ARTICLE

Oral-health knowledge of Ecuadorian pregnant women.

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Abstract: The aim of this study is to determine the level of knowledge in oral health of pregnant women who come to the Comprehensive Medical Center and Geriatric Gerontium of the IESS in Azogues-Ecuador. A cross-sectional study was carried out on 109 pregnant women from the first to the third trimester of pregnancy. A questionnaire was used to collect data, which was validated in the study by Castro et al. in Peru. The first part of the questionnaire includes questions of socio-demographic order, such as the trimester of pregnancy, level of education, urban or rural origin, and age. The second part includes 22 questions to assess the level of knowledge in various topics in oral health, such as preventive measures, understanding of oral diseases, dental care, and dental development. The responses to the second part were evaluated according to a numerical scale: 0 to 6 points were bad, 7 to 14 points were regular, and 15 to 22 points were good. The statistical analysis consisted of absolute and relative frequencies of the qualitative variables. A bivariate analysis was performed using the Chi Square test with a significance level of $p < 0.05$. The knowledge in oral health of pregnant women was regular, reaching 82.56% in overall, 56.88% in preventive measures, 64.22% in understanding of oral diseases, 61.46% in dental care during pregnancy, and 60.55% in dental development. No differences were detected in the levels of knowledge according to the trimester of pregnancy ($p = 0.38$), educational level ($p = 0.91$), urban or rural origin ($p = 0.25$), or age ($p = 0.98$). The level of knowledge of oral health of pregnant women attending the Integral Geriatric Medical Center and Geronto IESS in Azogues-Ecuador is regular and is not associated with socio-demographic factors.

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INTRODUCTION

According to the World Health Organization (WHO), oral health can be defined as the absence of orofacial pain, mouth cancer, or throat infection and mouth sores, periodontal disease, caries, tooth loss, and other diseases and disorders that limit the ability of the affected person to bite, chew, smile, and talk, while having an impact on their psychosocial well-being *(World Health Organization, 2007)*.

Health promotion is relevant as one of the strategies proposed by the WHO to increase control over the general and oral health in the population. The success of this strategy will depend on prior knowledge of the cultural patterns and lifestyles of the target population *(Pan American Health Organization, 2017)*. Preventive measures, if applied at the correct time, are most suitable to prevent the occurrence of chronic diseases or abnormalities *(Cuba, 2012).*

Pregnancy requires the implementation of measures for the care of the oral cavity in order to prevent and eliminate oral disease

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and myths linked to the mother's and the baby's health *(Domínguez, 2013)*. Myths must be removed so that pregnant women understand that their habits directly influence the health–disease process *(Asencio, 2016)*. Thus, comprehensive dental care for the pregnant woman is a high-impact intervention, because it is an appropriate stage to modify behaviors associated with health, emotional security, prevention of sequelae, and damage to the mother and child *(Arias & Orozco, 2017; Ministerio de Salud Pública del Ecuador, 2015)*.

The norm of attention to pregnant women of the Ministry of Public Health of Ecuador indicates that pregnant women should receive dental care during pregnancy. However, because of ignorance, accessibility, economic status, or lack of information, most pregnant women do not go to the dentist during pregnancy, except when it is urgent or there is a risk to the pregnancy or baby. For this reason, the National Dental Care Program was implemented in Ecuador *(Arias & Orozco, 2017; Ministerio de Salud Pública del Ecuador, 2015)*.

Because the knowledge, attitudes, and practices of oral health in pregnant women influence the oral health of the mother and the baby, identifying the level of knowledge will allow us to propose preventive actions pertinent to this population group *(Martínez et al., 2013)*. The objective of this study is to determine the level of knowledge in oral health of pregnant women who come to the Comprehensive Medical Center and Geriatric Gerontium of the IESS in Azogues-Ecuador.

MATERIALS AND METHODS

A cross-sectional study was conducted in June–August 2017 that included pregnant women who come to the Comprehensive Medical Center and Geriatric Gerontium of the IESS in Azogues-Ecuador. The pregnant women were informed verbally and in writing about the objectives and methodology of the study. The commitment to confidentiality was pointed out to them, and an informed consent form was signed.

A questionnaire was used to collect data, which was validated in the study by *Castro & Victoria (2016)* in Peru. The first part of the questionnaire includes questions of socio-demographic order, such as the trimester of pregnancy, level of education, origin, and age. The second part includes 22 questions to assess the level of knowledge in various topics in oral health, such as preventive measures, oral diseases, dental care, and dental development. The responses to the second part were evaluated according to a numerical scale: 0 to 6 points were bad, 7 to 14 points were regular, and 15 to 22 points were good.

The statistical analysis consisted of absolute and relative frequencies of the qualitative variables. A bivariate analysis was performed using the Chi Square test with a significance level of $p < 0.05$.

RESULTS

A total of 109 pregnant women were evaluated. The distribution and level of knowledge according to the trimester of pregnancy are shown in Table 1, according to educational level in Table 2, according to urban or

Tabla 1. Level of knowledge in oral health according to the trimester of pregnancy of the pregnant women attended in the Comprehensive Medical Center and Geriatric Geriatric of

Knowledge	Trimester of Pregnancy						
	First Trimester		Second Trimester		T hird Trimester		
	n	%	n	%	n	%	p-value
Good	4	3.66	4	3.66	2	1.83	0.38
Regular	30	27.52	25	22.93	35	32.11	
Bad	2	1.83	5	4.58	2	1.83	
Total	36	33.02	34	31.19	39	35.77	

Tabla 2. Level of knowledge in oral health according to educational level of pregnant women treated at the Integral Geriatric Medical and Geronto IESS Azogues Center

Knowledge	Educational Level						
	Primary		High School		Higher		
	n	%	n	%	n	%	P-valued
Good	0	0	4	3.66	6	5.50	0.91
Regular	4	3.66	36	33.02	50	45.87	
Bad	1	0.91	3	2.75	5	4.58	
Total	5	4.58	43	39.44	60	55.04	

Tabla 3. Level of knowledge in oral health according to the place of origin in the Comprehensive Geriatric Medical Center and Geronto IESS in Azogues

Knowledge	Origin				
	Urban		Rural		
	n	%	n	%	P-valued
Good	4	3.66	6	5.50	0.25
Regular	51	46.78	39	35.77	
Bad	7	6.42	2	1.83	
Total	62	56.88	47	43.11	

Tabla 4. L evel of knowledge in oral health according to the age of the pregnant women assisted at the Comprehensive Medical Center and Geriatric Gerontium of the IESS in Azogues

Knowledge	Age						
	18 years or less		19-25 years		26 years or older		
	n	%	n	%	n	%	P-valued
Good	0	0	2	1.83	8	7.33	0.98
Regular	4	3.66	15	13.76	71	65.13	
Bad	0	0	1	0.91	8	7.3	
Total	4	3.66	18	16.51	87	79.81	

rural origin in Table 3, and according to age range in Table 4.

DISCUSSION

The Comprehensive Geriatric Gerontium Center of IESS in Azogues is located in an urban area; despite its name, it does not exclude people under 65 years of age. This center is attended by a significant number of patients working in different public and private institutions in the city, as well as voluntary members without labor relationship.

Most pregnant women who attend this center are professionals from urban areas, which differs from other studies in South America. It would have been expected that, given the level of education and origin of the pregnant women, the level of knowledge in oral health would have been good. However, it was determined that there is still a lack of knowledge in oral diseases, dental development, and dental care. The study results deserve an analysis to propose strategies that improve the level of oral health knowledge of pregnant women.

The results of this study are consistent with the findings in other countries in Central and South America *(Domínguez, 2013; Castro & Victoria, 2016; Peña & Nolasco, 2014; Palma & Sanhueza, 2014; Cordova & Bulnes, 2007; Dobarganes et al., 2013)*, which found a regular level of knowledge in oral health. However, other studies *(Barrios, 2012; Álvarez & Pérez, 2016; Sotomayor et al., 2012; Yero et al., 2013)* have found a bad level of knowledge in oral health, which is probably due to socio-demographic differences between the populations studied. It is interesting to note that a good level of knowledge was found only after the implementation of educational strategies *(Castro & Victoria, 2016)*. This last situation is repeated when analyzing the level of knowledge in the four oral health topics evaluated *(Domínguez, 2013; Castro & Victoria, 2016; Peña & Nolasco, 2014; Palma & Sanhueza, 2014; Cordova & Bulnes, 2007; Dobarganes et al., 2013; Barrios, 2012; Álvarez & Pérez, 2016; Sotomayor et al., 2012; Yero et al., 2013)*

The regular level of knowledge in oral health according to the trimester of pregnancy coincides with some investigations *(Castro & Victoria, 2016; Peña & Nolasco, 2014; Palma & Sanhueza, 2014)*. On the other hand, the bad level of knowledge in oral health was found in the second trimester, and the regular level was found in the third. Therefore, it can be inferred that pregnant women improve their knowledge as their pregnancy progresses *(Castro & Victoria, 2016; Peña & Nolasco, 2014; Palma & Sanhueza, 2014; Barrios, 2012; Álvarez & Pérez, 2016; Sotomayor et al., 2012).*

Regarding preventive measures, oral diseases, and dental care, this study presents matches with most of the literature commented on herein. However, there is no clarity regarding the impact of the educational level, age, or place of origin on the level of oral health knowledge *(Domínguez, 2013; Castro & Victoria, 2016; Peña & Nolasco, 2014; Palma & Sanhueza, 2014; Cordova & Bulnes, 2007; Dobarganes et al., 2013; Barrios, 2012; Álvarez & Pérez, 2016; Sotomayor et al., 2012)*

It should be considered that the methodology used in this study differs from that used in other studies, so the results are not directly comparable. In any case, the results of this study show the need to develop new strategies to improve the level of knowledge in oral health of this population.

CONCLUSION

The level of knowledge in oral health of pregnant women who come to the Comprehensive Medical Center and Geriatric Gerontium of the IESS in Azogues-Ecuador is regular and is not associated with socio-demographic factors.

REFERENCES

Álvarez S, Pérez C. Eficacia del programa" Por mi salud bucal y la de mi futuro bebé" en la higiene oral de gestantes que acuden a un centro de salud materno infantil de la provincia de Chiclayo, 2015. (Tesis). Chiclayo (Perú): Universidad Católica Santo Toribio de Mogrovejo 2016.

Arias C, Orozco F. Conocimientos, actitudes y prácticas de embarazadas en control prenatal relacionadas con salud oral y embarazo, de mujeres que acuden a consulta externa del Hospital Gíneco Obstétrico Isidro Ayora. Odontoinvestigación.

2017;3(1): 1-17.

Asencio G. Nivel de conocimiento sobre salud bucal en gestantes del Hospital Regional Eleazar Guzmán Barrón de Nuevo Chimbote 2016. (Tesis). Trujillo(Perú): Universidad Nacional de Trujillo; 2016.

Barrios D. Nivel de conocimientos sobre salud oral en gestantes del HONADOMANI "San Bartolomé"-MINSA, en el año 2012. (Tesis). Lima (Perú): Universidad Nacional Mayor de San Marcos; 2012.

Castro R, Victoria J. Nivel de conocimiento sobre salud bucal en gestantes que acuden al centro de obras sociales "Maternidad de María" distrito Chimbote, provincia Del Santa, región Ancash, año 2016. (Tesis). Chimbote (Perú): Universidad Católica Los Ángeles Chimbote;2016.

Córdova J, Bulnes R. Nivel de conocimiento sobre prevención de salud bucal en gestantes, hospital de la mujer, Villahermosa, Tabasco 2007. Horiz Sanit. 2007;6(2):18-25.

Cuba M. Conocimiento sobre hábitos de succión en pediatras y odontólogos de Lima metropolitana. (Tesis). Lima (Perú): Pontificia Universidad Católica Del Perú; 2012.

Dobarganes A, Lima A, López N, Pérez R, González L. Intervención educativa en salud bucal para gestantes. AMC. 2011;15(3):528–41.

Domínguez Y. Nivel de conocimiento sobre salud bucal en multigestas menores de treinta años que acuden al servicio de gineco-obstetricia del hospital III–EsSalud, en el Distrito de Chimbote, Provincia del Santa, Departamento de Ancash, junio 2013. (Tesis). Chimbote (Perú): Universidad Católica de Los Ángeles Chimbote; 2013.

Martínez AJ, Llanes LE, Gou GA, Bouza VM, Díaz HO. Diagnóstico educativo sobre salud bucal en embarazadas y madres con niños menores de un año. Rev Cubana Estomatol. 2013;50(3):265-75.

Ministerio de Salud Pública del Ecuador. Tratamiento odontológico a embarazadas Guías de práctica clínica (GPC). Ecuador: Ministerio de Salud Pública del Ecuador; 2015.

Palma N, Sanhueza C. Diagnóstico del Nivel de Conocimiento sobre salud Bucal en embarazadas atendidas Cecosf Esmeralda entre 2013 y el 2014. (Tesis). Concepción (Chile): Universidad de Concepción; 2014.

Pan American Health Organization. Promoción de la salud. Washington: Pan American Health Organization; 2017.

Peña N, Nolasco A. Nivel de conocimiento sobre salud bucal en gestantes multigestas Puesto Salud la Florida, Chimbote 2013. Crescendo Cienc Salud. 2014;1(1):139-46.

Sotomayor J, Reyes S, Ochoa J, Mallma A, Correa E, Arieta J, Silva M, Watanabe R, Ayala G, Chuquihuaccha V. Nivel de conocimiento en prevención de salud bucal en gestantes que se atienden en dos hospitales nacionales peruanos. Odontol Sanmarquina. 2012;15(1):10-3.

World Health Organization. Oral Health. Geneva: World Health Organization; 2017.

Yero I, García M, Reytor E, Nazco L. Conocimiento sobre salud buco-dental de las embarazadas. Consultorio La California. 2012. Gac Med Espirit. 2013;15(1):20–9.Infant Mex. 2011; 68(2): 425-30.

Zapata M, Lavado A, Anchelia S. Hábitos bucales y su relación con maloclusiones dentarias en niños de 6 a 12 años. KIRU. 2014; 11(1):16-24.

Zhifei Z, Fen L, Shuning S,Linjuan S, Lei S, Xiaojing W. Prevalence of and factors affecting malocclusion in primary dentition among children in Xi'an, China. BMC Oral Health. 2016; 16(1):90.