choice questions. Assessment of trust in the medical system was conducted via the Medical Mistrust Index (MMI). Descriptive data and chi-square analysis were used to compare responses between the intervention v. no intervention groups.

RESULTS: To date, 1130/3595 surveys have been received, response rate = 31.4%. Except for age (35.87, SD=4.0 vs 35.68, SD=4.187 $p<.05$), both the intervention and non-intervention groups were similar in term of demographics, including education and race; participants were predominantly white (77.8%), married (89.2%), and nulliparous (68.6%).

30.3% reported that a loved one or themselves (7.5%) tested positive for COVID-19, 46.7% knew someone who had been hospitalized or who died of COVID-19, and 6.8% stated they would not get the vaccine. Most participants (54.8%) strongly disagreed or disagreed that the vaccine could affect future fertility.

Among the participants who reported their vaccination status (N=790), 25.3% of the study population received one dose, 61.4% completed vaccination while 11% did not plan on getting vaccinated.

Compared to those who intended to receive the vaccine, 97.9% v. 70.4% believed that the COVID-19 vaccine given during pregnancy does not cause genetic abnormalities in a fetus or infertility (98.8% v. 81.5%), that a more severe infection has been associated with pregnancy (81.3% v. 74.6%) and strongly disagreed (32.7% v. 1.7%) or disagreed (29.0% v. 1.7%) on having concerns on its impact on future pregnancies ($p<.05$). Similar patterns were seen with those with higher scores on the MMI and beliefs that the vaccines can cause harm.

Participants in the intervention group were more likely to believe that COVID-19 vaccination does not cause genetic abnormalities in a fetus (98.0% v. 94.2%), does not cause infertility (99% v. 96.2%) and that a more severe infection has been associated with pregnancy (81.3% v. 74.6%) (all $p<.05$). Higher scores on the MMI but not the intervention was associated with vaccine hesitancy (p=.01).

CONCLUSIONS: The majority of women in this study had received or planned to receive the COVID-19 vaccine. Participants with greater trust in the medical system were more likely to receive the vaccine. The intervention increased patient's knowledge regarding the vaccine and most patients did not believe that COVID-19 vaccination negatively impacts infertility.

IMPACT STATEMENT: Vaccine hesitancy was associated with mistrust of the medical system. Efforts should be made to improve trust and thereby increase willingness to participate in recommended medical interventions.

P-618 6:30 AM Wednesday, October 20, 2021

DIFFERENCES IN ANXIETY CONCERNING THE COVID-19 VIRUS AND COVID-19 VACCINE BETWEEN WOMEN UNDERGOING INFERTILITY TREATMENT AND THOSE NOT PURSUING TREATMENT. Amy Kwok, BA,[1] Yihuai Qu, BS,[2] Julia Howard, BS,[2] Janelle Luk, MD, FACOG,[2] Edward J. Nejat, MD, FACOG[2] [1]Generation Next Fertility; [2]Generation Next Fertility, New York, NY.

OBJECTIVE: The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has infected millions of people. With the development and administration of the SARS-CoV-2 vaccines, there is growing evidence to suggest that there has been reduced transmission of the virus. However, the novelty of the vaccine has raised many questions for infertility patients due to the lack of research. This study examines the perceived anxiety level of patients at a fertility clinic in Manhattan who are undergoing infertility treatments, such as Timed Intercourse (TIC), Intrauterine Insemination (IUI), and In-Vitro Fertilization (IVF). Understanding the mental state of patients with infertility problems during the COVID-19 pandemic is vital for fertility clinics in their future patient assessments.

MATERIALS AND METHODS: Surveys were administered to approximately 100 patients at a fertility clinic in Manhattan during early April 2021 - a few months after the first Covid vaccine was administered in the USA. The questionnaire asked patients to specify their treatment plan (TIC, IUI, IVF, oocyte cryopreservation, or no infertility problem). The survey included a 20-item Spielberger State-Trait Anxiety Inventory (STAI) assessing their current state of anxiety. For the STAI score cutoff, <40 = not anxious; 40+ = high anxiety.

Continuous variables were measured as mean and standard deviation and compared with a two-sample t-test or ANOVA. Categorical variables were compared with a Fisher test. A p-value <0.05 was considered statistically significant. Statistics were done with R version 4.0.5.

RESULTS: There is no statistical significance in which group was more likely to have received at least one dose of the COVID-19 vaccines. However, the "undecided" group had the lowest percentage of individuals receiving the vaccine.

There is also no statistical significance in the anxiety levels of the different groups of patients. The group with the greatest percentage of anxiety according to the STAI score is the "undecided" group. Fear of the COVID-19 virus being greater than the fear of the COVID-19 vaccine is a commonality between all the groups.

CONCLUSIONS: The survey found that the greatest cause of apprehension in patients was the virus's unknown effects on their physical health. Majority of the hesitancy in receiving the vaccine was due to the potential side effects posed by the injection on pregnant women and their fetus.

Interestingly, patients not in treatment had a trend towards higher fear and anxiety compared to patients undergoing infertility treatment. When broken down even further, patients who are undecided in their treatment are more anxious about both the COVID-19 virus and the vaccine. This indicates that the patient's treatment plan influences their view of the pandemic.

IMPACT STATEMENT: Women with infertility issues experience tremendous amount of emotional turmoil, which can further interfere with their fertility. Recognizing the root of this population's anxiety during the COVID-19 pandemic can assist reproductive endocrinologists in forming treatment plans that integrate management of patient's psychological well-being.

P-619 6:30 AM Wednesday, October 20, 2021

ASSOCIATIONS BETWEEN COVID-19 PANDEMIC CONDITIONS AND MATERNAL MENTAL HEALTH AND MATERNAL-INFANT BONDING. Erika L. Kelley, PhD,[1,2] Lulu Zhao, M.D.[3] [1]University Hospitals Fertility Center/Case Western Reserve University, Beachwood, OH; [2]University Hospitals Cleveland Medical Center, Cleveland, OH.

OBJECTIVE: The purpose of this study was to examine the relationships between the psychosocial effects of the 2019 novel coronavirus (COVID-19) pandemic, and maternal mental health and maternal-fetal bonding in a sample of pregnant women.

MATERIALS AND METHODS: This is an online, observational, survey-based study. Women were recruited from the outpatient Obstetrics and Gynecology and Psychiatry clinics of a hospital in the Midwest and via community online advertisements. Women aged 18 to 45 years old and currently pregnant in their second or third trimester were eligible to participate. Data was collected between June 2020 and April 2021. Women completed the surveys online at a location of their choosing using the institution's REDCap survey software. Descriptive and frequency statistics assessed characteristics of the study sample and Pearson's r correlation statistics were conducted to examine the associations between psychosocial stress due to the COVID-19 pandemic and maternal depression and anxiety and maternal-fetal bonding using validated instruments. Thematic assessment of qualitative, short-answer responses assessing participants' perspectives of the positive and negative impacts of the pandemic on their maternal-fetal bonding was conducted.

RESULTS: A total of 30 women completed the survey at the time of this analysis. The mean age was 32.07 (SD = 0.67) years and the majority of women (n = 26, 86%) were Caucasian. Three women (10%) reported receiving assisted reproductive technology for their current pregnancy. Greater psychosocial stress due to the pandemic conditions, assessed by the COVID-19 Family Stress Screener, was associated with higher depression scores assessed by the Edinburgh Postnatal Depression Scale (r = .50,