

An overview occupational encroachment in the health sciences. Based on teachers' perceptions in Mexico

Una visión general del intrusismo laboral en las ciencias de la salud. Basado en las percepciones de los profesores en México

Ramírez-Jimenez, Alida^a, Salinas-Sánchez, Igor^{*b}, Lara-Aguilar, Susana^c and Xolalpa-González, JuanAzael^d

^a ROR Universidad Nacional Autónoma de México • AED-3992-2022 • ID 0000-0001-5254-9765 • 224026

^b ROR Universidad Nacional Autónoma de México • ABH-1909-2020 • ID 0000-0002-9911-7895 • 814000

^c ROR Tecnológico de Monterrey • KIA-4472-2024 • ID 0009-0003-7219-4158 • 697396

^d ROR Universidad Nacional Autónoma de México • KIA-4144-2024 • ID 0000-0003-4659-2323 • 442750

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* ✉ igor.salinas@unam.mx

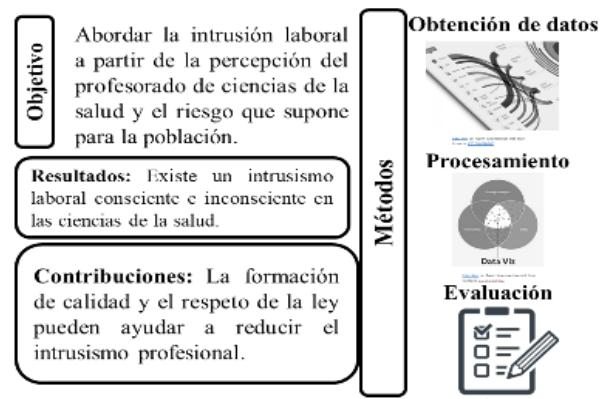
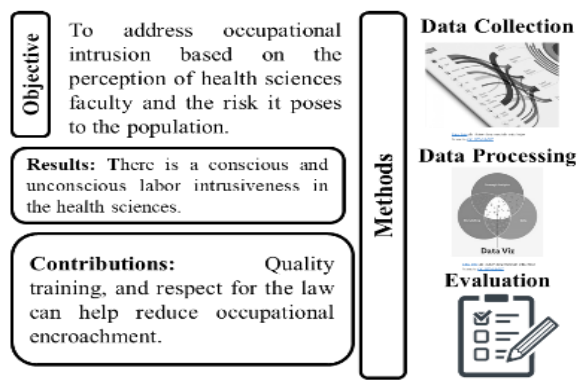


Abstract

No one should be harmed while receiving health care, yet globally, at least five patients die every minute due to unsafe care. This study addresses the role of occupational encroachment based on the perception of health science faculty and the risk it poses to the population. It combines descriptive analysis with qualitative analysis of interpretative and semantic phenomenological observation. Involving 164 professionals in medicine, orthopaedics, psychology, and physiotherapy, the study argues that there is conscious and unconscious occupational encroachment in the health sciences. The characteristics most related to occupational encroachment were poor professional relationships (108 responses) and acts "outside the law" (84 responses). Professionals identify educational (68), professional (108), and social (60) factors as contributing to this issue. The study highlights that communication, quality training, and respect for the law can help reduce occupational encroachment, emphasizing the importance of ethical training in the health sciences to protect patient safety.

Resumen

Nadie debería resultar perjudicado al recibir atención médica, pero globalmente, al menos cinco pacientes mueren cada minuto debido a cuidados inseguros. Este estudio analiza el intrusismo laboral en las ciencias de la salud según la percepción del profesorado y el riesgo que representa para la población. Combina análisis descriptivo y cualitativo de observación fenomenológica interpretativa y semántica, involucrando a 164 profesionales en medicina, ortopedia, psicología y fisioterapia. El estudio sostiene que hay intrusismo laboral consciente e inconsciente en las ciencias de la salud, relacionado con malas relaciones profesionales (108 respuestas) y actos "fuera de la ley" (84). Los profesionales identifican factores educativos (68), profesionales (108) y sociales (60) como contribuyentes a este problema. Destaca que la comunicación, la formación de calidad y el respeto por la ley pueden reducir el intrusismo laboral, subrayando la importancia de la formación ética para proteger la seguridad del paciente.



Education, Occupational encroachment, Ethics

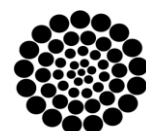
Educación, Intrusismo laboral, Ética

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Introduction

In May 2019, the 72nd World Health Assembly mandated that World Patient Safety Day be observed every September 17 ([World Health Organization, 2019a](#)), in response to the analysis of the millions of people who are affected each year by unsafe medical care around the world, causing 2.6 million deaths per year in developing countries alone. No one should be harmed while receiving health care, yet globally, at least five patients die every minute due to unsafe care ([World Health Organization, 2019b](#)). Among the causes, lack of care by professionals, incorrect medication or wrong doses are mentioned ([World Health Organization, 2019a](#)). However, we seem to lose sight of another, the recurrent intrusion of professionals who act in competencies that do not correspond to them and who, due to lack of preparation or knowledge, put people's health at risk.

It can be pointed out that there are already antecedents on the health risk caused by occupational encroachment, Ortiz J, Quintán J, and Armengol-Miró JR ([Ortiz et al., 2006](#)) describe it in their discussion on the health risk of occupational encroachment in sedation as acting among physicians.

([Falcón Romero & Luna Maldonado, 2006](#)), also mention occupational encroachment as a danger in tourism areas, where it puts health at risk. In addition, Jiménez S.; García S.; Mingo M. and Ceballos L. ([Jiménez et al., 2017](#)) clearly mention the risks of intrusion in physical therapy, while Wuest, J; Ford-Gilboe, M; Merritt-Gray, M. and Berman, H. ([Wuest et al., 2003](#)) study the basic social problem of intrusion and the implications for the knowledge and practice of health promotion.

One thing is clear, they are not the only health professions impacted by such behavior; medicine ([Araujo-Cuauro, 2022](#)), forensic and legal ([Checa, 2010](#)), nutrition ([González, 2003](#)) and psychology ([Solf, 2022](#)), are among other professions that also suffer from it.

Checa M. ([Checa, 2010](#)) retakes in Art. 403 of the current Penal Code of Spain, which establishes that, whoever exercises acts proper of a profession without possessing the corresponding academic degree issued or recognized, will incur a penalty of six to twelve months.

If the professional activity carried out requires an official degree that accredits the necessary training and legally qualifies for its exercise, and if he/she does not have such a degree, a fine of three to five months will be imposed, establishing some sanction for such behaviour.

It should be noted that, beyond a culture of health care that has existed since the past ([Guzmán-Gutiérrez et al., 2023](#); [Tybjerg, 2022](#); [Viniegra-Velázquez, 2020](#)) including traditional medicine ([Youn et al., 2023](#); [Zafra et al., 2016](#)) or medicine based on herbalism ([Fu-Shuang & Jing-Ke, 2017](#); [Husain & Wahidah, 2018](#)), as well as the care of midwives ([Lori et al., 2013](#); [Sarmiento et al., 2021](#)) or healers ([Nortje et al., 2016](#)), who by custom or out of necessity ([Buranbaeva et al., 2013](#)), have dedicated themselves to the provision of these services, transdisciplinary ([Thompson, 2014](#)) between empirical and modern medicine ([Yuan et al., 2016](#)), including the digital era ([Cao et al., 2022](#)), does not excuse the intervention of professionals who act with low ethical conduct in the care, diagnosis and prescription of health procedures outside their profession.

In this sense, Vincent K. Kopp, ([2023](#)) states it emphatically with the 16 duties of medical ethics of Rhodes R. ([Rhodes, 2020, 2022](#)) author who stands out for her work on this subject. It should be noted that from our perspective they are applicable to any health science.

Moreover, it is true that intrusion is not an occurrence on the part of professionals; countries such as Spain, Argentina, Chile, and Mexico ([Corteggiano & González, 2019](#); [Suárez-López, 2012](#)), have been talking about this problem for more than a decade.

Therefore, it is important to reach a consensus on the definition of occupational encroachment, so that professionals from different countries and the different health sciences professions can understand the risk that this poses to the population, and to propose strategies for university education to prevent such behavior and to work on public policies that help to prevent health professionals from engaging in intrusive behavior.

The objective of the study was to analyse the perception of professional teachers in health sciences in Mexico on occupational encroachment and the risk to the health of the population that it represents.

Materials and methods

A combination of quantitative descriptive analysis and a qualitative analysis of interpretative and semantic phenomenological observation was carried out to interpret the comments made by the health professionals who participated in the study.

For the development of the study, an instrument was established where health professionals were questioned about the professional competences of their area and their actions in different situations where they had to recognize the professional competences of their profession. Multiple-choice and open-ended questions were used.

The instrument was validated with Aiken V. (Aiken et al., 2008; Robles, 2018) as other authors have done, see equation 1, (Anculle-Arauco et al., 2022; Balaguer López et al., 2022)

$$V = \frac{\bar{X}-l}{k} \tag{1}$$

Where V is Aiken's coefficient, \bar{X} average of all judges' scores, l is Minimum grade, and k is the subtraction of the maximum grade minus the minimum grade ratings for each item were organized and analysed using Aiken's V coefficient (Penfield & Giacobbi, 2004), the results of which are shown in Table 1.

In addition, the same calculation was performed for the overall satisfaction of the instrument, yielding an Aiken V for satisfaction of 0.95.

Box 1

Table 1

Instrument validation according to the score given by experts

Evaluated item	Evaluation indicator	Average	E.D.	Aiken's V
1	Relevance	2,80	0,75	0,60
	Content	3,60	0,49	0,86
2	Relevance	4,00	0,00	1,00
	Content	4,00	0,00	1,00
3	Relevance	4,00	0,00	1,00
	Content	4,00	0,00	1,00
4	Relevance	3,80	0,40	0,93
	Content	3,80	0,40	0,93
5	Relevance	4,00	0,00	1,00
	Content	3,80	0,40	0,93
6	Relevance	4,00	0,00	1,00
	Content	4,00	0,00	1,00
7	Relevance	4,00	0,00	1,00
	Content	4,00	0,00	1,00
8	Relevance	4,00	0,00	1,00
	Content	4,00	0,00	1,00
9	Relevance	4,00	0,00	1,00
	Content	3,80	0,40	0,93
10	Relevance	4,00	0,00	1,00
	Content	3,60	0,49	0,86
11	Relevance	3,80	0,40	0,93
	Content	4,00	0,00	1,00
12	Relevance	4,00	0,00	1,00
	Content	3,60	0,80	0,86
Total, Scale	Relevance	4,00	0,00	1,00
	Content	4,00	0,00	1,00
Satisfaction		4,80	0,40	0,95

Source: own elaboration

The instrument has been sent through four media social networks, institutional email contacts, WhatsApp, and Telegram from March 1 to 21, 2023. A total of 166 responses were obtained, however, two did not meet the inclusion criteria (Professionals in any area of Health) so they were eliminated leaving a sample of 164 participants with an average age of 32.8 years.

The criteria were:

- Inclusion.
- Professionals in any area of Health.
- Have completed the entire questionnaire.
- Perform health care practice.
- Exclusion.
- Any person who is not a health professional.
- Students or persons who have not graduated.
- Health professionals who do not practice their profession in clinical care.
- Elimination.
- Non-health care professionals.

- Not having completed the questionnaire.
- Notification of desire to no longer participate in the research.

Figure 1 shows that the participation of health professionals' teachers' is diversified, the personnel with the highest participation is 39 by medicine (24%), followed by 31 ortho-prosthetists (19%), 30 psychology (18%) and 28 physiotherapists (17%), these were followed by 6 other professions reflecting the interest and commitment of these professionals with the topic addressed.

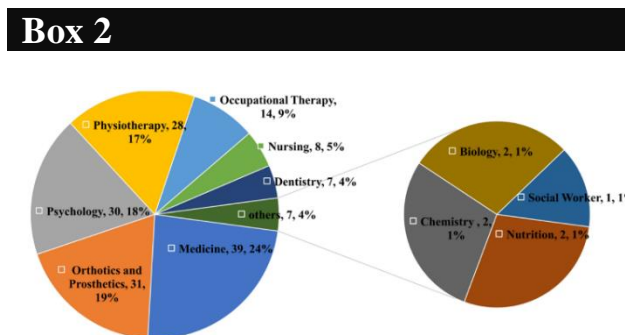


Figure 1
Professions Participants

Source: own elaboration

Results and discussion

According to the questions that were used through the instrument and after a descriptive analysis and content coding, the following information is presented.

Have you ever worked or collaborated with other health personnel outside your own profession? 96 of the participants collaborate interprofessional on a frequent basis, while 58 of them do so sometimes. 7%, equivalent to 10 people, commented that they have never worked interprofessional.

Do you consider the collaboration of other professionals necessary for the comprehensive care of your patients? 98% of them consider it necessary to maintain interprofessional collaboration, which indicates that most of them recognize the importance of bringing together the knowledge and skills of different professionals to provide more complete and effective care.

Only 2% of respondents believe that such collaboration is likely.

Three characteristics were presented as the most important in interprofessional work. Accordingly, 67 participants consider collaborative work to be the most important characteristic, 65 emphasize that communication is the most important, while the 32 participants consider that the most important thing is to respect professional roles.

Which competencies should be part of your professional performance?



Figure 2
Competencies according to each profession

Source: own elaboration

Figure 2 shows the interaction that health professionals understand as part of their competencies. 72.5% of the participants recognize as part of their competencies the taking of a clinical history in accordance with their profession; 67.6% consider that they should participate in clinical sessions; 65.8% recognize that it is part of their profession to record their interventions in clinical notes and to teach patients; the fifth most recognized competency is that of requesting anticommunications from other professionals.

These competencies share the quality of being transversal, activities that all health professionals should perform, so they should be competencies recognized by 100% of the participants, however, this was not the case, another thing that was observed is that with the exception of one competency, all had a large number of occupational encroachment, for example, only two nutritionists participated in the survey, however, 11 participants recognized that "determining a food plan according to the needs" is part of their work. The only competency recognized and respected by the professional who must perform it is "Determining a nosologically diagnosis", which was respected by all professions related to medicine and indicated by the physicians who participated as shown in the yellow circle in the Figure.

"Other", was the code that presented the least with a *fi* of 40 relations, in this one were identified comments such as Is a Person who profits professionally (Code: ● Other > Unrelated to the question; Position: 106 - 106; 26/06/2023; 16:41:11; Area: 41; 0.29%), some experiences for phenomenological analysis were It is something very risky in the habit of health because we put at risk the human being who is our core work (Code: ● Other > Experiences; Position: 4 - 4; 6/06/2023; 17:25:33; Area: 115; 0.81%). It can also be observed in (Figure 4), other examples about perceptions, as well as their frequencies represented with linking lines (the higher the *fi* the greater the linking thickness). According to this, not your competence with *fi* = 44, Not having a degree with *fi* = 43 and Incompetent or without knowledge with *fi* = 42 were the semantic fields that for the health professionals demonstrate the most what occupational encroachment is.

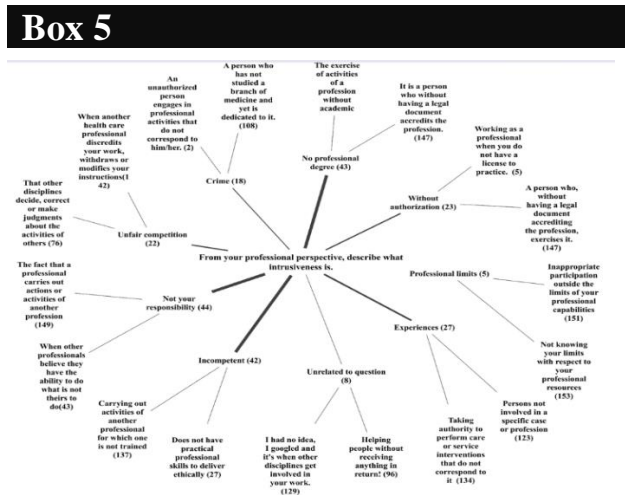


Figure 4
Case model: From your professional perspective, describe what occupational encroachment is.

Source: own elaboration

In your professional practice or workplace have you witnessed any type of occupational encroachment?

86 professionals have ever witnessed occupational encroachment in their areas, while 64 participants have frequently observed it, only 14 considered that they had never witnessed any type of occupational encroachment. For this reason, the question "Do you consider that in your profession there is professional occupational encroachment?" was asked. 99 participants considered that they frequently experience it, 61, only occasionally, and 5 participants considered that there has never been occupational encroachment in their profession.

What do you consider to be the main reason for professional occupational encroachment?

In this case, their results were varied, which induced the creation of six cohesive chains that illustrated the perceptions towards the main reasons for occupational encroachment, however, three of them, Table 2, were the ones that interacted most strongly and stood out as factors causing occupational encroachment.

Box 6			
Table 2			
Main factors leading to occupational encroachment, testimonials, and frequency. phenomenological analysis			
Factors	Testimonial	Frequency <i>fi</i>	Reference code
Educations			
Problem from the institutions	Universities, to have more students, offer preparation with a tendency towards the medical area.	20	Code: ● Educational > Problem from institutions; Position: 55 - 55; 27/06/2023 15:36:45; Area: 98; 0.769775%. Code: ● Educational > Lack of communication; Position: 40 - 40; 27/06/2023; 15:15:29; Area: 42; 0.329903%. Code: ● Educational > Lack of preparation; Position: 48 - 48; 27/06/2023 15:29:50; Area: 95; 0.74621%.
Lack of communication	Non-collaboration with other professionals	25	
Lack of preparation	Lack of knowledge and lack of education, inadequate education, professionalization	23	
Professionals			
Invasion of activities	Believing to have some minimal knowledge of another career, one would think that one could practice the same career.	29	Code: ● Professionals > Invasion of activities; Position: 113 - 113; 27/06/2023 16:13:04; Area: 100; 0.785484%. Código: ● Profesionales > Perfil Profesional; Position: 146 - 146; 27/06/2023 16:37:58; Area: 50; 0.392742%. Code: ● Profesionales > Roles/Competence; Position: 26 - 26; 27/06/2023; 15:03:23; Area: 61; 0.479145%.
Professional Profile	Lack of understanding of the scope of a discipline	16	
Roles/Competence	Lack of delimitation of professional competences	20	
Social			
By Beliefs	Cultural context of the geographic areas and idiosyncrasies.	24	Code: ● Social > By Beliefs; Position: 19 - 19; 27/06/2023 14:36:22; Area: 58; 0.455581%. Code: ● Social > Ethics; Position: 63 - 63; 27/06/2023; 15:43:29; Area: 22; 0.172807%.
By culture or customs		16	
Ethics	Lack of ethics and morals	20	

Source: own elaboration

Educational factors related to training and educational preparation, the problem from the institutions and the lack of communication between disciplines, are the characteristics that have caused the most intrusion.

After these, the factors dependent on the professional activity, the lack of knowledge of the professional profile and acting in competencies that are not of the profession cause occupational encroachment and in third place those related to social factors (beliefs, culture or customs of the population), in addition to the lack of ethics in the professional activity are the causes of occupational encroachment. According to this relationship where the frequencies of participation $f_i = 68$, $f_i = 65$ and $f_i = 60$ shown respectively, these are the factors that produce occupational encroachment in the health sciences.

Economic factors such as necessity, cost competition or profit motives with a $f_i = 56$, as well as laws and rules regulating the professions or sanctioning wrongdoing with a $f_i = 54$. Other reasons such as easy access to training or information in health sciences that only professionals in the field should perform with a $f_i = 31$ marks, were the three central factors that did not have such an important appearance.

What action do you consider most important to avoid occupational encroachment? According to the comments made by the participants, 59.1% of the respondents consider that knowing and respecting professional competencies and limits is the best way to combat occupational encroachment. 31.3% believe that creating awareness from professional training is the key to preventing intrusion. 9.6% of respondents highlight the importance of working collaboratively in patient care as a strategy to avoid occupational encroachment.

In general, it is observed that the participation of health professionals was balanced, however, it is important to note that physicians had the highest participation, followed by orthotists-prosthetists, psychologists, physiotherapists, and occupational therapists.

These data indicate that physicians had a greater interest and commitment to the topic addressed, which may be due to their central role in the health field. Orthotists-prosthetists also showed significant participation, reflecting the importance of their work in rehabilitation and the use of medical devices.

The participation of psychologists and physiotherapists was quite similar, as both groups have a strong interest in the topic and an understanding of its relevance in their respective areas of work.

This shows that multidisciplinary, as revealed by Nima Rezaei (Rezaei, 2022) in the work of the health sciences, is transcendental to reduce the risks of patient care that have led the WHO (World Health Organization, 2019a), even to determine one day a year for recognition, several authors demonstrate this in their works such as Kyu-Tae H. et. al. on the importance of multidisciplinary care in post stroke patients (Han et al., 2015).

The practice of medicine and other health professions requires specific technical and scientific knowledge, as well as adequate and certified training (Recognition of Official Validation of Studies (RVOE), 2015).

Lack of experience, knowledge, and skills necessary to perform certain medical procedures puts the health and safety of patients at risk. Health professionals through the study clearly express that occupational encroachment is an act that becomes a serious health risk, as Solft Zarate (Solft, 2022) shows with the intrusion of coaching in the professional work of psychology or Gonzalez L (González, 2003), in the field of nutrition mentions it, among other actions that will always be a health risk, as described by other authors (Jiménez et al., 2017) and has emphatically highlighted during the study.

In addition, the lack of knowledge in specific areas can lead to errors in the administration of medications, the performance of surgical interventions or the interpretation of diagnostic tests, among others.

It is essential that health professionals are properly trained and updated to ensure quality of care and patient safety.

The concept of occupational encroachment (Daniel, 2004) according to health professionals in Mexico, converge in a very clear way. The study showed that the general perception is of acting in the professional field without a degree and license that evidences their specific training, it is also working without permission, an invasion in acting without being requested (without invitation), which also consents and encourages unfair competition and is a crime that should be punished and punished (Checa, 2010), for example, an individual who poses as a doctor and performs medical treatment without having the proper license. Because of this, its understanding, comprehension and avoid ability by all health professions is important and transcendental for the development of science and the best health care.

Accordingly, the need for equal and conceptually similar communication among health professionals, as demonstrated by several authors (Liu et al., 2021; Valdez et al., 2021; Walker & Sivell, 2022), leads to the need to create policies, spaces, guidelines, and models of multidisciplinary and interprofessional care that make clear what occupational encroachment is and its risks.

Studies such as the one developed by Wilkes M. and Kennedy R (Wilkes & Kennedy, 2017) integrate an important relationship between the reduction of occupational encroachment and an adequate university training, this through the strengthening of teaching with interprofessional actors, incorporating professionals from different areas so that students acquire a multidisciplinary vision.

University training provides the theoretical and practical knowledge necessary to perform adequately in a profession, while providing the acquisition of the necessary skills and competencies, which helps to reduce occupational encroachment, since those who have adequate university training have a greater chance of offering a quality and safe service.

On the other hand, the incorporation of professionals from different areas in university education provides students with a broader and more complete vision of their future profession. This allows them to understand the importance of working in a collaborative and interdisciplinary manner.

The study demonstrates the impact of the training provided by institutions of higher education, particularly in the health sciences, on occupational encroachment, the professionals surveyed, even with the age variability observed, which translates into periods of professional development.

In addition, references (Rhodes, 2020, 2022) are very emphatic in including within her ethical duties of medicine (Health Sciences), that "Overseeing the profession" and "Developing and maintaining professional competence", are two examples that, added to 14 other precepts, demonstrate that there are many professionals interested in the best health care and professional respect among the sciences involved in its delivery.

Each professional has a specific set of knowledge and skills that they bring to the healthcare team, and it is important to recognize and value these differences. According to the study, the best way to combat occupational encroachment is communication, this coincides in an outstanding way with studies such as the one carried out by Martin Padilla, E.; Sarmiento Medina, P. and Ramirez Jaramillo,

A (Martín Padilla et al., 2014), in their work on the incidence of interprofessional communication with the quality of care, besides knowing and respecting professional competences and limits, creating awareness from professional training and working in a collaborative and transdisciplinary way (Thompson, 2014) in patient care. These actions can contribute to quality and safety in health care.

Conclusions

The results obtained in this research are real phenomenological testimonies that allow us to see the dimensions of occupational encroachment, as well as its interaction in all the contexts of the daily life of the population and health professionals.

Interprofessional communication is transcendental for the reduction of occupational encroachment. Its correct application contributes to patient safety and guarantees the quality of care. Likewise, interprofessional communication and respect for professional boundaries are fundamental aspects of quality patient care.

This study demonstrates the importance of ethical training in the health sciences and that the occupational encroachment competencies constitute a punishable action and represents a serious risk to the safety of the population.

Keywords: Occupational encroachment; Health risk; Health science; Patients; Ethics.

It is necessary that all the actors related to occupational encroachment: government, health and educational institutions, colleges, and professionals, work together to implement and establish policies and regulations on professional competencies, their limits, and sanctions for those who do not respect them.

Declarations

Conflict of interest

The authors declare no conflict of interest. They have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Authors' contribution

Ramírez-Jiménez, Alida: I contribute to the idea of the project and the development of the research.

Salinas-Sánchez, Igor: I contribute to the idea of the project, the development of the research, data analysis, review and editing.

Lara-Aguilar, Susana: I contribute to the development of research, data analysis, review and editing.

Xolalpa-González, Juan-Azael: I contribute to the development of research, review and editing.

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Abbreviations

WHO	World Health Organization
RVOE	Recognition of Official Validation of Studies

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Background

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