



Short article

Health education during pregnancy from perspective of pregnant women

Educación en salud durante el embarazo desde la perspectiva de las gestantes

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ABSTRACT

Keywords:
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Introduction: It is necessary to know the educational needs of pregnant women after the Covid-19 pandemic. **Objectives:** To know the educational needs of pregnant women and their preferred means to receive that education. **Method:** Descriptive study through virtual survey with purposive sampling and snowball call towards pregnant women who had their deliveries during the pandemic, as well as healthcare workers dedicated to prenatal and delivery care. Educational needs, types of content and the preferred way to receive it were found out. **Results:** A total of 144 women participated, 34 (23.61%) pregnant and 110 (76.39%) mothers, between 17-34 years old. They stated that they needed education on prenatal/delivery care: 113 (78.47%), breastfeeding: 109 (75.69%), baby care: 108 (75.00%) maternity and Covid-19: 90 (62.50%), prevention of Covid-19 transmission to the baby, 85 (59.03%) and mental health: 79 (54.86%). They would prefer videos 114 (54.86%), by WhatsApp: 106 (73.61%) and email 82 (56.94%). **Conclusions:** Pregnant women, mothers need education on pregnancy care, but also on Covid-19 prevention. They suggest videos through social networks

RESUMEN

Palabras clave:
educación;
mujeres
embarazadas;
película y
video
educativos.

Introducción: se requiere conocer las necesidades de educación para las gestantes en escenarios de post-pandemia por Covid-19. **Objetivo:** conocer las necesidades de educación para gestantes/maternas y los medios preferidos para recibirla. **Método:** estudio descriptivo mediante encuestas virtuales con muestreo intencional y convocatoria en bola de nieve, a gestantes/maternas cuyos partos ocurrieron en pandemia. Personal de atención prenatal y parto también fue entrevistado. Se averiguaron necesidades de educación, contenidos y formas preferidas para recibirla. **Resultados:** participaron 144 mujeres, 34 (23,6%) gestantes, 110 (76,4%) maternas, con edades entre 17-43 años. Manifestaron necesitar educación sobre cuidados del parto/preparto: 113 (78,5%), lactancia materna: 109 (75,7%), cuidados del bebé: 108 (75%), maternidad y Covid-19: 90 (62,5%), prevención de transmisión al bebé: 85 (59%) y salud mental: 79 (54,9%). Preferirían videos 114(79,2%), por *WhatsApp*: 106 (73,6%) y correo electrónico: 82 (56,9%). **Conclusiones:** las maternas necesitan educación sobre cuidados de la gestación, pero también sobre prevención del Covid-19. Sugieren videos a través de redes sociales.

INTRODUCTION

During the Covid-19 pandemic, isolation and restrictions led to changes in the provision of health services¹. Maternal and childcare were offered in various modalities to guarantee continuity and respect prevention measures². However, pregnant women experienced barriers, both to the exercise of sexual and reproductive rights³ and to obtaining prenatal care. Barriers aggravated by fear of contagion and increased stress during the epidemic⁴. The barriers generated by the pandemic⁵ and the existing structural inequities⁶, contributed to the deterioration of the quality of prenatal care, with a weakening of counseling, education, and humanized care during pregnancy, childbirth, and the postpartum⁷, with an increase in maternal mortality⁸.

In this scenario, educational strategies mediated by information and communication technologies (ICTs) were used in response to the restrictions imposed by the pandemic⁹ to provide education and improve the autonomy of pregnant women for the benefit of the quality of care¹⁰. Ideally, pregnant women require education, information, and communication (EIC) processes that allow them to recognize dangerous situations, act promptly, and promote safe motherhood. In this regard, some studies found an association between the knowledge and attitudes of pregnant women¹¹, the impact of educational interventions¹², the development of mobile applications to provide them with information¹³, and the quality of prenatal care during COVID-19⁷. However, no studies were found that investigate the needs of EIC from the perspective of mothers. The practical implications of this knowledge gap lead to delays in seeking care, dissatisfaction on the part of pregnant women, and complications in the evolution and management of pregnancy, childbirth, and postpartum, with deterioration in maternal and child health.

The objective of the study was to know the EIC needs of pregnant women and the preferred means of obtaining information from the perspective of women who were pregnant during the pandemic.

METHOD

Kind of investigation

A descriptive study was carried out in Colombia between June and August 2021.

Population and sample

Pregnant women or those who had been mothers during the pandemic were included between March 2020 and July 2021. The search for participants was done through social networks, using the snowball strategy¹⁴. Those who met the inclusion criteria and gave their informed consent underwent a virtual survey with non-probabilistic sampling.

Instruments

A survey-type instrument was developed with 35 questions with answers yes/no, which inquired about the EIC received during pregnancy, childbirth, and postpartum, as well as the topics on which the pregnant women considered that they required information. They were asked about the types of content, the social networks they preferred, and how they would like to receive EIC. This survey was validated with 12 participants. The pertinent adjustments were made, and the format was located on the Google virtual platform forms, available from June 30 to August 15, 2021.

Procedures

The responses to the surveys were recovered in databases in *Excel R*; they were purified and coded, then exported to the *Stata 14* program, where the analysis was carried out. Absolute and relative frequencies (proportions in percentage %) of each response obtained were calculated, and frequency distribution tables were prepared.

Statement on ethical aspects

Participation in the surveys was voluntary, with prior informed consent and authorization to use the responses for this research. The information collected did not include data that could allow the identification of the participants. At all times, the ethical principles of autonomy, confidentiality, beneficence, and non-maleficence, in force in the

country¹⁵, were respected, as well as the provisions established in Law 1581 of 2012 on protecting personal data. The UIS Ethics Committee approved the Project through Minute No. 3 of March 5, 2021.

RESULTS

One-hundred forty-four women participated, aged between 17 and 43 years ($M=29.0$, $SD=5.5$, and $median=28.5$). See Table 1.

Table 1. Sociodemographic characteristics of the participating women.

Characteristic	n (144)	%
<i>Civil status</i>		
Free union	72	50.0
Married	55	38.1
Single	17	11.8
<i>Education level</i>		
Primary	16	11.1
Baccalaureate	10	6.9
Technician/technologist	33	22.9
University professional	58	40.3
Postgraduate	29	20.1
<i>Social security affiliation regime</i>		
Contributory	114	79.2
Subsidized	23	16.0
Other	9	6.3
<i>Gestational status</i>		
Pregnant women	34	23.6
Maternal	110	76.4
<i>Attendance at prenatal control</i>		
Yes	141	97.9
No	3	2.1

In education, information, and communication (EIC) needs, they mentioned care during pregnancy, care of the baby, and prevention measures (Table 2).

Of the means through which they would like to receive EIC, they mentioned WhatsApp 106 (73.6%), email 82 (56.9%), Facebook 27 (18.8%), text messages 21 (14.6%), Instagram 19 (13.2%) and YouTube 18(12.5%). While the favorite audiovisual aids were videos: 114 (79.2%), slides: 40 (27.8%), audios: 35 (24.3%), video calls: 30 (20.8%), Podcast 18(12.5%) and calls: 17(11.8%).

Table 2. Aspects on which women require receiving EIC.

Aspects	n (144)	%
Care during labor and delivery	113	78.5
Breastfeeding	109	75.7
baby care	108	75.0
Maternity in times of Covid-19	90	62.5
Labor process	86	59.7

Prevention of transmission of Covid-19 to the baby	85	59.0
Mental health care in times of Covid-19	79	54.9
Nutritional Aspects	64	44.4
How to create attachment with the baby	61	42.4
Where to go in case of problems with pregnancy	51	35.4

EIC: Education, information, communication.

DISCUSSION

This work managed to establish the needs of EIC and the preferred means of dissemination from the perspective of pregnant women. They prioritized the need to know about care during pregnancy, warning signs, breastfeeding, nutritional aspects, and baby care, in addition to the prevention and management of COVID-19. Although there are few studies on the subject, a previous report shows that one in three participants, 31.1% (95% CI 16.5%-56.9%), received inadequate breastfeeding advice⁷.

Unlike what was expected, the EIC needs regarding COVID-19 were only mentioned by 63% of the participants. This shows that even when disruptions in care occur, such as those caused by the pandemic¹⁶, the EIC needs for pregnancy and newborn care continue to be a priority for mothers. The response to these needs is closely related to humanized childbirth care. On the other hand, it is striking that they considered the needs of EIC on mental health to be a priority, relevant issue, given the evidence that problems in this area increased during the pandemic^{4,17}.

Another finding was identifying the type of social networks mothers prefer to receive EIC, mainly WhatsApp, email, and Facebook, with the publication of videos as the first option. These results support that access to social networks and email is seen as an opportunity to impart EIC to pregnant women through videos and audio, formats preferred by most of them. These networks and formats have been used in previous studies with promising results^{5,13}.

Among the strengths of this study, it could be highlighted that information on EIC needs was obtained directly from pregnant and maternal mothers. The results guide the design of educational programs aimed at meeting the EIC needs felt by mothers. However, it must be taken into account, when designing educational programs, that there may be differences depending on the contexts, hence the

need to survey the target population before starting a program and agree on the topics, contents, etcetera, networks, and strategies to guarantee their effectiveness¹³.

One of the areas for improvement in the present study is the uncertainty about the sample's representativeness, a limitation caused by the type of study. On the other hand, the majority of those who responded to the survey have high levels of education and are affiliated with the contributory social security regime, which suggests that they belong to groups with better access to prenatal care services, which leads to the reasonable doubt that these results do not apply to less advantaged women. However, internet penetration and the use of social networks during the pandemic have been characterized as having broad coverage for most of the population¹⁸. Another area for improvement is using social networks to search for surrogate mothers, which limits participation to those who consult the platforms used, like to participate in surveys, and know how to do so. Some participants expressed fatigue with the quarantine restrictions and the accumulation of information on social networks about the pandemic in what has been known as an infodemic¹⁸. This leads researchers to be very cautious to avoid panic, primarily when it is known that most fake news is spread through *WhatsApp* and *Facebook*, media preferred by the participants¹⁹.

It is recommended that researchers carry out new investigations that involve more considerable and more representative samples, which respond not only to the needs of EIC and the media but also measure the effectiveness of educational programs. Additionally, this study generates research questions about how to use social networks to disseminate educational content on topics of interest to mothers.

CONCLUSIONS

Pregnant women need EIC on the aspects of pregnancy, such as care during pregnancy, the birth process, breastfeeding, and care of the newborn. Also, on specific aspects such as the prevention of COVID-19 both for them and for the newborn, vaccination, and childcare. They prefer this education through videos and WhatsApp.

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STATEMENT ON CONFLICTS OF INTEREST

The authors declare that there are no conflicts of interest.

CONTRIBUTION OF THE AUTHORS

The first author wrote the draft of the Project, submitted the proposal to the call, and participated in the collection and analysis of the data. She wrote the first version of the article, submitted it to the other authors for review, and adjusted the final version.

The second author participated in the conception and execution of the Project. He led the design and validation of the data collection instrument and approved the final version of the article.

The third author participated in the conception of the Project, carried out quality control of the procedures, and participated in the data analysis. She approved the final version of the article.

The fourth author participated in the writing and submission of the Project, the collection and analysis of the data, and approved the final version of the manuscript.

The fifth author participated in the conception of the Project, the collection and analysis of the data, and approved the final version of the manuscript.

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