

▪ **Basic Research**

**Effect of Media Exposure on Women Utilization of Family Planning Methods and their Attitude during COVID 19 Pandemic**

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**Abstract**

**Background:** The COVID-19 pandemic has had an impact on women's sexual health, particularly their desire to become pregnant, mass media can play a crucial role in promoting awareness, intention, and usage of family planning methods **Aim:** This research aims to explore the effect of media exposure on women's utilization of family planning methods & their attitude during COVID 19. **Design:** A cross-sectional, descriptive study design was utilized on 334 married women. **Sampling:** The snow ball sampling technique was used. **Tools of data collection:** 1) women's sociodemographic characteristics questionnaire, 2) Women perceived fears (WPF) questionnaire regarding the effect of COVID-19 on pregnancy, 3) The Desire to Avoid Pregnancy (DAP) scale, 4) Source of information & effect of Media Exposure to Family planning message/campaign, 5) Women Attitude toward using family planning methods through media exposure. **Results:** 53.3% of women have a low desire to avoid pregnancy during the Covid-19 pandemic, 64.7% of the studied women reported that they didn't use family planning methods after exposure to mass media family planning message and the majority of women (76.6%) highlighted holding positive attitudes towards utilization of family planning methods after media exposure and there was weak positive correlation for the mass media and use of family planning was found for traditional media messages **Conclusion:** The study concluded that women exposed to different types of media which impact their attitude positively although they did not use family planning methods during COVID-19 as they had low desire to avoid pregnancy. **Recommendation:** further quantitative researches should be done.

Key words: media exposure, family planning methods, COVID 19.

## 1. Introduction

The World Health Organization (WHO) declared coronavirus disease 2019 (COVID-19), the infectious disease caused by SARS-CoV-2, a pandemic, and many states enacted strict rules, such as border closures, transportation restrictions, and quarantine. **(WHO, 2020)**

The emergence of the coronavirus disease pandemic has transformed the pre-existing worldwide sexual and reproductive health environment rapidly **(Church et al., 2020)**. In addition to increasing the desire to delay or avoid birth, the epidemic led to economic hardship and additional obstacles to contraceptive services. This pattern may result in a rise in unwanted pregnancies, especially among those who struggled to pay for accommodation, transportation, and/or food during the pandemic. **(Lin et al., 2021)**

Pregnant women are currently not more prone to contracting COVID-19 than the general population. However, pregnancy must be taken into account as a risk factor for the rise in illness and fatalities from influenza epidemics. There has been a significant effort to educate pregnant women about the importance of adhering to the rules of home isolation. **(UNFPA, 2020)**

Family planning (FP) strategies have witnessed significant interest from Egyptian policy-makers since the early sixties **(Mohamed et al., 2022)**. Moreover, modern contraceptive has witnessed more popularity among women of reproductive age in less developed countries over the past three decades. Egypt is one of them **(El Weshahi et al., 2021)**.

Other factors, namely religious tendencies, may influence the decision to use family planning methods, especially in Muslim countries **(Dal & Beydağ, 2021; Hasna, 2003)**. **Hasna (2003)** suggested that family planning programs need “to address the needs of men and women in a comprehensive and culturally sensitive manner” (p. 193).

National family planning strategies have always included health communication initiatives as essential elements. The use of mass media, counselling, and other forms of interpersonal communication is common to educate the public and raise awareness of family planning options, to amuse crowds and create positive role models, and to encourage certain behaviors like the use of condoms, injectable contraceptives, or permanent sterilization **(Agha & Beaudoin, 2012)**

The use of maternal healthcare services by women can be encouraged by their exposure to mass media (such as watching TV, listening to the radio, and reading newspapers). Written,

televised, and spoken communication that is intended for a public audience is referred to as mass media. Mass media is a key tool for societal integration (**Viswanath et al., 2021; Katz et al., 1973**).

Media may swiftly and affordably deliver information to huge audiences in the form of persuasive messages, entertainment, advertisements, or even dramas (**Sarrassat et al., 2015**). The media has influenced various demographic processes, particularly those involving family planning strategies and incentives as well as health prevention and promotion (**Barber & Axinn, 2004**).

Since efficient communication is crucial for promoting social interaction and growth in general, exposure to the media can aid in promoting the use of contraceptives. Particularly in the context of developing nations, mass media plays a crucial role in public health by overcoming the language barrier in the transmission of policy information to encourage difference. (**Wakefield et al., 2010**)

Within the FP programme, mass media advertisements and FP messaging concentrated on teaching women on the benefits of modest family norms and the use of contraceptives as well as providing information about the programme. Mass media messages make it more easier for different segments of society to receive information on a variety of subjects. Women who are exposed to the media can better decide whether or not to use FP on their own. (**Ghosh and others, 2021**)

The role of a nurse involves imparting knowledge to patients and enhancing societal health. As a result, a nurse needs to be up to date on the best ways to use social media to accomplish these goals. Social media is undoubtedly having an impact on nurses' professional lives, and this impact will result in long-lasting changes to nursing practitioners' and nursing researchers' behaviors (**Gorea et al., 2016**)

Given the significance of the role performed by a nurse as a family planning counsellor in reducing population growth rates by reducing the frequency of unintended pregnancies through an increase in the use of modern and effective contraceptives by both couples who are equally responsible for fertility, as well as the effects this has on the health of mothers, their children, and society as a whole (**Al-Shawakh et al., 2020**)

### **Significance of the study:**

In Egypt, according to Data sourced from FP 2020, the number of additional users of modern methods of contraception in 2019 was 1,691,000 & in 2020 was 1,919,000 which means that there is an increase in the users of family planning methods from the beginning of COVID 19 pandemic till 2020 (**Cahill et al., 2021**)

Although Little data are available about Mother-To-Newborn Infection With COVID-19, several media campaigns have been recently spread during Covid 19 to urge family planning methods utilization. Therefore, the current study endeavors to explore the effect of media exposure on women's utilization of family planning methods & their attitude during COVID 19.

## **2. Aim of the study**

This study aimed to explore the effect of media exposure on women's utilization of family planning methods & their attitude during COVID-19

## **3. Research questions**

RQ1: What is the effect of media exposure on women's utilization of family planning methods during the COVID-19 pandemic?

RQ2: What effect do women's fears of acquired COVID-19 have on their desire to become pregnant?

RQ3: What are the attitudes of women towards the use of family planning methods in light of their exposure to the media during the Covid-19 crisis?

## **4. Subjects and Methods**

Research design: A cross-sectional descriptive study design to examine the effect of media exposure on women's utilization of family planning methods during COVID-19

### **4.1. Sampling technique:**

The linear snow ball sampling technique was used for collecting information from married women within reproductive age (15-49 years old)

4.2. Setting: Facebook & WhatsApp were chosen as the social media setting for disseminate the web-based survey

4.3. Sample size: The target population were the married women in reproductive age (19 – 49 years). Where the population is unknown, the minimum sample size can be calculated by using the formula of **Cochran (Cochran, 1963, p.75):**

$$n_0 = (z^2 \times p(1-p)) / e^2$$

Where:

$n_0$  - ?

$z^2$  - %95 confidence level (The value of (1- $\alpha$ ) in Standard Normal Distribution z-table, which is 1.96 for 95%)

$p$  - %50 variability of the population (which is maximum)

$e$  - %5 margin of error

$$n_0 = ((1.96)^2 \times 0.5(1-0.5)) / (0.05)^2 = 384.16$$

A minimum sample size of **384** used as sample

## **5. Tools for data collection:**

Web-based survey was commenced using an online survey, for which a questionnaire was created in Arabic using the Google forms <https://forms.gle/MPQmdkz3VJVhhziHA>. The survey questionnaire consisted of questions 34 questions that assessed:

5.1. ***Women's demographic characteristics questionnaire*** (7 MCQ questions) that assessed age, educational level, adequacy of monthly income, residence, marriage duration, number of children

5.2. ***Women perceived fears (WPF) questionnaire*** regarding the effect of COVID-19 on pregnancy is designed by the researchers and comprises 6 items which include "COVID-19 caused congenital anomalies, abortion, premature labor, fetal death, maternal death" rated on a 3-point Likert scale in which (agree = 3, uncertain = 2 & disagree = 1) except item No (6) "no effect of COVID-19 on pregnancy" has reverse score in which (agree = 1, uncertain = 2 & disagree = 3) The total scoring system was measured by summing the information of all the respondents and high score indicating high fear perception

Scoring:

| Description                         | score        |
|-------------------------------------|--------------|
| Low fear perception ( $\leq 60\%$ ) | (6 to 13.2)  |
| High fear perception ( $>60\%$ )    | (13.3 to 18) |

**5.3. The Desire to Avoid Pregnancy (DAP) scale** ,The scale was developed by **Rocca et al., 2018**. It is 14 items aimed at measuring women's thoughts and feelings about becoming pregnant within the next 3 months and having a baby within the next year. The scale is adapted by the researchers by selecting only the 5 items concerning the pregnancy intention. The 5 items were rated on a 3-point Likert scale, for negatively expressed items, 3 means "agree" and for positively expressed items, 3 means "disagree." A classical approach was used to sum up raw material scores and divide by 5 to obtain a mean pregnancy preference score (final range: 1–3) with cutoff point  $<1.8$  ( $< 60\%$ ) has low DAP , while cutoff point  $\geq 1.8$  ( $\geq 60\%$ ) has high DAP

**5.4. Effect of Media Exposure to Family planning message questionnaire** is designed by the researchers and involved 9 MCQ questions including, 1) the source of information traditional media as "T.V, Radio, Newspaper" or personal contact as "friends, relatives, specializes physician "or modern media as "Facebook and websites ",2) if the woman use family planning methods after media exposure (1 item/ yes or no), and exposure intensity to different media (3 items/ high, medium, low or no exposure)

**5.5. Women's Attitude toward using family planning methods through media exposure scale:** designed by the researchers, it consists of 7 items include: Media campaigns for family planning 1) help facilitate access to this type of services, 2) are not important in making my family planning decision, 3) helped me feel reassured when making a family planning decision, 4) make me aware of the importance of family planning during the Corona pandemic, 5) helped me correctly identify family planning methods, 6) encouraged me to better communicate with my husband to make a decision in this regard, 7) increase in awareness campaigns for family planning during the Corona pandemic, those items were measured on 3 point scale (1= disagree, 2 = uncertain, 3 = agree) for

the positive items & reverse scoring for the negative items. the total score was from 7-21:

- Negative attitude < 60(12.5-7) %
- Positive attitude  $\geq$  60%(21-12.6)

#### 6. Tool validity and reliability:

The accuracy and relevance between the translated and original material for the adopted tool was determined by specialists from the Maternity Nursing, Community Health Nursing, and Public Relations & Journalism divisions in mass communication. The developed tools were also revised by Arabic experts.

| Tool                            | Validity | (Reliability test)<br>Cronbach's coefficient |
|---------------------------------|----------|--|
| Desire to Avoid Pregnancy (DAP) | 0.835    | 0.77   |
| Women Perceived Fears (WPF)     | 0.777    | 0.604  |
| Women Attitude tool             | 0.81     | 0.802  |

#### 7. Pilot study:

To assess the clarity, application, and feasibility of the research tools and to gauge the time required for data collection, the pilot study was carried out on a ratio of 10% of the study sample size (384) at "38 cases". Based on the pilot's findings, no alteration was necessary, and it was added to the study sample.

#### 8. Preparatory phase:

At this stage, an investigation was conducted to review related work in Media communication campaigns, Media health communications, Media and crisis management & Media, attitude formation towards COVID-19 Also effect of COVID 19 on pregnancy and factors that affect using of family planning services care during COVID 19, using books, articles, internet, periodicals and journals .Language specialists translated the chosen tool (DAP) into Arabic and then back into English; any inconsistencies between the back translation and the original tools were interpreted as proof of a translation problem.

## 9. Implementation phase :

The survey was conducted from 30 October 2021 to 29 December 2021. The first participant was contact through Facebook group concerning women and child health. They were asked to share the e-questionnaire with their friends using their personal and institutional Facebook and Messenger. the geographic location target function on the advertisement platform was used to ensure a more geographically representative sample. Results were downloaded as a CSV (comma-separated values) file that had been organized using Excel after the deadline for questionnaire submissions. The Statistics Package for Social Sciences was used to conduct the statistical analysis. (SPSS, version 21.0) .

## 10. Ethical issues:

Each respondent gave their permission to take part in the survey after reading the informed consent form that was included with the electronic questionnaire. All participants received information about the research's goal, the confidentiality of their information, and their right to cancel their participation at any time without explanation in the permission form.

## 11. Statistical Design:

Using real numbers and table percentages, data were displayed in tables and figures. Utilizing mean and standard deviation, the chi-square test for categorical data, and the Pearson correlation coefficient to examine correlation measures, the statistical significance and relationship were evaluated.  $P > 0.05$  was judged to be not significant (NS),  $P < 0.05$  to be significant (S), and  $P < 0.001$  to be highly significant for the observed differences and relationships (HS).

## 12. Results

Of the 384 married woman invited to participate, 334 accepted with response rate 87%. The results were presented in 4 tables and 5 figures. Regarding the sociodemographic distribution of the studied women, in **Table (1)** 65.3% were in the age group 20-34 with a mean age of  $31.67 \pm 6.760$  years old, regarding their residency 62.3% were urban, regarding the educational status of them, 45.5% of them were highly educated. Regarding marriage duration, 64.4% were married for more than 3 years with a mean marriage duration of  $2.50 \pm 0.730$  years, 73.1% of them reported that their monthly income was enough for basic needs, while 85.6% of them have children and only 31.7 of them were para 2 .



Regarding the Desire to Avoid Pregnancy **Figure (1)** showed that 53.3% (cutoff point  $<1.8$ ) of women have a low desire to avoid pregnancy during the COVID-19 pandemic while slightly less than half of the sample indicated a high desire to avoid pregnancy during this time 46.7% (cutoff point  $\geq 1.8$ )

Regarding the Women perceived fears (WPF) toward the effect of COVID-19 on pregnancy **Table (2)** reveals that the highest mean was awarded to statement 6 :(No effect of COVID-19 on pregnancy) while the lowest average was awarded to statement 4: (Intrauterine fetal death). As well as Figure(2) illustrates that 67% of studied women have low perceived fears while 32% have high perceived fears toward the effect of Covid-19 on pregnancy

Regarding Media Exposure to Family planning message/campaign as apparent from **Figure (3)** illustrated that 42% of the studied women were highly exposed to social media such as Facebook, WhatsApp, and Instagram. while 38.3 % were moderately exposed to online newspapers & finally 34.1 % were moderately exposed to traditional media such as newspapers, radio and TV channels. Also, Figure 4 illustrates that 64.7% of the studied women reported that they didn't use family planning methods after exposure to social media messages/campaigns concerning using of family planning methods during COVID-19

Regarding women's attitudes toward using family planning methods after exposure to family planning campaigns in media during COVID-19, **Figure 5** illustrates that the majority of women (77%) highlighted holding positive attitudes towards these methods and family planning campaigns in general. Comparatively, only a margin of respondents (23 %) affirmed they have negative attitudes towards using family planning methods after their exposition to media campaigns during COVID-19.

Regarding the relation between sociodemographic characteristics of the studied women and their using family planning methods after media exposure **Table (3)** reveals that there are highly statistically significant relations between residence & qualification with using of family planning methods in which  $X^2 = 10.143$  and  $15.037$  at  $p = .001$  and  $.001$  respectively. While there is a statistically significant relationship between the level of income & number of children with the use of family planning methods after media exposure in which  $X^2 = 6.877$  &  $8.545$  at  $p = .032$  &  $.003$  respectively.

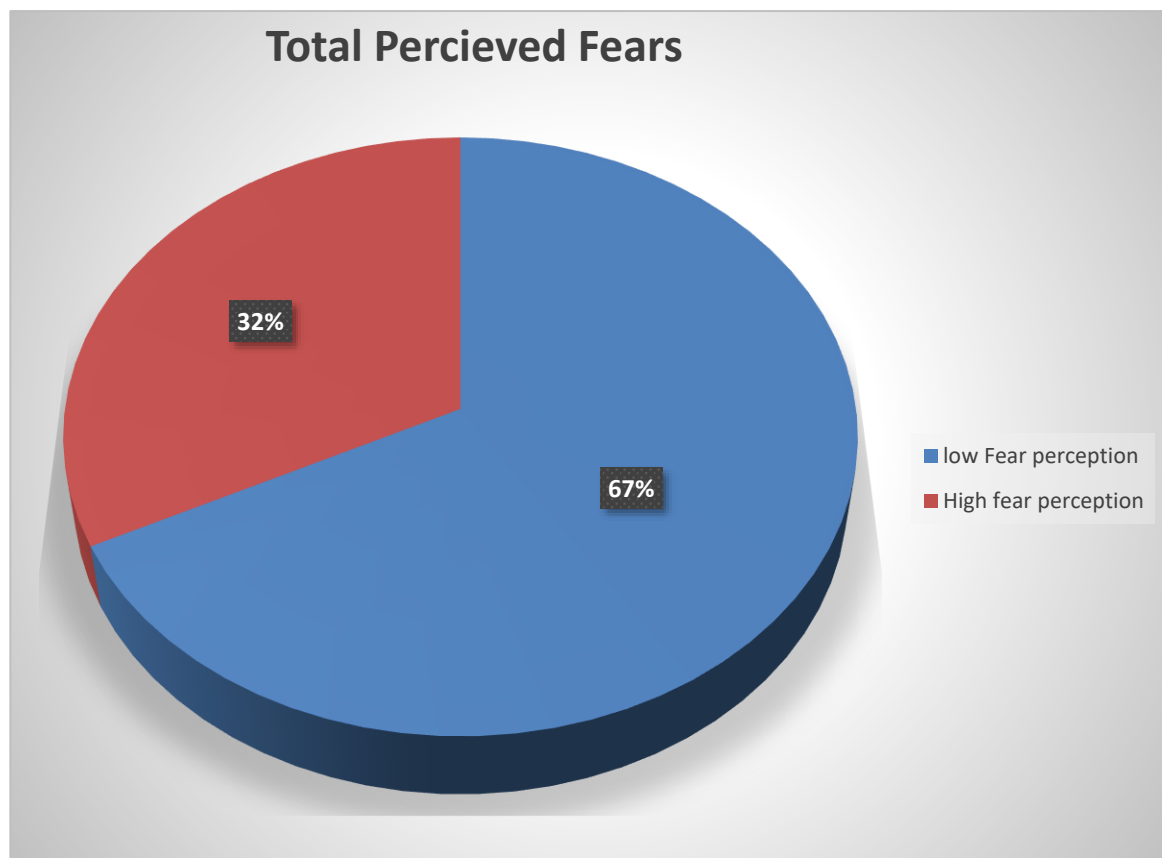
The Pearson correlation analysis of using family planning methods after media exposure & three different types of media exposure in **Table (4)** generally indicated a weak positive correlation but very significant direct relationships. Specifically, the greatest correlation for

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the mass media and use of family planning was found for traditional media messages (Television & Radio) ( $r = 0.320$ ;  $p = .000$ ) followed online newspapers ( $r = 0.203$ ;  $p = 0.0001$ ) while the there is no correlation was found for access to social media messages ( $r = -.003$ ;  $p = .953$ ).

**Table 1: Frequency and percentage distribution of the studied women demographic characteristics (n=334).**

| Items                           | (n=334)                             |             |
|---------------------------------|-------------------------------------|-------------|
|                                 | No.                                 | %           |
| <b>Age</b>                      |                                     |             |
| 15 -19                          | 1                                   | 3           |
| 20-34                           | 218                                 | 65.3        |
| 35-49                           | 115                                 | 34.3        |
| <b>Mean <math>\pm</math> SD</b> | <b>31.67 <math>\pm</math> 6.760</b> |             |
| <b>Residence</b>                |                                     |             |
| Urban                           | 208                                 | 62.3        |
| Rural                           | 126                                 | 37.7        |
| <b>Qualifications</b>           |                                     |             |
| Diploma                         | 116                                 | 34.7        |
| High educated                   | 152                                 | 45.5        |
| High studies                    | 66                                  | 19.8        |
| <b>Marriage duration</b>        |                                     |             |
| <1                              | 47                                  | 14.1        |
| 1-3                             | 72                                  | 21.6        |
| >3                              | 215                                 | 64.4        |
| <b>Mean <math>\pm</math> SD</b> | <b>2.50 <math>\pm</math> 0.730</b>  |             |
| <b>Level of income</b>          |                                     |             |
| Enough                          | <b>244</b>                          | <b>73.1</b> |
| Not enough                      | <b>67</b>                           | <b>20.1</b> |
| Enough& save                    | <b>23</b>                           | <b>6.9</b>  |
| <b>children</b>                 |                                     |             |
| Yes                             | 286                                 | 85.6        |
| No                              | 48                                  | 14.4        |
| <b>parity</b>                   |                                     |             |
| <b>P1</b>                       | 72                                  | 21.6        |
| <b>P2</b>                       | 106                                 | 31.7        |
| <b>P3</b>                       | 72                                  | 21.6        |
| <b>&lt; P3</b>                  | 36                                  | 10.8        |
| <b>Mean <math>\pm</math> SD</b> | <b>2.25 <math>\pm</math> 0.973</b>  |             |

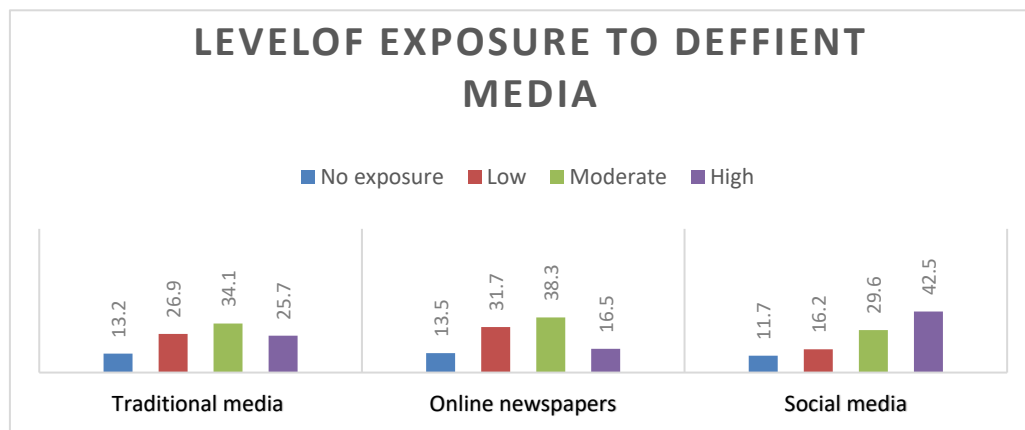


**Fig 1: Percentage distribution of the studied women according to their Desire to Avoid Pregnancy (DAP)**

**Table (2): Frequency and percentage distribution of the studied women’s Perceived fears regarding COVID 19 impact on pregnancy (n= 334)**

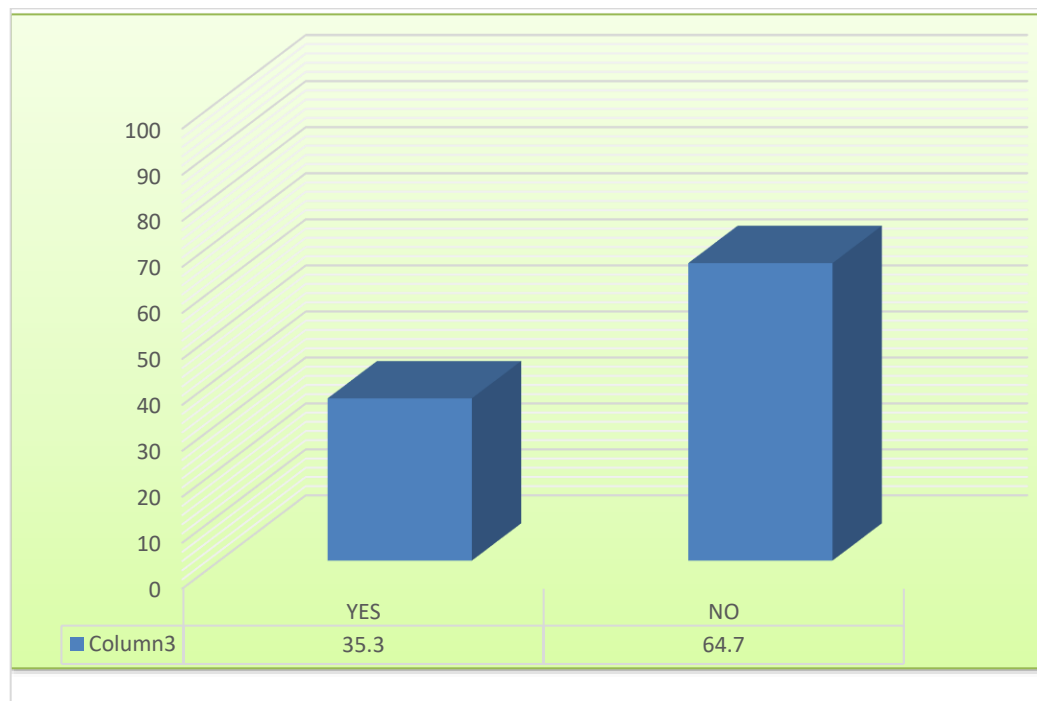
| Item                               | Agree<br>n (%)      | Uncertain<br>n(%) | Disagree<br>n (%) |
|------------------------------------|---------------------|-------------------|-------------------|
| Congenital anomalies               | 77 (23.1)           | 143 (42.8)        | 114 (34.1)        |
| Increase abortion                  | 97 (29.0)           | 149 (44.6)        | 88 (26.3)         |
| Preterm labor                      | 95 (28.4)           | 145 (43.3)        | 94 (28.1)         |
| Intrauterine fetal death           | 67 (20.1)           | 153 (45.8)        | 114(34.1)         |
| Maternal death during labor        | 71 (21.3)           | 152 (45.5)        | 111(33.2)         |
| No effect of COVID-19 on pregnancy | 174 (52.1)          | 99 (29.6)         | 61(18.3)          |
| <b>Mean ± SD</b>                   | <b>11.99 ± 3.39</b> |                   |                   |

**Fig 2: Distribution of studied women according to total perceived fears regarding COVID 19 impact on pregnancy**

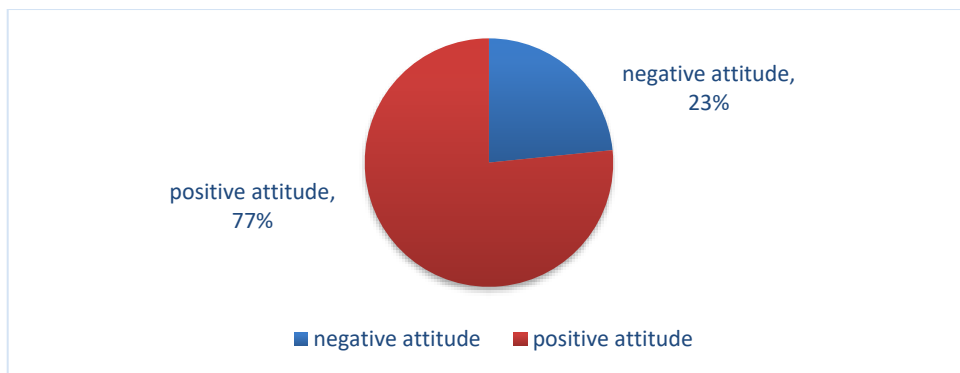


\* Numbers are not mutually exclusive

**Fig 3: distribution of the studied women according to their level of media exposure toward family planning campaign/message during COVID 19 through different media**



**Fig 4: Distribution of studied women according to the effect of media exposure on using of family planning methods**



**Figure (5): Distribution of studied women according to their attitude toward using family planning methods through media exposure**

**Table (3): Relation between the studied women`s characteristics, and use of family planning using after media exposure (n=334).**

| general characteristics |              | Using the family planning method after media exposure |            | X <sup>2</sup> | P value |
|-------------------------|--------------|---|------------|----------------|---------|
|                         |              | Yes (no.) %   | No (no.) % |                |         |
| Age                     | 15 -19       | (1) 0.3   | 0          | 1.984          | 0.371   |
|                         | 20-34        | (75)22.5  | (143) 42.8 |                |         |
|                         | 35-49        | (42)12.6  | (73) 21.9  |                |         |
| residence               | Urban        | (60) 18   | (148) 44.3 | 10.143         | .001* * |
|                         | Rural        | (58) 17.4   | (68) 20.4  |                |         |
| Qualification           | Diploma      | (57) 17.1   | (59) 17.7  | 15.037         | .001* * |
|                         | High Edu.    | (44) 13.2   | (108) 32.3 |                |         |
|                         | High studies | (17) 5.1  | (49)14.7   |                |         |
| Marriage duration       | <1           | (13) 3.9  | (34) 10.2  | 5.006          | .082    |
|                         | 1-3          | (33) 9.9  | (39) 11.7  |                |         |
|                         | 3            | (72) 21.6   | (143) 42.8 |                |         |
| Level of income         | Enough       | (81) 24.3   | (163) 48.8 | 6.877          | .032*   |
|                         | Not enough   | (32) 9.6  | (35) 10.5  |                |         |
|                         | Enough& save | (5)1.5  | (18) 5.4   |                |         |
| NO. of children         | yes          | (110) 32.9  | (176) 52.7 | 8.545          | .003 *  |
|                         | no           | (8) 2.4   | (40)12     |                |         |

HS= statistically highly significant at  $p \leq 0.001$  S= statistically significant at  $p \leq 0.05$   
 NS= statistically not significant at  $p > 0.05$

**Table (4): correlation coefficient between using family planning methods after media exposure & three different types of media exposure, & DAP**

| Variables                      | r       | P value |
|--------------------------------|---------|---------|
| Traditional media (TV & Radio) | .320* * | .000    |
| Online newspapers              | .203* * | .000    |
| Social media                   | -.003   | .953    |

### 13. Discussion:

The COVID-19 pandemic has had an impact on women's sexual health, particularly their desire for pregnancy. By supplying a steady stream of information and inspiration to keep women using contraceptives, mass media can play a significant role in raising awareness, intention, and usage of family planning methods. This study aimed to explore the effect of media exposure on women's utilization of family planning methods & their attitude during COVID-19.

A total of 334 women with a mean age of with mean age  $31.67 \pm 6.760$  years old were enrolled in the study, less than two third were married for than three years and more than half of them had one or two children only.

Data analysis of the current study reveals that more than two thirds of the studied women had low fear perception regarding effect of COVID 19 on pregnancy. This may be explained as there is no enough evidence to support the vertical transmission of infection as yet.

The previous finding is in the same line with **Elsaddig & Khalil, (2021)** who study a systematic review about “Effects of the COVID pandemic on pregnancy outcomes” and stated that 74 % of pregnant women with COVID-19 presented asymptotically and also stated that there is no difference in the rate of stillbirth of pregnant women with COVID-19 with pregnant women without COVID-19

Additionally, **Wastnedge et al. (2021)** who reviewed papers on "pregnancy & COVID 19" and claimed from the evidence base that it is challenging to draw firm conclusions on whether pregnant women are at greater risk of serious COVID-19 consequences supported the earlier findings.

These also contradicted with **Hossain et al. (2020)** who study “Perceptions, Generalized Anxiety and Fears of Pregnant women about Corona Virus infection in the heart of Pandemic” and found that a very high proportion of pregnant women have

a stronger belief that if a mother has an infection, the child will also have it and it is likely to be transmitted from mother to child.

Data analysis of the current study shows that more than half of the studied women have a low desire to avoid pregnancy during the COVID-19 pandemic; This could be explained by the current study results as less than two third of the studied women were married for more than three years and more than half of them had one or two children only also tow third of them had low Frears perception

These findings are consistent with a Turkish study that found that the COVID-19 pandemic had just a 28% negative impact on women's willingness to become pregnant (**Yuksel & Ozgor, 2020**). 18% of respondents in Italy said they wanted to start a family before the epidemic, but more than one-third gave up on the idea because of looming financial hardships and increased pressure on the healthcare system. Contrarily, several individuals who did not intend to become pregnant claimed that they did so out of a desire for positive (**Micelli et al., 2020**).

In contrast to the current study, **Lindberg et al. (2020)** indicated that women postpone childbirth or desire to have fewer children since they are aware that the epidemic brings about economic hardships.

Another important finding in the current study was that more than three-fifths of the studied women stated that they didn't use family planning methods after exposure as well as more than three quarter of them holding positive attitudes towards family planning methods after exposure to family planning message .this could be explained as the result of the current study showed that more than half of them had low desire to avoid pregnancy and at the same time media can disseminate information to large audiences in the form of public service announcements, entertainment, advertisement, or short drama quickly and at relatively low costs .

In support to the current study findings, **Hutchinson & Meekers, (2012)** studied " Estimating Causal Effects from Family Planning Health Communication Campaigns Using Panel Data: The "Your Health, Your Wealth" Campaign in Egypt", they found that all of the estimators find positive effects of the "Your Health, Your Wealth" campaign on reproductive health outcomes, but has no effect on contraceptive use . Additionally, **Dal & Beyda (2021)** discovered that married women's attitudes about family planning during the pandemic period were favorable, although not at the targeted level.

Studies undertaken in post-soviet Central Asia, Nigeria, Kenya, and Kenya (**Habibov & Zainiddinov, 2017, Ajaero et al., 2016, and Guilkey & Hutchinson, 2011**) indicated that family planning messages conveyed through mass media have a

beneficial impact on the use of contemporary contraceptives, which are in contrast to this finding.

The current study's data analysis showed that there are statistically significant relationships between income level and using family planning methods after media exposure, as well as highly statistically significant relationships between residence and qualification and using family planning methods. This could be clarified by the notion that women with higher levels of education have greater access to health information, more autonomy in making their own decisions, and better access to high-quality healthcare services, which results in increased awareness and a favorable attitude toward modern contraceptives. Additionally, information about contraception can be found on radio, newspapers, magazines, and television.

In keeping with past findings, **Ahmed & Seid (2020)** discovered no link between women exposed to media messages about family planning and the use of modern contraception in rural areas. But in cities, women who were exposed to media messaging about family planning were less likely to use modern contraception.

The latest study's results similarly showed a weak positive correlation but significant direct correlations. In particular, online newspapers and traditional media messaging (TV and radio) were found to have the strongest associations with the usage of family planning. This means that as the availability of family planning messages on television and the radio increases, so does the usage of family planning.

This finding goes in the same line with **the Egypt Demographic and Health Survey 2014 [FR302] (2015)** which was conducted on behalf of the Ministry of Health and Population and revealed that Television is the primary source of family planning information In Egypt around three-fifths of married women had seen a recent family planning message on television, and exposure to family planning information through print media increased with educational level

**Ajaero et al. (2016)** stated that television was the most significant medium for disseminating knowledge on FP among married women in India, further corroborating the earlier findings.

This finding is contrasted with **Seun Olagunju et al. (2020)** who found that media exposure shows that more than half had family planning messages on radio, while more than two-fifths had family planning messages on television, 21% read it in newspaper/magazines, this could be explained by that most of households now have satellite receivers and, therefore, women are less likely to watch the public television channels where family planning messages are broadcasted.



**14. Conclusion:**

This study concluded that women exposed to different types of media which impact their attitude positively although they did not use family planning methods as more than half of them had a low desire to avoid pregnancy and more than two thirds of them had low fear perception regarding effect of COVID 19 on pregnancy

**15. Recommendation:**

- Further qualitative and quantitative research should be done
- Since family planning is an inexpensive approach to raise awareness among women and educate them about its relevance, it should be given more coverage in the media.
- It may be helpful to offer culturally and religiously sensitive educational programs to inform women about the importance of family planning.
- Preparing training programs for nurses about family planning counseling using different types of social media as providing virtual group educations to establish a two-way dialogue with public and health care professionals which could enhance the awareness of women of reproductive age.
- Provide effective online training and counselling services as well as simple, cost-free access to family planning services to ensure that contraceptive methods are available and that unmet family planning requirements are met.

**16. Strength & limitation:**

- Despite these drawbacks, our study is one of the few to contribute to the body of knowledge on media exposure and family planning use.

**References:**

1. **Agha, S., & Beaudoin, C. E. (2012).** Assessing a Thematic Condom Advertising Campaign on Condom Use in Urban Pakistan. *Journal of Health Communication*, 17(5), 601–623. <https://doi.org/10.1080/10810730.2011.635768>
2. **Ahmed, M., & Seid, A. (2020).** Association between exposure to mass media family planning messages and utilization of modern contraceptive among urban and rural youth women in ethiopia. *International Journal of Women's Health*, 12,
3. **Ajaero, C. K., Odimegwu, C., Ajaero, I. D., & Nwachukwu, C. A. (2016).** Access to mass media messages, and use of family planning in Nigeria: A spatio-demographic

- analysis from the 2013 DHS. *BMC Public Health*, 16(1), 1–10.  
<https://doi.org/10.1186/s12889-016-2979-z>
4. **Al-Shawakh, M. R., Mostafa, N. M., & Saleh, L. M. (2020).** Assessment of the knowledge and practice of nurses about family planning counseling in health care centers – Lattakia. *Universal Journal of Public Health*, 8(4), 148–154.  
<https://doi.org/10.13189/ujph.2020.080406>
  5. **Barber, J. S., & Axinn, W. G. (2004).** New ideas and fertility limitation: The role of mass media. *Journal of marriage and family*, 66(5), 1180-1200.
  6. **Cahill, N., Sonneveldt, E., Emmart, P., Williamson, J., Mbu, R., Fodjo Yetgang, A. B., ... & Alkema, L. (2021).** Using family planning service statistics to inform model-based estimates of modern contraceptive prevalence. *Plos one*, 16(10), e0258304.
  7. **Church, Kathryn and Gassner, Jennifer and Elliott, M. (2020).** Reproductive health under COVID-19--challenges of responding in a global crisis. *Sexual and Reproductive Health Matters*, 28(1), 1773163.
  8. **Cochran, W.G. (1963)** Sampling Techniques, Wiley, New York
  9. **Dal, N. A., & Beydağ, K. D. (2021).** Attitudes of Married Muslim Women Regarding Family Planning Methods During the COVID-19 Pandemic in Western Turkey. *Journal of Religion and Health*, 60(5), 3394-3405. <https://doi.org/10.1007/s10943-021-01387-3>
  10. **El Weshahi, H. M. T., Galal, A. F., & Sultan, E. A. (2021).** Providers' perspectives of socio-cultural and health service challenges related to postpartum family planning in Alexandria, Egypt. *Journal of the Egyptian Public Health Association*, 96(1).  
<https://doi.org/10.1186/s42506-020-00066-7>
  11. **Egypt Demographic and Health Survey 2014 [FR302]. (2015).**  
<http://dhsprogram.com/pubs/pdf/FR302/FR302.pdf>
  12. **Elsaddig, M., & Khalil, A. (2021).** Effects of the COVID pandemic on pregnancy outcomes. *Best Practice and Research: Clinical Obstetrics and Gynaecology*, 73, 125–136.  
<https://doi.org/10.1016/j.bpobgyn.2021.03.004>
  13. **Ghosh, R., Mozumdar, A., Chattopadhyay, A., & Acharya, R. (2021).** Mass media exposure and use of reversible modern contraceptives among married women in India: An analysis of the NFHS 2015-16 data. *PLoS ONE*, 16(7 July), 1–23.  
<https://doi.org/10.1371/journal.pone.0254400>
  14. **Gorea, R. K., Gorea, A., & Gorea, A. (2016).** Role of Social Media in the Practice of Nursing Science. *Global Journal of Nursing & Forensic Studies*, 1(1), 2015–2017.
  15. **Guilkey, D. K., & Hutchinson, P. L. (2011).** Overcoming methodological challenges in evaluating health communication campaigns: Evidence from rural Bangladesh. *Studies in Family Planning*, 42(2), 93–106. <https://doi.org/10.1111/j.1728-4465.2011.00269.x>
  16. **Habibov, N., & Zainiddinov, H. (2017).** Effect of TV and radio family planning messages on the probability of modern contraception utilization in post-Soviet Central Asia.

- International Journal of Health Planning and Management*, 32(1), e17–e38.  
<https://doi.org/10.1002/hpm.2318>
17. **Hasna, F. (2003).** Islam, social traditions and family planning. *Social Policy and Administration*, 37(2), 181–197. <https://doi.org/10.1111/1467-9515.00333>
  18. **Hossain, N., Samuel, M., Sandeep, R., Imtiaz, S., & Zaheer, S. (2020).** Perceptions, Generalized Anxiety and Fears of Pregnant women about Corona Virus infection in the heart of Pandemic. *Research Squar*, 1–16.
  19. **Hutchinson, P. L., & Meekers, D. (2012).** Estimating Causal Effects from Family Planning Health Communication Campaigns Using Panel Data: The “Your Health, Your Wealth” Campaign in Egypt. *PLoS ONE*, 7(9).  
<https://doi.org/10.1371/journal.pone.0046138>
  20. **Katz, E., Haas, H., & Gurevitch, M. (1973).** On the use of the mass media for important things. *American Sociological Review*, 38(2), 164–181. <https://doi.org/10.2307/2094393>
  21. **Lin, T. K., Law, R., Beaman, J., & Foster, D. G. (2021).** The impact of the COVID-19 pandemic on economic security and pregnancy intentions among people at risk of pregnancy. *Contraception*, 103(6), 380–385.  
<https://doi.org/10.1016/j.contraception.2021.02.001>
  22. **Lindberg, L. D., VandeVusse, A., Mueller, J., & Kirstein, M. (2020).** Early impacts of the COVID-19 pandemic: findings from the 2020 Guttmacher survey of reproductive health experiences.
  23. **Micelli, E., Cito, G., Cocci, A., Polloni, G., Russo, G. I., Minervini, A., Carini, M., Natali, A., & Coccia, M. E. (2020).** Desire for parenthood at the time of COVID-19 pandemic: an insight into the Italian situation. *Journal of Psychosomatic Obstetrics and Gynecology*, 41(3), 183–190. <https://doi.org/10.1080/0167482X.2020.1759545>
  24. **Mohamed, N. A., Abdel-Razik, M. S., & Salem, M. R. (2022).** Adjustment of family planning service statistics reports to support decision-making at central and governorate level, Egypt. *Journal of the Egyptian Public Health Association*, 97(1).  
<https://doi.org/10.1186/s42506-021-00098-7>
  25. **Rocca, C. H., Ralph, L. J., Wilson, M., Gould, H., & Foster, D. G. (2018).** Psychometric Evaluation of an Instrument to Measure Prospective Pregnancy Preferences. *Medical Care*, 1.  
<https://doi.org/10.1097/mlr.0000000000001048>
  26. **Sarrassat, S., Meda, N., Ouedraogo, M., Some, H., Bambara, R., Head, R., & Cousens, S. (2015).** Behaviour change after 20 months of a radio campaign addressing key lifesaving family behaviours for child survival: midline results from a cluster randomized trial in rural Burkina Faso. *Global Health: Science and Practice*, 3(4), 557-576.
  27. **Seun Olagunju, O., Afolabi Obasanjo, B., Peter Temitope, E., Saliu, O., Taiwo, I., Musa, Z., Omoluabi, E., & Kayode Babalola, T. (2020).** Does Family Planning Messages Exposure in the Preceding 12 Months Period Predict the Current Use of a
-

- Modern Family Planning Method among Women of Reproductive Age in Nigeria? *American Journal of Public Health Research*, 8(3), 100–104.  
<https://doi.org/10.12691/ajphr-8-3-4>
28. **UNFPA; (2020)**. (published online 5 March). Available from: <https://www.unfpa.org/press/unfpa-statement-novelcoronavirus-covid-19-and-pregnancy>
29. **Viswanath, K., Ramanadhan, S., & Kontos, E. Z. (2021)**. Mass Media. Macrosocial Determinants of Population Health, 275–294. [https://doi.org/10.1007/978-0-387-70812-6\\_13](https://doi.org/10.1007/978-0-387-70812-6_13)
30. **Wastnedge, E. A. N., Reynolds, R. M., van Boeckel, S. R., Stock, S. J., Denison, F. C., Maybin, J. A., & Critchley, H. O. D. (2021)**. Pregnancy and COVID-19. *Physiological Reviews*, 101(1), 303–318. <https://doi.org/10.1152/physrev.00024.2020>
31. **Wakefield, M. A., Loken, B., & Hornik, R. C. (2010)**. Use of mass media campaigns to change health behaviour. *The Lancet*, 376(9748), 1261–1271.  
[https://doi.org/10.1016/s0140-6736\(10\)60809-](https://doi.org/10.1016/s0140-6736(10)60809-)
32. **World Health Organization and others. (2020)**. Maintaining essential health services: operational guidance for the COVID-19 context: interim guidance, 1 June 2020.
33. **Yuksel, B., & Ozgor, F. (2020)**. Effect of the COVID-19 pandemic on female sexual behavior. *International Journal of Gynaecology and Obstetrics: The Official Organ of the International Federation of Gynaecology and Obstetrics*, 150(1), 98–102.  
<https://doi.org/10.1002/IJGO.13193>

## الملخص العربي

### تأثير التعرض الإعلامي على استخدام السيدات لأساليب تنظيم الأسرة واتجاهتهن خلال جائحة كوفيد 19

**مقدمة:** ان لجائحة فيروس كورونا المستجد (كوفيد-19) تأثير على الصحة الجنسية للمرأة ، لا سيما على رغبتها في الحمل ، ويمكن لوسائل الإعلام أن تلعب دورًا مهمًا في تعزيز الوعي بوسائل تنظيم الأسرة ، والنية لاستخدامها خلال الجائحة.

**الهدف من الدراسة:** يهدف هذا البحث إلى دراسة تأثير التعرض الإعلامي (لوسائل الإعلام) على استخدام السيدات لوسائل تنظيم الأسرة واتجاهتهن نحوها خلال جائحة كوفيد-19. تصميم الدراسة: تعد الدراسة وصفية .

**مكان الدراسة:** تم نشر الاستبيان عبر موقع وتطبيق (فيسبوك ، واتس آب) باعتبارهما بيئتين افتراضيتين للتواصل الاجتماعي عبر شبكة الإنترنت .

**عينة الدراسة:** شملت عينة الدراسة 334 سيدة متزوجة في سن الإنجاب ، وتم تجميع العينة باستخدام عينة كرة الثلج من مواقع التواصل الاجتماعي المذكورة سابقاً .

**أدوات جمع البيانات:** تم جمع البيانات بواسطة استبيان للخصائص الديموجرافية للمرأة ، (2) استبيان بشأن مخاوف السيدات اتجاه تأثير كوفيد-19 على الحمل ، (3) مقياس الرغبة في تجنب الحمل ، (4) مصادر المعلومات ، وتأثير التعرض لوسائل الإعلام على الرغبة في الحمل ، (5) سلوكيات السيدات اتجاه استخدام وسائل تنظيم الأسرة من خلال التعرض لوسائل الإعلام.

**النتائج:** توصلت الدراسة أن أكثر من نصف السيدات الخاضعات للدراسة لديهن رغبة منخفضة في تجنب الحمل أثناء جائحة كوفيد-19 ، و أكثر من ثلاثة أخماس السيدات الخاضعات للدراسة أنهن لم يستخدمن وسائل تنظيم الأسرة بعد التعرض لوسائل الإعلام ، بالإضافة إلى أن أكثر من ثلاثة أرباعهن يحملن مواقف إيجابية تجاه وسائل تنظيم الأسرة بعد التعرض للرسائل الاعلاميه لتنظيم الأسرة.

**الخلاصة:** لخصت هذه الدراسة إلى أن السيدات يتعرضن لأنواع مختلفة من وسائل الاعلام التي تؤثر على موقفهن بشكل إيجابي تجاه وسائل تنظيم الأسرة على الرغم من عدم استخدامهن وسائل تنظيم الأسرة لأن أكثر من نصفهن لديهن رغبة منخفضة في تجنب الحمل ، حيث أن أكثر من ثلثيهن كان لديهن تصور منخفض للخوف فيما يتعلق بتأثير كوفيد-19 على الحمل .

**التوصيات:** إعداد برامج تدريبية للممرضات حول استشارات تنظيم الأسرة باستخدام أنواع مختلفة من وسائل التواصل الاجتماعي مثل توفير تعليم جماعي افتراضي لإقامة حوار ثنائي الاتجاه مع المتخصصين في الرعاية الصحية والعامه والذي يمكن أن يعزز وعي النساء في سن الإنجاب.