Factors associated with professionals to carry out health education activities for primiparous pregnant women and informal caregivers during the covid-19 pandemic

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Original

Abstract

Objective: This study aimed to know factors associated with health professionals to carry out Health Education to the primiparous pregnant woman and the main caregiver for the promotion of breastfeeding.

Methodology: A cross-sectional online survey was used 150 health professionals from the Health Area of Valladolid East who attend first-time pregnant women and the main caregiver in their consultations participated in this study. The study used structured self-administered questionnaires. Descriptive analysis was conducted to examine the relationship between these variables and breastfeeding rates, using Chi-square tests and ANOVA.

Results: Statistical significance was recorded between number of consultations on demand including the caregiver and Health Education (Eps), ($p \leq 0.000$) and time spent in scheduled consultation with pregnant women ($p \leq 0.000$) and including the caregiver ($p \leq 0.000$); and time in consultation on demand only for the pregnant woman ($p = <2e\text{-}16$) with Eps. Also, the employment situation of professionals with EPS, in scheduled consultation with a pregnant woman ($p \leq 0.000$), in scheduled consultation with a caregiver ($p \leq 0.000$), in consultation with a pregnant woman ($p = <2.2e\text{-}16$) and in On-demand consultation with a caregiver ($p \leq 0.000$).

Conclusions: There is a significant difference between the number of consultations, time and employment status of professionals with Health Education activities. Usually, health professionals provide little health education to the primiparous pregnant woman, including the caregiver.

Palabras clave:

Health professional; employment situation; consultation modality; consultation time; Health Education; primiparous pregnant; main caregiver.

Factores asociados a los profesionales sanitarios para realizar actividades de educación para la salud en la embarazada primípara y cuidador informal durante la pandemia por COVID-19

Resumen:

Objetivo: Este estudio tuvo como objetivo conocer los factores asociados a los profesionales de la salud para realizar Educación en Salud a la gestante primípara y al cuidador principal para la promoción de la lactancia materna.

Metodología: Estudio descriptivo transversal. Participaron un total de 150 profesionales sanitarios del Área de Salud de Valladolid Este que atienden a embarazadas primerizas y al cuidador principal en sus consultas. El estudio utilizó cuestionarios autoadministrados estructurados. Se realizó un análisis descriptivo para examinar la relación entre estas variables y las tasas de lactancia materna, utilizando pruebas de Chi-cuadrado y ANOVA.

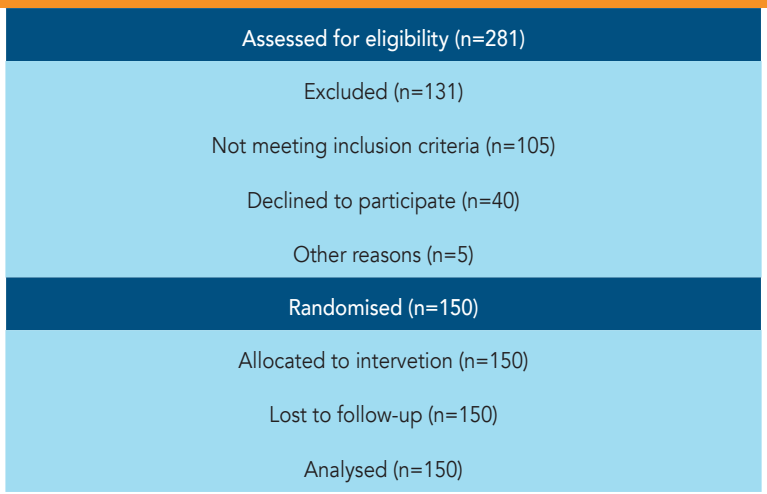
Resultados: Se registró significancia estadística entre número de consultas a demanda incluyendo al cuidador y Educación en Salud (Eps), ($p \leq 0{,}000$) y tiempo de consulta programada con gestantes ($p \leq 0{,}000$), e incluyendo al cuidador ($p \leq 0{,}000$); y tiempo en consulta a demanda solo para la gestante ($p = <2e\text{-}16$) con Eps. También la situación laboral de los profesionales con EPS, en consulta programada con gestante ($p \leq 0{,}000$), en consulta programada con cuidador ($p \leq 0{,}000$), en consulta con gestante ($p = <2{,}2e\text{-}16$) y en Consulta a demanda con un cuidador ($p \leq 0.000$).

Conclusiones: Existe una diferencia significativa entre el número de consultas, el tiempo y la situación laboral de los profesionales con actividades de Educación para la Salud. Por lo general, los profesionales de la salud brindan poca educación en salud a la mujer embarazada primípara, incluido el cuidador.

Palabras clave:

Profesional de la salud; situación laboral; modalidad de consulta; tiempo de consulta; Educación para la salud; embarazada primípara; cuidador principal

Follow diagram of the progress through the phases of randomised trial (allocated to intervention, lost to follow-up and anaysed.



Introducción

According to the latest data analysed by the International Institute for Statistics (International Institute for Statistics, 2022) (1) there has been a decline in the initiation of exclusive breastfeeding, especially among primiparous pregnant women, due, in part, to the reduction in Education for Breastfeeding activities. Health, in which different health professionals are involved in disseminating the benefits of health for mother, child and society (1,2), so the involvement of health professionals is required, to create a social environment favorable to breastfeeding. These low rates of breastfeeding are based on factors directly related to the lack of information that pregnant women have about healthy eating behaviors (2). These rates could have increased, modifying personal health practices during pregnancy through health education of pregnant women (3) and people who accompany her in the health process and influence her (4). The advancement or development of health care requires health education of patients at all levels, both individual and community (5). Health education is one of the basic activities that should be developed within the professional practice of any health professional (6). Primary health care is the first point of contact that health services provide to the population (7). It is proven that, through education for the health of the population, an efficient and effective health system is achieved, so it is the responsibility of health professionals to carry out health education activities for their patients (8).

Undoubtedly, the pandemic of Covid-19 has caused a before and after in the activities of health professionals. One of these changes has been the establishment of remote consultations to care for patients, something that had been done in some specialties, but that was not usual (9). The use of teleconsultation could be an important tool in cases where the patient is isolated due to suspected or confirmed coronavirus infection, but it represents a significant barrier to the transmission of knowledge in situations where patients are vulnerable, such as primiparous pregnant women (10). Another factor affecting the development of adequate health education is the stability of employment of health professionals. In most countries, working conditions for health professionals are precarious; according to the WHO (11) worldwide, 70% of health professionals are in a situation of instability.

To ensure the proper functioning of the health system, the collaboration and action of both patients and professionals and an adequate use of resources based on the available scientific evidence is required (12); but we must not forget that there are some limitations due to the terrible working conditions of professionals (13,14), more noticeable in times of pandemic.

The saturation of medical consultations is an influential aspect, professionals have little time in their consultations to be able to carry out educational activities in addition to medical care. But, to achieve adequate education, health professionals must be trained in the necessary knowledge and skills. Because of the high healthcare pressure suffered by healthcare professionals, most of their time is devoted to on-demand consultations, to the detriment of scheduled activity, home care and healthcare education activities. Overcrowding, lack of time or obstacles to requesting diagnostic tests prevent adequately resolving a query. Consequently, the citizen feels dissatisfied, due to the impersonality and bureaucratism in the provision of the service, and the health professional becomes demoralized, because he sees the quality and resolution capacity of his actions decrease (14).

With this purpose of determining these variables, this study has been proposed during the Covid-19 pandemic, aiming at the thorough analysis of the factors that influence professionals in carrying out health education activities in pregnant women and their caregivers (individual/group health education); causing a significant impact on the improvement of the health quality provided.

Methods

Research design

This study was conducted from December 1 to August 20, 2021. This is a retrospective, descriptive and inferential cross-sectional study of the variables under study.

Participants

150 health professionals from the East Area of Valladolid participated in this study, a total of 23 health centers. The population under study (n=281) has been configured with all health professionals surveyed in the Health Area of Valladolid East

Using the sample formula, the sample size required for this population, which is not in a homogeneous structure, is within the 95% confidence interval, with a sampling error of ±5% *n* = 281 (1.96) 2 (0.2) (0.8) / (0.0 5) 2 (281 – 1) + (1.96) 2 (0.2) (0.8) = 1 31. The sample was n=150.

Participants were selected according to the inclusion criteria and after receiving relevant information, gave their consent to participate in the study.

Inclusion criteria

Health professionals who belonged to the Health Area of Valladolid East by territorial demarcation and who provided health care to pregnant women and primiparous caregivers during the study period.

Variables

These variables have been professional category (family doctor, area doctor, pediatrician, family and community nurse, area nurse, midwife, medical student, and nursing student), employment status (permanent, interim and substitute), number of consultations in two modalities (scheduled and demand), consultation time, need for training and application of a comprehensive program.

Data collection

The recruitment of the participants was carried out by telephone with the aim of increasing the response rate, where the researcher presented the project to the health teams, requested their collaboration, and

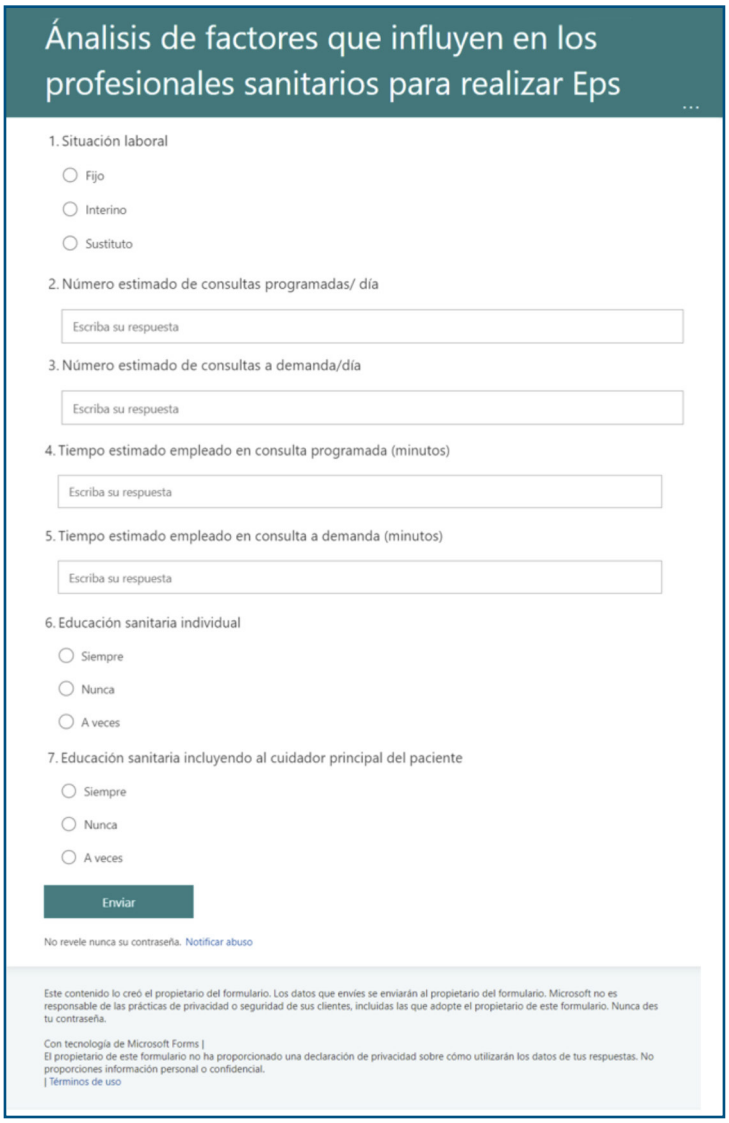
guaranteed a commitment to the confidentiality of the information. The distribution of the questionnaires to the selected sample was carried out through the institutional mail where confidentiality was guaranteed. After knowing the research and ethical aspects, the online form was sent, with the acceptance of Free and Informed Consent.

Ethics statement: Ethical clearance for all studies was obtained prior to the studies commencing. Clearance was obtained from *the Research with Medicines Health Area Valladolid East's Ethics Committee (PI 20-2068 AP COVID),*

Measurement

The questionnaires were based on literature review and clinical experience. It is an online form, Office 365@ created from institutional mail, Q-Labors survey 56 (15), validated survey (Figure 1). The form was self-administered and comprised 16 structured questions, focusing on variables and the study. The information on the modality and the time of consultation carried out followed the definitions of the portfolio of health services of Castilla y León (16). The modality of scheduled consultation, carried out at the initiative of a health professional and consultation on demand, at the

Figure 1. Online forms, Office 365@. Q-Labors survey 56.



initiative of the patient, preferably organized by appointment (17).

Statistical analysis

Data analysis was performed with SPSS 20.0 software. The Chi-square test was used for comparisons of qualitative categories of interest. Analysis of variance (ANOVA) was used for the comparison of means. For the use of this test, we checked whether, for each variable (scales and dimensions), the variances were homogeneous between the groups through the Levene Test (18). When the homogeneity of variances was not verified, adjustment was performed using the Kruskal-Wallis's test. In situations where there was a significant difference between groups, to identify which categories differed from each other, multiple comparisons were made, using Tukey's test. The level of statistical significance for all tests was p<0. 05. It means that a 95% confidence interval was used.

Results

Characteristics of the participants

Table 1 shows the distribution of participants according to professional category, employment situation and other variables in relation to health education.

According to the professional category, 53. 3% were family physicians (n=80) and 13%. 3% Community nursing specialist

Tabla 1. Participants characteristics: professional category, employment situation and health education.

Variable				N	%
Professional Category		Family doctor		80	53.3
		Family nurse		20	13.3
		Pediatrician		15	10.0
		Midwife		15	10.0
		Medical student		7	4.6
		Area nurse		5	3.3
		Area doctor		5	3.3
		Nursing student		3	2.0
Employement Situation		Permament		70	46.6
		Interim		60	40.0
		Substitute		20	13.3
Health Education Sheduled Consultation	Primiparous Pregnant	Yes	Always	104	69.3
			Sometimes	46	30.6
	Caregiver Inclusion	Yes	Always	4	2.6
			Sometimes	66	44.0
		No	Never	80	53.3
Health Education Consultation on demand	Primiparous Pregnant	Yes	Always	26	17.3
			Sometimes	78	52.0
		No	Never	46	30.6
	Caregiver Inclusion	Yes	Always	1	0.6
			Sometimes	34	22.6
		No	Never	115	76.6
Training need		Agree		44	29.3
		Totally agree		106	70.6
Integral program		Agree		50	33.3
				100	66.6

nurses (n=20). Other participants with greater representation were pediatricians and midwives. Groups found according to employment status: 46. 7% (n=70) were fixed, 40% interim (n=60) and 13. 3% (n=20) are substitutes. Among other variables studied, 66. 6% (n=100) of professionals strongly agree with a comprehensive health education program. Professionals in general carry out more salt education activities in the consultation programs than on demand, and this education only aimed at pregnant women without regard to the caregiver.

Bivariate relationship between the professional category-employment situation and consultation modality where professionals perform health education

Considering the professional categories investigated and the modality of individual health education to primiparous pregnant women in scheduled consultation and on demand, there is a statistically significant relationship (p<0. 05). Regarding the employment situation, there is a statistically significant relationship with health education both individually and with the inclusion of the caregiver in the two modalities of consultation (p <0. 05). There were no significant differences in the average number of consultations in the two modalities: scheduled and on-demand, where the health professional performs health education including the caregiver (p>0. 05). The highest average score for the professional category that always performs health education corresponds to the family doctor followed by the community nurse specialist. The highest average score for a health professional who never performs health education activities corresponds to a family doctor (p<0.05), set in the modality of consultation on demand with the inclusion of a caregiver (Table 2).

Tabla 2. Comparison of Health Education activities carried out on the primiparous pregnant woman and / or caregiver according to professional category and employment situation.

Health Education		Scheduled Consultation Pregnant		Scheduled Consultation Pregnant+ Caregiver			Consultation On demand Pregnant			Consultation On demand Pregnant+ Caregiver		
		Sometimes	Always	Sometimes	Never	Always	Sometimes	Never	Always	Sometimes	Never	Always
Professional Category	N	17	3	6	14	0	5	13	3	3	17	0
	AN	0	5	5	0	0	3	0	5	5	0	0
	NS	0	3	2	1	0	0	0	0	0	3	0
	D	22	58	33	43	4	52	26	17	17	62	1
	AD	1	4	4	1	0	4	1	0	0	5	0
	M	0	15	4	11	0	8	1	2	2	13	0
	MS	0	7	4	3	0	1	0	2	2	5	0
	P	6	9	8	7	0	5	5	5	5	10	0
		p-value< 0.001		p-value = 0.212			p-value< 0.001			p-value = 0.061		
Employement Situation	Permanent	38	32	14	56	0	25	45	0	1	69	0
	Interim	8	52	36	20	4	50	1	9	23	37	0
	Substitute	0	20	16	4	0	3	0	17	10	9	1

* N= Family nurse; * AN= Area nurse; * NS= Nurse student; * D= Family doctor; * AD= Area doctor; * M= Midwife;
* MS= Medical student; *P= Pediatrician; * p-value obtained by means of the Chi-square test.

Bivariate relationship between professional category-work situation and time spent on health education activities.

Multiple comparisons were made between the number of consultations in both modalities (scheduled and demand) and time spent on individual health education or with the inclusion of the caregiver.

The results of the previous multiple comparisons show that there is a significant difference between the number of consultations at the request of the caregiver with the health education performed, there is also an association between the time spent in the scheduled consultation on the pregnant woman individually and with the caregiver and health education; and time spent on on-demand consultation of pregnant women and health education (p<0. 05). The correlation analysis showed that the mean number of consultations on demand including the caregiver and health education performed, professionals have a greater number of consultations in this modality but perform fewer health education activities. The midwife (188.8±66.1) and the pediatrician (135.6±22.1).

They are the professionals who carry out the most education both in scheduled and face-to-face consultations, but if the modalities of education are analyzed, education only for primiparous women is greater than with the inclusion of the caregiver in both professional categories.

Tabla 3. Analysis of multiple comparisons between the two types of Health Education employed, professional category, employment situation, number of consultations in the scheduled and on-demand modes.

		N. ° Scheduled. Consultation Pregnant		Scheduled Consultation Pregnant+ Caregiver		N. ° Consultation On demand Pregnant		N. ° Consultation On demand Pregnant+ Caregiver	
		S	N	S	N	S	N	S	N
Professional Category	N	29.0 (10.5)	20	10.1 (10.7)	20	39.8 (14.7)	20	34.6 (16.8)	20
	AN	14.6 (4.9)	5	12.2 (5.1)	5	27.4 (21.5)	5	7.8 (4.0)	5
	NS	15.0 (7.0)	3	1.0 (0.0)	3	26.0 (7.0)	3	2.6 (0.5)	3
	D	73.1 (25.8)	80	8.0 (6.2)	80	89.6 (28.1)	80	31.6 (15.7)	80
	AD	63.6 (28.0)	5	15.2 (4.5)	5	150.0 (22.5)	5	51.6 (44.6)	5
	M	188.8 (66.1)	15	20.6 (13.8)	15	200.0 (84.5)	15	119.2 (49.8)	15
	MS	12.0 (1.7)	7	2.5 (0.7)	7	23.4 (1.2)	7	3.5 (2.6)	7
	P	135.6 (22.1)	15	67.6 (31.0)	15	188.5 (48.9)	15	112.2 (81.4)	15
	p-value< 0.001			p-value< 0.001		p-value< 0.001		p-value< 0.001	
Health Education	Sometimes	67.4 (43.5)	46	15.8 (25.5)	66	99.5 (53.2)	78	19.5 (25.2)	34
	Always	83.8 (60.7)	104	4.5 (1.2)	4	94.0 (96.0)	26	0.0 (NA)	1
	Never	-	-	15.8 (8.3)	80	102.5 (66.5)	46	55.4 (50.7)	115
	p-value = 0.102			p-value=0.588		p-value=0. 873		p-value< 0.001	
	Permanent	77.9 (39.0)	70	12.3 (14.1)	70	98.8 (53.3)	70	49.6 (41.0)	70
	Interim	88.0 (68.8)	60	14.8 (16.7)	60	114.9 (77.1)	60	57.3(57.3)	60
	Substitute	54.0 (61.3)	20	28.9 (42.7)	20	55.3 (49.8)	20	5.6 (5.2)	20
	p-value= 0.063			p-value= 0.009		p-value= 0.001		p-value= 0.001	

* N= Family nurse; * AN= Area nurse; * NS= Nurse student; * D= Family doctor; * AD= Area doctor; * M= Midwife; * MS= Medical student; *P= Pediatrician; * p-value obtained through the analysis of variance test (ANOVA).

There were significant differences between the time dedicated to the scheduled consultation including the caregiver and the education performed, professionals have more time in consultation with this modality, but perform fewer health education activities.

The professionals who spend the most time on health education are family and community medicine residents and community nursing residents, in both modalities of consultation (scheduled and on demand), with substitutes according to the modality of employment being those who invest the most time in health education activities (Table 3 and 4).

Discussion

This study advances in the knowledge of the factors associated with health professionals who carry out education activities in primiparous pregnant women, including caregiver with the aim of promoting breastfeeding, in the context of the covid-19 pandemic. This research detected how individualized education for primiparous women, both in scheduled and on-demand consultations, is statistically significant (p<0. 05), while the education carried out with the inclusion of the caregiver is not significant in the two modalities of consultation; These results contrast with a recent study conducted in a rural health area (19), where the number of scheduled consultations represented 20%, while 80% were in on-demand

Table 4. Analysis of multiple comparisons between the two types of Health Education employed, professional category, employment situation and time of consultations in the scheduled and on-demand modes

		Time Scheduled Consultation Pregnant		Time Scheduled Consultation Pregnant+ Caregiver		Time Consultation On demand Pregnant		Time Consultation On demand Pregnant+ Caregiver	
		S	N	S	N	S	N	S	N
Professional Category	N	11.0 (2.2)	20	11.0 (2.2)	20	6.0 (3.0)	20	5.2 (1.1)	20
	AN	13.0 (2.7)	5	13.0 (2.7)	5	7.0 (2.7)	5	5.0 (0.0)	5
	NS	15.0 (0.0)	3	15.0 (0.0)	3	15.0 (0.0)	3	15.0 (0.0)	3
	D	11.0 (2.3)	80	10.9 (2.7)	80	5.8 (1.8)	80	5.7 (1.7)	80
	AD	12.0 (2.7)	5	12.0 (2.7)	5	6.0 (2.2)	5	5.0 (0.0)	5
	M	11.3 (2.2)	15	11.3 (2.2)	15	9.3 (3.1)	15	6.0 (2.0)	15
	MS	15.0 (0.0)	7	15.0 (0.0)	7	14.2 (1.8)	7	15.0 (0.0)	7
	P	11.6 (2.4)	15	11.6 (2.4)	15	8.6 (4.4)	15	5.6 (1.7)	15
	p-value=0.001			p-value=0.009		p-value< 0.001		p-value< 0.001	
Health Education	Sometimes	10.3 (1.2)	46	12.3 (2.8)	66	6.5 (2.5)	78	6.17 (2.7)	34
	Always	11.9 (2.6)	104	10.0 (4.0)	4	12.3 (3.5)	26	5.0 (NA)	1
	Never	-	-	10.7 (2.2)	80	5.1 (0.7)	46	6.3 (2.8)	115
	p-value=0.002			p-value= 0.006		p-value< 0.001		p-value= 0.883	
	Permanent	10.2 (1.1)	70	10.2 (2.0)	70	5.0 (0.0)	70	5.4 (1.4)	70
	Interim	11.6 (2.7)	60	11.6 (2.7)	60	7.1 (2.4)	60	6.0 (2.0)	60
	Substitute	15.0 (0.0)	20	14.7 (1.1)	20	14.2 (1.8)	20	10.0 (5.1)	20
	p-value< 0.001			p-value< 0.001		p-value< 0.001		p-value< 0.001	

mode, with the percentages of educational activities carried out 60% in the scheduled consultation and 40% in the demand. In our study, there is no significant level($p<0.05$) in health education activities in the form of consultation on demand. Therefore, this study confirms the findings that the consultation model, both scheduled and on demand, continues to have an individualistic approach towards the patient without the participation of the caregiver.

According to the findings found, non-face-to-face consultations do not present a barrier with respect to face-to-face consultations, in addition, non-face-to-face consultations offer potential advantages to patients, such as avoiding costs and avoiding travel; a study (20), identified how the use of the Skype application used for in Medicine was more effective in the management of chronic diseases.

Today there are studies (21)that show that non-face-to-face consultations avoided almost 88% of face-to-face consultations, especially those related to analytical results, medical information, and medication prescriptions; Family doctors considered that 79. 60% of teleconsultations avoided a face-to-face visit. In addition, in this study, it was shown that non-face-to-face consultation was not the appropriate type of consultation to carry out health education and that some doctors preferred conventional consultations. In our study, 70. 6% of professionals strongly agreed with the need to include the caregiver in health education activities for the promotion of breastfeeding.

A study conducted on the COVID-19 pandemic (22), confirms that virtual consultations were not considered appropriate for all situations. In our study, the number of on-demand consultations is higher than scheduled.

The results indicated that the professional category influenced the performance of education, being the category of doctor and nurse specialist in community nursing these that performs more educational activities ($p<0. 05$), being statistically higher only for pregnant women in both modalities of consultation (scheduled and on demand), this confirms that both the professional category and the number of consultations is influential in the realization of education; the number of consultations is statistically significant, family doctors present 73. 1±25. 8 scheduled consultations for primiparous women versus 8. 0±6. 2 including caregiver, and 89. 6 ±28. 1 in on-demand consultations to primiparous women versus 31. 6±15. 7 including the caregiver.

The family nurse presents similar findings, 29.0±10.5 scheduled visits to primiparous women compared to 10.1±10.7 including the caregiver, and 39.8±14.7 in on-demand visits to primiparous women compared to 34.6±16.8 including the caregiver. This result of the professional category contrasts with a study (23), where a bibliographic search was carried out and the role of the midwife was concluded, as the professional who educates the most in relation to other professionals. Additionally, this study explored that the time spent by health professionals is the most influential factor in carrying out health education activities; The findings indicate that time is statistically significant both in the modalities of consultation and in the form of health education carried out (individual or including the caregiver); The categories of family doctor 5.7±1.7 and family nurse 5.2±1.1 are the ones that spend the least time on their consultations; being even lower in the on-demand modality including the caregiver.

Another recent study on the importance of health education in consultation already points to the direct relationship between the stipulated consultation time and health care: a walk-in patient is very common in Primary Care and can become problematic. When the data on the number of consultations and the activities of Education are compared, it is confirmed that the number of consultations is an influential factor in the possibility of carrying out health education, with permanent and temporary

professionals having the largest number of consultations (24).

In reference to the employment situation of professionals, it was also a determining factor for the realization of Education activities (p<0. 05), being the professional who is in a stable employment situation the one who performs the most health education for pregnant women both in scheduled consultations and on demand: fixed 77. 9 ±39. 0 and 98. 8 ±53. 3 and interim 88. 0 ±68. 8 and 114. 9 ±77.1; however, the professional who is in unstable employment (substitute), performs more education including the caregiver 28. 9 ± 42. 7 in the scheduled consultation mode.

On the other hand, in the consultation on demand with a caregiver, there is a low prevalence of education in all work situations (fixed, interim and substitute). This conclusion confirms the need for direct supervision by the professional employment situation; substitutes are those who carry out more educational activities, including the caregiver, and these are those who work less frequently than professionals who are in a permanent situation; to this is added the distribution of consultations in terms of form and modality, to guarantee an adequate space to carry out educational activities not only individually, but with the presence of the patient's main caregiver, and that these activities are carried out effectively. The possible justification for why professionals in fixed and temporary situations perform less health education, including the caregiver, is the high number of consultations and the less time available.

Likewise, a cross-sectional study on the effectiveness of health education in the promotion of breastfeeding (25), which was detected in three primary care companies located in rural areas of Spain, showed a relationship between the low rates of health professionals who performed health education in their consultations with pregnant women with low breastfeeding rates (26). A total of 11 (32. 3%) professionals perform health education and 67. 6% (n=23) do not engage in health education activities, 86% (n =43) of pregnant women who attended health education breastfed their children and 14% (n=7) did not breastfeed. Of the pregnant women who did not receive, 42% (n=21) breastfed and 56% (n=28) did not breastfeed. These data confirm the findings found in our study: 67. 4 (43. 5%) of health professionals sometimes perform health education for pregnant women at the scheduled consultation and 83. 8 (60. 7%) always. While, in the form of consultation on demand, 99. 5 (53. 2%) sometimes 94%. 0 (96. 0%) always, and 102. 5 (66. 5%) never carry out educational activities in health.

A study of the analysis of the health professions involved in health education as a fundamental tool in the performance of their profession, affirms that there is a great deficit of education in society and these deficiencies are evident in the great demand for patients in Primary Care consultations and especially in emergency services (27). Additionally, a recent study in nursing students (28)shows that the support of health professionals is a determining factor for mothers to decide to start and maintain breastfeeding, students obtained significantly higher average scores and had done internships in maternity or neonatal units, in our study also explored higher rates of education in professional categories directly related to pregnant women: midwives 12.0±1.7 and pediatricians 135.6 ±22.1 in scheduled consultation.

Implications for practice

Identifying factors that influence health professionals to carry out health education activities can provide useful information for health policy makers to update and revise the structure of health consultations to promote breastfeeding. The results of this study contribute to clinical practice, involving the number of consultations and professionals, time available, employment status and training of professionals in the

direct care of primiparous pregnant women, their family and community, in the promotion of healthy habits; providing reflections to the Health System and the professionals responsible for the care of pregnant women, structuring the number of consultations and time dedicated to them, as well as job stability for the promotion, protection and support of breastfeeding, providing numerous benefits at the level of health of the mother, infant, family and society as well as at the economic and social level. All these benefits allow the patient to access health under normal conditions, develop their own skills to cope with everyday situations and be able to contribute to their community. Another consequence of the application of these considerations is the reduction of health costs; for this, it is necessary to contribute to a more efficient allocation of the structure and resources of primary care.

Limitations

The results were specific to health professionals in primary health care facilities and cannot be generalized to hospitals. In addition, this study was conducted during the COVID-19 pandemic, consultations were influenced by the demand of affected patients.

Conclusions

Differences were found in the number of consultations, time and employment status of health professionals with health education activities, being the most used in consultations scheduled individually to pregnant women, with a worrying fact in the professionals who carry out caregiver education. Itis extremely important to give greater visibility to health education including the caregiver, i.e. to introduce a specific program of individual health education that includes as soon as possible the main caregiver of the pregnant woman for health promotion; its presence implies healing at the community level, with important repercussions on the quality of life of the patient, in terms of promoting healthy habits and preventing disease. The professional labor factor, such as consultation time, modality (scheduled and on demand) and employment situation (permanent, interim and substitute), directly affects the possibility of carrying out quality health education and within the framework of the planning of individual and collective educational interventions, to improve its impact on the quality of life of this population group.

Health education has a positive impact on society, allows us to advance in the prevention or cure of diseases, it is the medicine of today and tomorrow; for this, it is necessary that professionals project into the future, that they base education on scientific evidence at the community and social level; therefore, The daily work of the primary care health professional should be valued, since he has the ability to intervene at the family level, with the implementation of a comprehensive program, to meet the care needs, with an impact on improving the quality of life of the population's health indicators, achieving an increase in the rates of women breastfeeding their children. To advance this knowledge, it is recommended to carry out other studies, with a longitudinal approach, comparing the professionals who perform Health Education with a caregiver and those who do not with the rates of women who breastfeed their children. One of the strategic lines to follow to support the future of the National Health System is the reconversion of Primary Care, "strengthening and reinforcing its structure and resources. But also modernizing their way of caring for patients from the point of view of Health Education, with technological and organizational innovation, and developing the different professional roles. In this sense, emphasis is placed on the need to "take care of those who take care of us"

References

1. Armfield, Nr; Bradford, M; Bradford, NK; 2015. The clinical use of Skype-For what patience, with what problems and in what environments? An instant review of the literature. Int J Med Inform, 84 (2015), 737-742 http://dx.doi.org/10.1016/j.ijmedinf.2015.06.006 http://dx.doi.org/10.1016/j.ijmedinf.2015.06.006
2. Balogun, O; O'Sulliwan, E; McFadden, A; Ota, E; Gavine, To; Garner, C; Renfrew, M; MacGilliyray, S; 2016. Interventions to promote breastfeeding initiation. 9(11), 5-54. https://doi.org/10.1002/14651858.CD001688.pub3.
3. Bradfield, Z; Officer, K; Barnes, C; Mignacca, E; Butt, J; Hauck, And; 2021. Sexual and reproductive health education: midwives' trust and practices. 225 (2021), 5-67. https://doi.org/10.1016/j.wombi.2021.09.005
4. Burklow, C; Cones, M. S; Allen, D; Cherry, S; Tiffany, J; Dethridge, K; Allen, S; Cherry, E; McClellan, V; 2020.A nurse-led population-based health education project to improve the childcare knowledge of an Old Order Mennonite community. 24 (6), 3-27. https://doi.org/10.1016/j.nwh.2020.09.009
5. Cervera-Gash, To; Andreu-Pejó, L; González-Chordá, VM;López-Peña, N; Valero-Chilleron, MJ; Roman, P; León-Larios, F; Mena-Tidela, D; 2021. Knowledge of breastfeeding in university nursing students. A multicenter study in Spain 103 (104), 2-15. https://doi.org/10.1016/j.nedt.2021.104945
6. Chanchala, T; Kithmini, N; Sandamali, I; Dissanavaka, T; Warnasekara, J; Buddhika, S; Pérez-Escamilla, R; 2021. Barriers to early initiation and exclusive breastfeeding up to six months in predominantly rural Sri Lanka: the need to strengthen policy implementation. 16(1), 2-32. http://doi.org/ 10.1186/S13006-021-00378-0.
7. Conner, B; Weller, C; Biondi, M; Allen, A; Rescigno, M; Resnik, J; Laughton, S; M.Warner, K; Hierholzer, A; Kim, E; Hagen, M; McFarland, A; Danko, R; 2021. High School Health Education: The Impact of Medical Student-Led Instruction in Northern Nevada High Schools. 24(6), 3-45. https://doi.org/10.1016/j.pmedr.2021.101512
8. Coombs, N; Porter, J; Barbagallo, M; Plummer, V; 2021.Public Health Education by Emergency Nurses: A Review of Scope and a Narrative Synthesis. 320 (2021), 8-25. https://doi.org/10.1016/j.pec.2021.08.036
9. Eguía, H; Vinciarelli, F; Villoslada, RL; Sanz, FJ; 2020. Remote consultation: information for primary care physicians. 25 (5), 3-15. https://doir.org/10.1016/ J.Semerg.2020.08.005
10. Fair, F; Ford, G; Soltani, H; 2019. Interventions to support initiation and continuation of breastfeeding in overweight or obese women. 1789), 3-25. http:// doi.org/ 10.1002/14651858.CD012099.pub2
11. World Health Organization (WHO), 2022. https://www.who.int/es/news/item/28-04-2022-who-reveals-shocking-extent-of-exploitative-formula-milk-marketing (accessed 2 March 2022)
12. Giménez, V., Jimeno, B., Valles, D., Sanz, E., 2015. Prevalence of breastfeeding in a health centre in Zaragoza (Spain). Socio-sanitary factors that condition it. Primary Care Pediatrics17 (65), 1-15. https://dx.doi.org/10.4321/S1139-76322015000100004
13. Gomes, C; Malta, MB; Da Costa, ML; D'Aquino, H; Barros, To; De Barros, MA; Carvalhaes, L; 2019. Consumption of ultra-processed foods by pregnant women: the effect of an educational intervention with health professionals. 23(5), 692-703. htpp://doi.org/ 10.1007/S10995-018-2690-Z.
14. Groot, N; Venekam, A; Hanneke, T; Lambregtse, M; Bonsel, G; 2016. Vulnerable pregnant women in prenatal practice: caregiver perception of workload, associated burden and agreement with objective case burden, and the influence of a structured prenatal risk management organization. 40(8), 153-161. https://doi.org/10.1016/j.midw.2016.07.003
15. J. Casas, J.R. Repullo, C. Mingo, P. Sánchez, M. Aguilera, A. Pérez-Hervada, et al. Adaptación de la escala Q-Labors a atención primaria. Rev Calidad Asistencial, 19 (2004), pp. 329-340
16. Grover, B; Macedo-Ojeda, G; Shells, D; Rodriguez, To; Martinez, M; Diaz, M. A; 2022.Breastfeeding training in Mexican health students may not be enough: analysis of a case. Nurse Education Today. 108(2022), 56-123. https://doi.org/10.1016/j.nedt.2021.105172
17. International Institute of Statistics, 2022. https://council.science/es/member/isi-international-statistical-institute/ (accessed January 15, 2022).

18. Lopez, 2020. Impact of health education on breastfeeding. Benefits for the newborn. http://www.revistapediatria.cl/volumenes/2020/vol17num2/pdf/IMPACTO%20DE%20LA%20EDUCACION%20PARA%20LA%20SALUD%20EN%20LA%20LACTANCIA%20MATERNA.pdf (accessed January 15, 2021).
19. Lopez, F; Walsh, S; Solans, O; Adrocher, C; Ferraro, G; García-Altés, To; Garcia, F; Carulla, LS; Sagarra, M; Vidal-Alaball, J; 2020.Teleconsultation between patients and health professionals of the Catalan Primary Care Service: Analysis of message annotation in a retrospective cross-sectional study. J Med Internet Res. 22(9), 2-32. doi: 10.2196/19149
20. Miller, P; Burgos, MJ; Mejia, M; 2015. Results of a health education intervention in the continuity of breastfeeding. 25 85), 14-65. http.//doi.org/10.1016/j.enfcli.2015.05.002. Epub 2015 Jul 29.
21. O'Reilly, S; O'Brien, E; McGuinness, D; Mehegan, J; Coughlan, B; O'Brien, D; Szafranska, M; Callanan, S; Hughes, Conway, M; Brosnan, M; Sheehy, L; Murtagh, R; O Hagan, L; Murray, S; Scallon, C; Dunn, E; Power, P; Woodcock, M; Carroll, A; Corbett, M; Walsh, M; Keogh, R; McAuliffe, F; 2021. Latch On: A protocol for a multicenter randomized controlled trial of perinatal support to improve breastfeeding outcomes in women with a high BMI. 22 (2021), 2-25. https://doi.org/ 10.1016/J.CONCTC.2021.100767
22. Paulina, B., Valdés, V., 2017. Benefits of breastfeeding and risks of not breastfeeding. Chilean Pediatrics 88(1), 12-18. http://dx.doi.org/10.4067/S0370-41062017000100001
23. Swerts, M; Westhof, E; Bogaerts, To; Lemiengre, J; 2016. Supporting breastfeeding women from the midwife's perspective: A systematic review of the literature. 37(6), 32-40. http://doi.org/10.1016/j.midw.2016.02.016
24. Thivagaraian, A; Subsidy, C; Griffiths, F; Atherton, H; 2020. Exploring the Patient and Clinician Experiences of Video Consultations in the Primary Car: A Systematic Review of Scope. BJGP Open. https://pubmed.ncbi.nlm.nih.gov/32184212/ (accessed January 31, 2022). http://dx.doi.org/10.3399/bjgpopen18X101638 Error! Invalid hyperlink reference.
25. Tinn, J; Garnett, To; Donelle, L; 2021. Nursing education and training on electronic health record systems: an integrative review. 55(6), 2-54. https://doi.org/10.1016/j.nepr.2021.103168
26. Tizón, E., 2015. Breastfeeding and its determinants (PhD thesis). Coruña: University of A Coruña. https://ruc.udc.es/dspace/bitstream/handle/2183/15939/TizonBouza_Eva_TD_2015.pdf?sequence=4&isAllowed=y (accessed December 12, 2021).
27. Wang, Y; Xiaohan, L; Bei, S; 2022. Mapping Research Hotspots and Thematic Trends of Simulation in Nursing Education: A Bibliometric Analysis from 2005 to 2019. Nurse Education Today, 116 (822), 331-335. https://doi.org/10.1016/j.nedt.2022.105426
28. Zari Rukundo, Z; Abaasa, C; Byamukama, P; 2019. Perceptions and concerns of parents and caregivers about the accessibility of antenatal services by pregnant adolescents in Mbarara township, Uganda. 72 (6), 74 to 79. https://doi.org/10.1016/j.midw.2019.02.011