# ORIGINAL



# Empathy in competencies of specific norms in Obstetrics students from Ica universities - 2022

# Empatía en competencias de normas específicas en estudiantes de Obstetricia de universidades de Ica - 2022

Nelly Alejandrina Pérez de la Cruz<sup>1</sup>  $\square$   $\boxtimes$ , Juana Yris Díaz-Mujica<sup>1</sup>  $\square$   $\boxtimes$ , Elizabeth Dany Araujo-Robles<sup>2</sup>  $\square$   $\boxtimes$ , Yanina Gallardo-Lolandes<sup>3</sup>  $\square$   $\boxtimes$ , Hilda Rocio Mendoza-Jimenez<sup>1</sup>  $\square$   $\boxtimes$ 

<sup>1</sup>Universidad César Vallejo. Perú <sup>2</sup>Universidad Peruana Cayetano Heredia. Perú <sup>3</sup>Universidad Privada San Juan Bautista. Perú

**Cite as:** Pérez de la Cruz NA, Díaz-Mujica JY, Araujo-Robles ED, Gallardo-Lolandes Y, Mendoza-Jimenez HR. Empathy in competencies of specific norms in Obstetrics students from Ica universities - 2022. Salud, Ciencia y Tecnología. 2023; 3:571. https://doi.org/10.56294/ saludcyt2023571

Received: 19-06-2023

**Revised:** 01-08-2023

Accepted: 13-09-2023

Published: 14-09-2023

Editor: Dr. William Castillo González 回

#### ABSTRACT

**Introduction:** for over a century, educational policies have vigorously promoted competency-based education in higher education students.

**Objective:** it was proposed to determine the incidence of empathy in the competencies of specific norms of Obstetrics students at universities in Ica.

**Methods:** there was a quantitative approach, a non-experimental correlational-causal design; The sample consisted of 101 female students in the last year of the Faculty of Obstetrics. The instrument was the personal reactivity questionnaire (first variable) and, for the second variable, the observation technique and performance checklist.

**Results:** the results revealed that 67,33 % of the students presented a low level of empathy; 58,4% had a low level of cognitive empathy; 75,2 % had a low level of affective empathy; Regarding the competency standards, 86,14 % did not comply with the competencies, of this, in the care of pregnant women and unborn children, 7,9 % complied with them. In the dimension of caring for women and couples, 16,8 % complied.

**Conclusion:** empathy significantly affected the competencies of specific norms in students evaluated, suggesting the need to strengthen this soft skill to improve the competitiveness of future obstetric professionals.

Keywords: Empathy; Competencies; Delivery of Health Care; Students.

## RESUMEN

**Introducción:** durante más de un siglo, las políticas educativas han promovido enérgicamente la educación basada en competencias en los estudiantes de educación superior.

**Objetivo:** se propuso determinar la incidencia de la empatía en las competencias de las normas específicas de los estudiantes de Obstetricia de las universidades de Ica.

**Métodos:** se utilizó un enfoque cuantitativo, un diseño no experimental correlacional-causal; La muestra estuvo constituida por 101 alumnas del último año de la Facultad de Obstetricia. El instrumento fue el cuestionario de reactividad personal (primera variable) y, para la segunda variable, la técnica de observación y lista de chequeo de desempeño.

**Resultados:** los resultados revelaron que el 67,33 % de los estudiantes presentó un bajo nivel de empatía; el 58,4 % tuvo un bajo nivel de empatía cognitiva; el 75,2 % tuvo un bajo nivel de empatía afectiva. En cuanto a

© 2023; Los autores. Este es un artículo en acceso abierto, distribuido bajo los términos de una licencia Creative Commons (https:// creativecommons.org/licenses/by/4.0) que permite el uso, distribución y reproducción en cualquier medio siempre que la obra original sea correctamente citada los estándares de competencia, el 86,14 % no cumplió con las competencias, de esto, en la atención a la mujer embarazada y al niño por nacer, el 7,9 % las cumplió. En la dimensión de atención a la mujer y a la pareja, el 16,8 % las cumplía.

**Conclusiones:** la empatía afectó significativamente las competencias de normas específicas en los estudiantes evaluados, lo que sugiere la necesidad de fortalecer esta habilidad blanda para mejorar la competitividad de los futuros profesionales de la obstetricia.

Palabras clave: Empatía; Competencias; Prestación de Servicios de Salud; Estudiantes.

#### INTRODUCTION

One of the main higher education reforms of the previous century was to guide the competency-based education processes in the country, which started as a trend that gradually took shape and that, at present, has many instruments and methods that continue to be standardized according to the areas of knowledge taught in the university faculties. Different scholars emphasized that development by competencies is based on the process of evaluating student performance.<sup>(1)</sup> They emphasizing that students should not only carry out procedures based on their knowledge, but should also develop attitudes and values that allow them to analyze, question and reflect on their actions in the solution of problems according to the complexity of the social environment in which they work. Ideally, this would allow the formation of this human capital sufficiently to achieve the welfare of citizens throughout the national territory.<sup>(2)</sup>

Empathy is an important aspect for students in health schools and faculties, because it allows the strengthening of the emotional component during the process of human interaction and mobilizes skills, attitudes and psychological resources to effectively resolve any contingency that may arise. <sup>(3)</sup> Within this framework, education plays an essential role, thus allowing improvements in the modulation of this in the professional training process. It generates trust, provides an opportunity to avoid misunderstandings, allows understanding the feelings of the other, facilitating the collection of good information that favors a more accurate diagnosis of the patient. It also facilitates adherence to therapy, accelerating recovery.<sup>(3)</sup>

Despite its importance in the human training process, it is not given the place it should have in the curricular plans of university health schools, being relegated to a condition of its own initiative or, peculiarity of some academic school, which uses it as part of its marketing in its processes of student recruitment. In this context, the study set out to determine the incidence of empathy in the competencies of specific standards of midwifery students in universities in Ica, a region located south of Lima and which amalgamates an interesting convergence of multiple intercultural worldviews of a social group that continues to grow demographically and that demands health professionals with better professional and socioemotional skills.

#### Theoretical approach

The literature reports interesting information on the development and strengthening of empathy as a constituent part of social skills, demonstrating that they can be modulated and learned within academic contexts and that they have a direct impact on social interaction.<sup>(4)</sup> Likewise, there is evidence that empathy can be improved in young people, in contrast to older people,<sup>(5)</sup> a condition that was perfectly exploited by a study done in China, where it was possible to demonstrate the mediating role of empathy in the influence of the communicative capacity, obtaining that more than 80 % of female university students showed medium to high levels in communicative competencies associated with empathy. This determines a direct influence of communicative competence on empathy and of the latter on interpersonal communicative competences. <sup>(6)</sup> In more regional settings, in Chile, generic social skills were linked to curricular activities in obstetrics and childcare students in a university, showing that they significantly favored curricular performance where students interacted with patients,<sup>(7)</sup> being considered as a key key in the process of professional training in health,<sup>(6)</sup> which provides greater glimpses of good results to this proposal. In the country, research has also been conducted that has determined good levels of association between emotional intelligence and empathy, which should be approached concomitantly when induction activities are intended to be carried out with young students.<sup>(9)</sup> In regions within the country, studies were conducted that proposed the analysis of the links between empathy and the inductive processes taught to students in university professional schools, obtaining high levels of relationship,<sup>(10)</sup> which undoubtedly provided sufficient background to justify the research that sought to go beyond merely determining the associations, since the determination of the levels of causality was prioritized as a condition that would provide greater arguments to generate academic discussions of curricular restructuring in which the need for human and then scientific-technical training would be prioritized.

Regarding the thematic theoretical approach, the concept of empathy has received multiple inputs and contributions in its evolutionary process from different specialists, researchers in the field, psychologists,

## 3 Pérez de la Cruz NA, et al

which has allowed the emergence of theories or approaches and new models on empathy, whose etymological root is Apathon (in Greek), equivalent to feeling from within.<sup>(11)</sup> Going to a more contemporary context, cognitive empathy aims to understand and interpret the feelings of others.<sup>(11,12)</sup> It is organized in perspective and fantasy. The perspective-taking dimension assesses the source of the emotion, its intensity, and how the experience achieves a specific outcome or "understanding the other person's point of view." Fantasy, which includes imagining, dreaming, identifying with the feelings of others, and expressing fantasies.<sup>(11)</sup> The faculty to connect with, feel the emotions, sensations and feelings of others is known as affective empathy.<sup>(10)</sup> Empathic concern are the emotions in individuals who feel concern for others without reaching despair upon learning of the person's discomfort that can often turn into affective support. The set of reactions of emotional disturbance such as indisposition or anxiety felt by one person towards another who is having some complicated negative situation is known as "concern for the feelings of the other" or general discomfort.<sup>(12)</sup>

On the other hand, the Davis Interpersonal Reactivity Index (IRI)<sup>(13)</sup> is based on the broad sense that empathy is related to a person's reactions to the experiences observed by another. It analyzes the mechanism of individual differences in empathic orientation from a multidimensional perspective. It comprises 28 items distributed in four subscales that evaluate four independent dimensions of the total concept of empathy: Empathic Concern (EC), Perspective Taking, Personal Discomfort (PD) and Fantasy (FS), with seven items each. The mechanism consists of telling the person to make a series of statements related to their thoughts and feelings in different situations, and asks them how they feel about themselves.<sup>(13)</sup>

Since the research proposal proposes a university higher education environment, it is indicated that, due to the globalization of education by competencies, additional processes are currently proposed to complement the traditional training accepted and endorsed by the government,<sup>(14)</sup> since it is certain that training exclusively in the cognitive aspect distances too much from the condition of humanity that should permanently accompany the procedures involved in public health care.<sup>(15)</sup> Thus, the competency-based educational model seeks to generate training processes to face challenges according to the needs of the globalized world oriented to personal and professional development with quality, taking into account the needs of society and context.<sup>(14,16)</sup>

Competencies are complex processes that mobilize knowledge for the resolution of problems through activities according to the requirements of the environment, personnel who contribute to the construction and transformation of reality whose purpose is to seek human welfare. In this process, self-motivation, initiative, collaborative work, observation, explanation, analysis, procedures and strategies interact, all taking into account the specific requirements.<sup>(1,14)</sup> Competencies are macro skills that integrate three types of knowledge: cognitive, procedural and attitudinal.<sup>(17,18)</sup> Competence is a complex knowledge that uses knowledge and human dimensions in certain scenarios.<sup>(1)</sup>

At the higher education level, there is greater emphasis on strengthening the research process, based on know-how and cognitive and attitudinal contents, moving from merely transmitting repetitive concepts to awakening the student's motivation and intellectual curiosity. In this order of ideas, basic competences are considered as those cognitive competences essential for the formation of a profession. This includes knowledge, technical and procedural skills, which are appropriate at lower educational levels, such as the appropriate use of written, oral and mathematical language. However, reality strikes this component, since, according to reports and academic documents, there is still much to be done in this process, within the context of regular basic education,<sup>(19)</sup> although this will not be a topic to be addressed in this study.

Generic skills are the common foundation of the profession and are required in specific situations of professional practice that require complex responses.<sup>(1)</sup> Strengthening them will guarantee the graduation of a good professional in the field of obstetrics for the welfare of society although, to achieve this, it is necessary to mobilize knowledge, attitudes, skills and abilities during the training process.<sup>(13,14)</sup> In this regard, since 2016, the College of Obstetricians of Peru (COP) has had specific professional training guidelines in effect until today, which are permanently available for the consideration of institutions, technical professionals and the public. These documents were the result of workshops with the social actors involved and include aspects suggested by the academics. The goal is to establish quality standards to obtain the certification of professional competencies<sup>(20)</sup> with a view to international standardization, constituting a series of related procedures based on the competency approach that are conducted by the aforementioned professional association to strengthen the professional, personal and social development of the members of its order.<sup>(21)</sup>

Competency norms are technical documents or standards that contain competency components. They detail what a person is able to perform in the function of the tasks that correspond to the productive activity. The productive function is determined in the student by the performance criteria. According to the established, the achievement of the productive function in the student is determined by the performance criterion. The characteristics and circumstances of performance are defined by the field of application and the evaluation by competency standards evaluates the achievement of formative learning through performance. In this sense, the second instrument used, the control or checklist, also known as a checklist, is an evaluation mechanism that establishes criteria for recording actions oriented to effective decision-making on a particular activity. It

has indicators based on the COP guide by which it is possible to clearly determine whether these criteria have been met. It allows dichotomous selections (yes/no, complies/does not comply, etc.).<sup>(17)</sup>

The objective of the research was proposed to determine the incidence of empathy in the competencies of specific norms of Obstetrics students at universities in Ica.

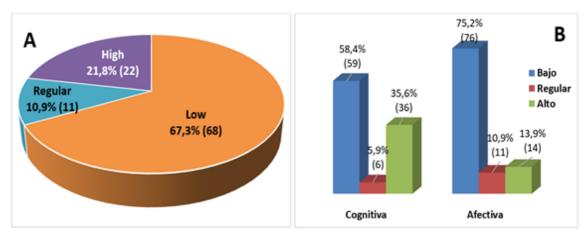
#### **METHODS**

The approach was quantitative, systematized, basic, and explanatory in scope.<sup>(22)</sup> We worked with two variables and predetermined instruments, where the collection of information allowed measurement and analysis in statistical procedures.<sup>(23)</sup> The study was carried out with a non-experimental, cross-sectional and causal correlational design, seeking to explain the relationship of influence of one variable on another to establish some degree of prediction, and with the information obtained the respective analysis was performed. The sample consisted of 101 obstetrics internship students from the universities of Ica, who were doing their internship in local hospitals. For this study, the survey technique was used to measure the first variable (Empathy) by means of the 28-item Interpersonal Reactivity Index (IRI) (Cronbach's Alpha = 0,851).

For the second variable (Specific Norm Competencies), the observation technique was applied. Instrument of 20 verifiable items (Kuder Richardson value = 0,795). The statistical test of ordinal logistic regression (OLS) was used, which corresponds to the causal correlational study, highlighting the Exp(B) indexes to determine the percentage level of influence of one variable on the other.<sup>(24)</sup>

#### RESULTS

The results obtained for the empathy variable evaluated in the students of the last year of the midwifery career revealed a clear tendency towards the low level, followed by the high level, although in a third of the predominant percentage (See **Figure 1.A**). This would show that there would not be sufficient positioning within the professional training processes. This was also reflected in the frequencies obtained in the two evaluated dimensions of this variable, and, although the dominance of the low level was seen in both, the most striking thing was to see that it was higher in the affective dimension, compared to the cognitive one (See **Figure 1.B**).



**Figure 1.** Descriptive results: **A.** Levels of empathy of midwifery students evaluated in universities in Ica. **B.** Levels determined in frequencies for the dimensions of the variable Empathy evaluated in these same students.

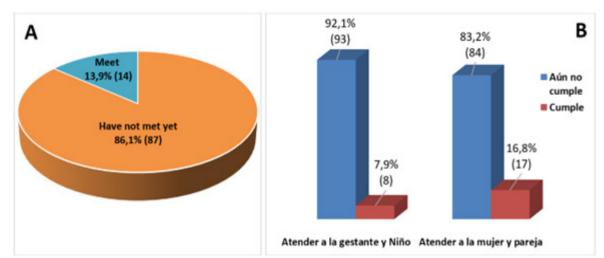
For the variable competencies of specific norms, there was a dominant majority of students who did not meet the basic requirements evaluated in the field of midwifery, a situation that was noticeably reflected in the two dimensions evaluated, although in the case of the second dimension (caring for the woman and partner) the percentage of compliance was more than double the homologous item of the first dimension (See Figure 2. A., B.). This result validates that of the first variable and, although negative, provides evidence that the links between the two could be theoretically and pragmatically justified.

Regarding the statistical analysis, it should be indicated that, previously, the requirements for the execution of the test (Omnibus test and pseudo R-squared estimators) and the obtaining of the contrast estimators were fulfilled. Thus, it was determined that empathy significantly impacted specific norm competencies (p<0,0001, Wald = 34,56), although what was most interesting was that, the value of Exp(B=2,98) = 19,69 which, translated into percentage terms, would indicate that there would be about 20 % level of influence of empathy on specific norm competencies. This result would reveal the incidence, although, according to the descriptive results, they would not necessarily be desirable for this professional group.

On the other hand, the results of the specific contrasts had a similar path, although the percentage levels of incidence were lower than those obtained in the general contrast. Thus, a level of influence of 11,25 % of

# 5 Pérez de la Cruz NA, et al

empathy was determined for the dimension Attending to the pregnant woman and the unborn child, while for the dimension Attending to the woman and partner it was only 5,13 %, less than half that of the first. In general terms, this would show that empathy does have an impact on both dimensions; however, since it is lower in the second dimension, there is a probability of the interference of some related factor that has not been visualized in this analysis (see **Table 1**).



**Figure 2.** Descriptive results: **A.** Frequency levels for the variable specific standards competencies evaluated in midwifery students of the universities of Ica. **B.** Levels determined in frequencies for the dimensions of the variable competencies of specific norms evaluated in these same students.

| Table 1. Contrast estimators of the influence of Empathy on the variable Competencies of specific norms and its dimen- |  |
|--|--|
| sions, evaluated in students of the last year of the career of Obstetrics in universities of Ica, 2022.                |  |

| Dependent variables assessed**  | В     | Standard<br>Error | Wald   | Gl | Sig.  | Exp(B) |
|---|-------|-------------------|--------|----|-------|--------|
| Competencies of specific standards  | 2,980 | 0,309             | 34,560 | 1  | 0,000 | 19,688 |
| Care for the pregnant woman and the unborn child  | 2,420 | 0,369             | 43,040 | 1  | 0,000 | 11,250 |
| Care for the woman and partner  | 1,634 | 0,273             | 35,750 | 1  | 0,000 | 5,125  |
| *Ordinal Logistic Regression Test (ORT). Var. Independent: Empathy. N=101 // Omnibus tests X <sup>2</sup> <0,0001 |       |                   |        |    |       |        |

# DISCUSSIONS

In the descriptive analyses it was possible to distinguish that the negative levels (Low) were predominant over the positive ones (High), which would reflect precariousness levels in the use of Empathy and, similarly, the observed levels of Non-compliance with specific standards in the performance process of the students during their internship in local hospitals are also worrisome, taking into account that these are upcoming professionals who will be inserted in the health care labor market, where the quality of care should be improved instead of being detrimental<sup>(25)</sup> and, what is worse, it would be an indicator that in the institutions of university higher education, this soft skill is not being promoted, despite the recommendations and availability of the information contained in the technical guidelines on this aspect, by the COP.<sup>(21)</sup> In this situation, it remains to reflect on the operationalization and implementation of the strengthening of these competencies within the curricular plans that universities implement for the training of future midwifery professionals.<sup>(26)</sup> In this sense, the responsibility should not be placed solely on the educational entities,<sup>(18,19)</sup> but rather, the need should be reflected upon to undertake a path of improvement in the provision of health care services, as some neighboring countries have done, basing the plan on elements that allow for the humanization of the personnel, taking into account that the vast majority of these students evidence satisfaction in caring for other human beings, being the reflection of an authentic vocation, which could provide many traits of self-kindness, and development of social skills that would support the relevance of teamwork, which is essential in health services.<sup>(27,28)</sup>

We believe that the strengthening of empathic skills in students should start as a proposal from the practice of health care instead of waiting for a theoretical basis on which to develop the details of these social and soft

skills programs. Teaching styles in the health care sector indicate that the training experience is much richer when it is provided within the contexts where the health service is provided, rather than in the university cloisters.<sup>(29,30)</sup> This provides greater robustness to the need to establish academic parameters that would be required as essential at a stage prior to the health care practice of future health professionals. In this perspective, the results of the hypothesis contrasts ratify the influence of empathy in the real performance of the evaluated and, although the levels of influence were not uniform, definitely, the information generated in this study provides evidence to prioritize the topics or themes on which should be more and better influenced in the teaching process to the students, which, eventually, should be extended to the students, eventually, should be extended to younger teachers, who also show a greater predisposition to modulate their levels of empathy, which could have a doubly positive effect, since if the change is achieved in the trainer, it would have a greater effect on the trainees.<sup>(5,31,32)</sup>

A separate issue is that this social skill - empathy - can also be practiced by patients,<sup>(33)</sup> since it is complicated to deal with a myriad of sociocultural variables that vary according to the geographical contexts in the national territory, however, it should be remembered that, in general, the patient comes to the professional with a positive expectation that predisposes him/her to follow the indications and precisions provided by him/ her, since his/her recovery would depend on it. This condition provides a greater advantage to the health professional, since, if he/she practices empathy correctly, the result obtained in the provision of the service will be much better, having, as an added value, the satisfaction of the work accomplished and the gratitude of the patient. This situation would result in their level of job satisfaction, which is diminished by some externalities such as salary levels and job stability, which would be interesting to link in future research.<sup>(34,35)</sup>

Finally, by way of conclusions, it is indicated that the variability of the levels of the competencies of specific norms is due to 19,69 % of the levels of empathy in the midwifery students evaluated in the universities of Ica. On the other hand, the variability of the levels of the competencies of specific norms in attending the pregnant woman and the unborn child according to current regulations is due to 11,25 % of the levels of empathy in these same students. Finally, the variability of the levels of competencies in attending the woman and couple in their demand and needs for contraceptive methods according to current norms is due to 5,13 % of the empathy levels of these midwifery students.

#### REFERENCES

1. Tobón S. Aspectos básicos en la formación basada en competencias. I+ T+ C-Investigación, Tecnología y Ciencia. 2007; 1(1).

2. Álvarez AL. Atención a la diversidad en la Formación Profesional. Rev Int apoyo a la inclusión, Logop Soc y Multicult. 2018. Disponible en: https://revistaselectronicas.ujaen.es/index.php/riai/article/view/4373

3. Vecchi C. Empatía, burnout y competencias profesionales. Algunas reflexiones. Archivos argentinos de pediatría. 2017; 458-471. http://www.scielo.org.ar/pdf/aap/v114n5/v114n5a17.pdf

4. Campos C. Empatía y Habilidades Sociales (Tesis) Universidad Rafael Nandívar. http://recursosbiblio.url. edu.gt/tesiseortiz/2018/05/42/Campos-Carmen.pdf. 2017

5. Camacho G. Capacidad de empatía en docentes de la facultad de Medicina de la Pontificia Universidad Católica del Ecuador, octubre a diciembre del 2017. Quito-Ecuador (Tesis). Pontificia Universidad Católica del Ecuador). http://repositorio.puce.edu.ec/bitstream/handle/22000/14329/2018

6. Choi H, Kim H, Lee S. Mediating Effects of Empathy on Competence of Korean Nursing Students. Iran J Public Health. 2021 Apr;50(4):737-746. doi:10.18502/ijph.v50i4.5998

7. Venegas Rojo R, y Hernández N. Competencias genéricas adquiridas según estudiantes de una carrera de la salud. Investigación en Educación Médica. 2016

8. Ulloque MJ, Villalba S, de Villalba TV, Fantini A, Quinteros S, Díaz-Narváez V. Niveles de empatía en estudiantes de medicina de Córdoba, Argentina. Arch Argent Pediatr. 2019;117(2):81-6.

9. Alcántara S, Salas J. Inteligencia emocional y empatía en estudiantes de enfermería de un instituto Tecnológico Superior de Salud de Lima (Tesis), Universidad Norbert Wiener, Lima. 2018. Obtenido de https://bit.ly/3Jd3n3w

10. Ramírez O, Barbarán C. Implicancia de la empatía en el proceso de inducción de la Escuela profesional

# 7 Pérez de la Cruz NA, et al

de Administración de la Universidad Nacional de Ucayali (Tesis). Universidad Nacional de Ucayali. http://repositorio.unu.edu.pe/bitstream/handle/UNU/4935/B69\_UNU\_2020

11. Ciriza-Mendívil CD. La empatía histórica, una propuesta didáctica clave para la Formación Profesional Básica. Didáctica las Ciencias Exp y Soc. 2021 Jul 2;40(40):51. Disponible en: https://academica-e.unavarra. es/xmlui/handle/2454/41728

12. Corrales-Felipe H, Norabuena P, Hernández R, Ramírez E, y Hernández R. Empatía en estudiantes de psicología de dos universidades peruanas. Revista de psicología. 2018; 9(1), 31-44. http://revistas.ucsp.edu. pe/index.php/psicologia/article/view/298

13. Davis de la Oliva S. Evaluación del modelo educativo constructivista de orientación educativa e intervención psicopedagógica desde el enfoque socioformativo. Educar., 2019 55(2), 561-576, Obtenido de: https://raco.cat/index.php/Educar/article/view/359310

14. Ocaña-Fernández Y, Inga M, Tejada AA. The New Normal In Virtual Education: A View From Teaching Practice. J Pharm Negat Results., 2022;13(3):429-34. Disponible: https://www.pnrjournal.com/index.php/home/article/view/1522/1287

15. López MJ, Zavala JJ, Vértiz-Osores JJ, Gómez WE, Cueva-Ríos MA. Política de salud y determinantes sociales del Covid-19 basado en sistemas de tecnología y comunicación: una revisión sistemática. Rev Ibérica Sist e Tecnol Informação. 2022; (E48):348-58.

16. Vértiz-Osores JJ, Vértiz-Osores RI, Díaz JY, Delgado RM, Vallejos FJ, Saavedra-López MA, et al. Public policies for tuberculosis control in two marginal urban indigenous communities of Lima. Arch Venez Farmacol y Ter. 2021; 40(7):686-90. http://doi.org/10.5281/zenodo.5750348

17. López A, Nader J, y Ríos T. Investigación y creatividad para el desarrollo de competencias científicas en estudiantes universitarios de la salud. Educación Médica Superior. 2020; 34(3). Obtenido de: http://scielo.sld. cu/pdf/ems/v34n3/1561-2902-ems-34-03-e1606.pdf

18. Montiel M, Martínez A, López S, Sánchez J, y Sánchez M. Educación por competencias: de estudiante a médico. Revista de la Facultad de Medicina (México). 2011; 54(6), 42-50. http://www.scielo.org.mx/pdf/facmed/v54n6/v54n6a10.pd

19. Vértiz JJ, Cucho RR, Vértiz-Osores RI, Vílchez GL, Angulo A. Virtual university education in the context of the health emergency due to COVID-19: Challenges in the evaluation processes. Int J Early Child Spec Educ. 2020; 12(1):467-77. Disponible en: http://www.int-jecse.net/abstract.php?id=171

20. Sistema Nacional de Evaluación, Acreditación y Certificación de la Calidad Educativa. Normas de Competencia del Profesional Técnico en el Sector Salud. Obtenido de: https://cdn.www.gob.pe/uploads/ document/file/1.pdf 2016

21. Colegio de Obstetras del Perú. Reglamento Nacional de Desarrollo Profesional de Obstetricia. Obtenido de https://colegiodeobstetras.pe/wpcontent/uploads/2022/04/nt\_SINADEPRO\_reglamento\_abr22.pdf.2019

22. Hernández-Sampieri R, Mendoza CP. Metodología de la investigación: Las rutas cuantitativa, cualitativa y mixta. México: Mc Graw Hill Education; 2018. 1-753 p

23. Monge C. Metodología de la Investigación cuantitativa y Cualitatitva- Guía didáctica. Colombia: Universidad Surcolombiana. 2021

24. Box GE, Hunter JS, Hunter WG. Statistics for Experimenters. Design, innovation and discovery. 2th ed. Hoboken, NJ: Willey-Intersciencie - John Wiley & Sons, Inc; 2005. 655 p.

25. González MA. Factores que influyen en el rendimiento académico de residentes de Obstetricia y Ginecología de una universidad en Bogotá, Colombia. Rev UDCA Actual Divulg Científica 2019; 22(2):e1377.

26. Gonzales-Sánchez A, Berrío-Quispe ML, Díaz CMF, Ocaña-Fernández Y. Social-emotional Competencies in

Peruvian Educational Institutions. Int J Early Child Spec Educ. 2021;13(2):586-92.

27. Cluzet O, Perales A, Canchihuamán F, Mezzich JE. Latin American Experiences and Reflections on Science and Humanism in Person Centered Medicine - ProQuest. Int J Pers Cent Med. 2018;7(3):151-9.

28. Buceta MI, Bermejo JC, Villacieros M. Enhancer elements of compassion satisfaction in healthcare professionals. Ann Psychol. 2019;35(2):323-31.

29. León-Arce HG, Chávez Chávez J, Mogollón-Pérez AS, Vargas I, Vázquez ML. Implementing joint training sessions of general practitioners and specialists aimed at improving clinical coordination in Colombia: Contributions from participatory action research. J Health Serv Res Policy. 2022 May 22;27(4):261-8. Disponible en: https://journals.sagepub.com/doi/abs/10.1177/13558196221094676?journalCode=hsrb

30. Buceta MI, Bermejo JC, Villacieros M. Enhancer elements of compassion satisfaction in healthcare professionals. Ann Psychol. 2019;35(2):323-31.

31. González MA. Factores que influyen en el rendimiento académico de residentes de Obstetricia y Ginecología de una universidad en Bogotá, Colombia. Rev UDCA Actual Divulg Científica. 2019 Dec 31;22(2): e1377.

32. Gazquez Linares J, Perez-Fuentes J. Innovación docente e investigación en ciencias de la salud : nuevos enfoques en la metodología docente. Molero M del M, editor. Innovación docente e investigación en ciencias de la salud. Dykinson; 2021. 1-386 p.

33. Ortíz J, Quirorz JM, Neira R, Díaz M, Elgueta P, Lucero J, et al. Systematization of initiatives in sexual and reproductive health about good practices criteria in response to the COVID-19 pandemic in primary health care in Chile. Medwave. 2022; 22(6):1-13. Disponible en: 10.5867/medwave.2022.06.002555

34. Vela-Valdés J, Salas-Perea RS, Quintana-Galende ML, Pujals-Victoria N, González-Pérez J, Díaz-Hernández L, et al. Formación del capital humano para la salud en Cuba. Rev Panam Salud Publica; 2018; 42:1-8. Disponible: https://iris.paho.org/handle/10665.2/34904

35. Oliveira LS de, Costa MFBNA da, Hermida PMV, Andrade SR de, Debetio JO, Lima LMN de. Practices of nurses in a university hospital for the continuity of care for primary care. Esc Anna Nery. 2021 Jul 9; 25(5):1-13. Disponible: http://www.scielo.br/j/ean/a/7shMcHgv3mrBSpwhdZ7vsgH/abstract/?lang=en

# FINANCING

No financing.

#### CONFLICT OF INTEREST

The authors declare not to have any kind of conflict of interest in any of the stages of execution of the research. Authors' contributions.

#### **AUTHORSHIP CONTRIBUTION**

Writing the manuscript: Nelly Alejandrina Pérez de la Cruz, Juana Yris Díaz-Mujica, Elizabeth Dany Araujo-Robles<sup>,</sup> Yanina Gallardo-Lolandes e Hilda Rocio Mendoza-Jimenez

*Correcting and revising the final version of the manuscript:* Nelly Alejandrina Pérez de la Cruz, Juana Yris Díaz-Mujica, Elizabeth Dany Araujo-Robles, Yanina Gallardo-Lolandes e Hilda Rocio Mendoza-Jimenez