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Original Article

Palliative care knowledge among Peruvian physicians: Is it time for an educational change?

Conocimiento en cuidados paliativos en Médicos Peruanos: ¿Será momento de un cambio educacional?

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ABSTRACT

Introduction: Palliative Medicine (PM) is a vital branch of medicine that focuses on the relief of symptoms while facing a life-threatening illness. In Peru, PM education is not included in the medical school curriculum and there is currently no fellowship for adequate PM training.

Objective: To evaluate Palliative Medicine knowledge among Peruvian graduated physicians who are currently training or practicing in Peru.

Methods: An observational, cross sectional and analytical study was conducted in graduated physicians from Peruvian medical schools who have or have not done a residency training and are currently residing and practicing medicine in Peru. Peruvian physicians were provided with an online link to assess their palliative medicine knowledge, primarily utilizing the Palliative Care Knowledge Test Spanish Version (PCKT-SV) which was our primary outcome variable.

Results: A total of 120 physicians answered the questionnaire from different parts of Peru. Most of them were male (55.83%) and the range of age was between 25-40 years (81.67%). Regarding knowledge levels about palliative care, we found a higher correct answers for philosophy (83.75%), followed by dyspnea (68.12%). The least proportion of correct answers were present in the dimensions of psychiatry problems (54.58%), pain (56.39%) and gastrointestinal problems (58.33%).

Conclusion: Peruvian physicians exhibit a commendable level of knowledge regarding palliative care, but issues arise in the comprehensive management of palliative patients since most of the medical practitioners lack specific expertise in this domain. Furthermore, the deficiency of undergraduate and postgraduate education on the subject is noteworthy.

Keywords: Palliative Care; Palliative Treatment; Internship and Residency.

RESUMEN

Introducción: La Medicina Paliativa (MP) es una rama vital de la medicina que se enfoca en el alivio de los síntomas mientras se enfrenta una enfermedad potencialmente mortal. En Perú, la educación en MP no está incluida en el plan de estudios de las facultades de medicina y actualmente no existe una residencia para una formación adecuada en MP.

Objetivo: Evaluar el conocimiento sobre Medicina Paliativa entre médicos peruanos graduados que se encuentran actualmente en entrenamiento o en ejercicio en Perú.

Métodos: Se realizó un estudio observacional, transversal y analítico en médicos graduados de facultades de medicina peruanas, quienes han realizado o no una residencia y que actualmente residen y ejercen medicina en Perú. A los médicos peruanos se les proporcionó un enlace en línea para evaluar sus conocimientos sobre medicina paliativa, utilizando principalmente la versión en español del Palliative Care Knowledge Test (PCKT-SV), que fue nuestra variable principal de resultado.

Resultados: Un total de 120 médicos respondieron el cuestionario desde diferentes partes del Perú. La mayoría de ellos eran hombres (55,83%) y el rango de edad estaba entre 25 y 40 años (81,67%). Con respecto a los niveles de conocimiento sobre cuidados paliativos, encontramos un mayor porcentaje de respuestas correctas en la dimensión de filosofía (83,75%), seguido de disnea (68,12%). La menor proporción de respuestas correctas se presentó en las dimensiones de problemas psiquiátricos (54,58%), dolor (56,39%) y problemas gastrointestinales (58,33%).

Conclusión: Los médicos peruanos exhiben un nivel encomiable de conocimiento sobre cuidados paliativos, pero surgen dificultades en el manejo integral de los pacientes paliativos, ya que la mayoría de los médicos carecen de una formación específica en este campo. Además, se destaca la deficiencia en la educación de pregrado y posgrado sobre este tema.

Palabras-clave: Cuidados Paliativos; Tratamiento Paliativo; Internado y Residencia.

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INTRODUCTION

The art of palliative medicine (PM) relies on improving the quality of life for both the patient, who is facing a life-threatening illness, and their family. It does not only consist of preventing and treating the symptoms experienced by patients who have an illness, but also in helping the patients and their families make important decisions about the patient's care[1]. However, according to the World Health Organization (WHO) in 2020, only 14% of people who need palliative care services currently receive it and the need for palliative care medicine will continue to increase because of ageing populations and prevalent chronic diseases[2].

In the Latin American region, notable advancements have been observed in several key indicators related to palliative care services, including the number of services per inhabitants, the presence of national plans, educational initiatives, and the availability of medicinal resources. However, despite these positive developments, the current state of palliative care in the region remains insufficient, necessitating concerted efforts to underscore its significance in both medical school curricula and physician training programs. In recent years, a growing divergence in the distribution of palliative care resources has become apparent among countries in the region, with Peru registering the lowest proportion of palliative care teams per population and consistently ranking at the bottom of various relevant indicators. This disparity highlights a relative underdevelopment in the field of palliative care in Peru when compared to other Latin American nations[3,4].

In Peru, a palliative care course is not included in the medical school curriculum[5] – which leads to a poor understanding of PM, shown by Tarazona-Pedreros on her study about palliative care knowledge among university medical students in Peru[6]. Furthermore, there are studies concerning the demand for palliative care on hospital wards, as demonstrated by Velasquez-Manrique in the study on the requirement for palliative care in hospitalized patients, revealing that 38% of patients required such care[7]. Furthermore, we suspect that the lack of foundation in PM during medical school, leads to future poor knowledge and practice – foundational knowledge in PM is crucial for Peruvian physicians as there are no palliative medicine residencies in our country, and general physicians as well as specialists of different branches oversee patients in need of adequate PM.

Hence, the purpose of this study is to evaluate palliative care knowledge among Peruvian physicians and determine the associated factors. In our bibliographic search, we found no previous studies regarding this subject among Peruvian physicians.

METHOD

An observational, cross sectional and analytical study was conducted in graduated physicians from Peruvian medical schools who have or have not done a residency training and are currently residing and practicing medicine in Peru. A convenience, non-probabilistic sampling method was used.

The main variable was level of knowledge about palliative care, which was evaluated by the Palliative Care Knowledge Test Spanish Version (PCKT-VS) that has been validated and adapted to the Spanish language by Ordoñez et al. This questionnaire includes 31 questions divided into five aspects including generalities in palliative care, bioethics, respect and communication with patient and family, spirituality, symptomatology, and pharmacology. The answers to these questions are Yes or No. Based on Ioshimoto et al, the participants were then divided into four groups based on the percentage of right questions: group 1 (excellent) 76-100%, group 2 (good) 51-75%, group 3 (poor) 26-50%, and group 4 (bad) 0-25%[8]. The secondary variables were age, sex, specialization, and if palliative care was taught in medical school.

A link was given to Peruvian physicians as a Google Forms link through WhatsApp; this link included informed consent, secondary variables, and the main PCKT-VS questionnaire. All data was collected and recorded in a Google Sheets spreadsheet application. The descriptive analysis of all study variables was performed using STATA 17. They were presented in absolute numbers and proportion or mean and standard deviation. Association between variables was searched using Pearson´s chi square or Fisher´s exact test accordingly. Also, simple linear regression with Beta coefficients were reported with a confidence interval of 95% with statistical criteria. Results were considered significant when $p < 0.05$.

RESULTS

A total of 120 physicians answered the questionnaire from different parts of Peru. Most of them were male (55.83%) and the range of age was between 25-40 years (81.67%). The majority were general physicians without specialty (45%), had less than five years of experience (62.50%), worked in a private hospital (49.17%), and worked in Internal Medicine (72.50%). Only 18.5% of physicians were from other parts of Peru aside from Lima. Only 18.33% of physicians informed having taken a course of in palliative care during medical school training and 11.22% during post graduate training. The average of score obtained in PCKT-SV was 12.3 ± 2.6 points and most physicians had a "good" level of knowledge according to questionnaire results (65.84%) (Table 1).

Table 1. General characteristics of Peruvian physicians in the study.

Characteristics	Total (N=120)	
	n	%
Sex		
Female	53	44.17
Male	67	55.83
Age (years old)		
Less than 25	6	5.00
25 to 40	98	81.67
41 to 59	11	9.17
60 or older	5	4.17
Experience (years)		
Less than 5	75	62.50
5 to 9	20	16.67
10 to 14	10	8.33
15 or more	15	12.50
Health System		
MINSA-GR (Public)	41	34.17
EsSalud (Public)	15	12.50
Policia Nacional – Fuerzas Armadas (Public)	5	4.16
Private	59	49.17
Area of Work		
Internal Medicine	87	72.50
Gynecology	6	5.00
Pediatrics	4	3.33
Surgery	23	19.17
Work Location		
Lima	99	82.50
Outside of Lima	21	18.50
Palliative Care training in medical school		
No	98	81.67
Yes	22	18.33
Palliative Care training in post graduate years		
No	87	88.78
Yes	11	11.22
PCKT-SV		
Mean ± SD	12.3 ± 2.6	
Bad	1	0.83
Poor	27	22.50
Good	79	65.84
Excellent	13	10.83

Abbreviation: SD: Standard deviation.
Note: **Sample size of 98 physicians.

Regarding knowledge levels about palliative care, we found a higher correct answers for philosophy (83.75%), followed by dyspnea (68.12%). The least proportion of correct answers were present in the dimensions of psychiatry problems (54.58%), pain (56.39%) and gastrointestinal problems (58.33%) (Table 2).

In the bivariate analysis regarding knowledge level of palliative care, we did not find associations between any of the including variables (Table 3).

In the crude sample, no association between variables were found. Furthermore, after adjusting confusing variables according to epidemiologic criteria, the tendency stayed, without reporting new statistically significant associations (Table 4).

DISCUSSION

According to Aliaga Chavez et al., the progress of palliative care in Latin America has exhibited a relatively slow pace when compared to other regions of the world. Within Latin America, Peru finds itself placed within the lower echelons concerning the provision of palliative care services, largely attributed to deficiencies in education, funding, and the prevalence of common misconceptions regarding Palliative Care. This deficiency can be largely attributed to the absence of a comprehensive educational foundation during medical school and postgraduate years[9]. Consequently, this study's researchers recognized the paramount importance of investigating the knowledge of practicing physicians in Peru.

On a global scale, various studies have demonstrated the limited awareness of palliative care among healthcare professionals and the general population[10]. In a study conducted in Mozambique, it was found that only 15% of physicians were familiar with the concept of "do-not-resuscitate"[11]. Similarly, in Vietnam, knowledge surveys revealed that only 44% of questions were answered correctly[12]. In Germany, a group of intensivists correctly answered 55% of knowledge questions, and more than half of them considered themselves either confident or very confident in palliative care management. However, it was concluded that the confidence displayed did not necessarily correlate with their actual knowledge[13]. The lack of awareness of palliative medicine is not limited to healthcare professionals, as the general population also lacks understanding of the scope of palliative care. In the United States, it was identified that only one in three individuals had knowledge of palliative care[14].

While most physicians exhibited a "good" level of knowledge regarding palliative care, as per the PCKT-SV assessment, it is imperative to dissect this knowledge across various domains. The domain of philosophy garnered the highest number of correct answers, suggesting a strong

Table 2. Knowledge of Palliative Care according to PCKT-SV among Peruvian physicians.

Questions	Correct		Incorrect	
	n	%	n	%
Philosophy				
Q1: Palliative care should only be provided for patients who have no curative treatments available.	97	80.83	23	19.17
Q2: Palliative care should not be provided along with anti-cancer treatments.	104	86.67	16	13.33
Total for philosophy domain		83.75		16.25
Pain				
Q3: One of the goals of pain management is to get a good night's sleep.	103	85.83	17	14.17
Q4: When cancer pain is mild, pentazocine should be used more often than an opioid.	74	61.67	46	38.33
Q5: When opioids are taken on a regular basis, non-steroidal anti-inflammatory drugs should not be used.	84	70.00	36	30.00
Q6: The effect of opioids should decrease when pentazocine or buprenorphine hydrochloride is used together after opioids are used.	57	47.50	63	52.50
Q7: Long term use of opioids can often induce addiction.	20	16.67	100	83.33
Q8: Use of opioids does not influence survival time.	68	56.67	52	43,33
Total for Pain domain		56.39		43.61
Dyspnea				
Q9: Morphine should be used to relieve dyspnea in cancer patients.	90	75.00	30	25.00
Q10: When opioids are taken on a regular basis, respiratory depression will become common.	79	65.83	41	34.17
Q11: Oxygen saturation: levels are correlated with dyspnea.	61	50.83	59	49.17
Q12: Anticholinergic drugs or scopalamine hydrobromide are effective for alleviating bronchial secretions of dying patients.	97	80.83	23	19.17
Total for Dyspnea domain		68.12		31.88
Psychiatric Problems				
Q13: During the last days of life, drowsiness associated with electrolyte imbalance should decrease patient discomfort.	52	43.33	68	56.67
Q14: Benzodiazepines should be effective for controlling delirium.	57	47.50	63	52.50
Q15: Some dying patients will require continuous sedation to alleviate suffering.	115	95.83	5	4.17
Q16: Morphine is often a cause of delirium in terminally ill cancer patients.	38	31.67	82	68.33
Total for Psychiatric Problems domain		54.58		45.42
Gastrointestinal Problems				
Q17: As terminal stages of cancer, higher calorie intake is needed compared to early stages.	53	44.17	67	55.83
Q18: There is no route except central venous for patients unable to maintain a peripheral intravenous route.	83	69.17	37	30.83
Q19: Steroids should improve appetite among patients with advanced cancer.	75	62.50	45	37.50
Q20: Intravenous infusion will not be effective for alleviating dry mouth in dying patients.	69	57.50	51	42.50
Total for Gastrointestinal Problems Domain		58.33		41.67

Table 3. General characteristics according to level of knowledge in Palliative Care among Peruvian physicians.

Characteristics	Leve of Palliative Care Knowledge								*p* value
	Bad		Poor		Good		Excellent		
	n	%	n	%	n	%	n	%	
Sex									0.127†
Female	1	1.89	16	30.19	32	60.38	4	7.55	
Male	0	0.00	11	16.42	47	70.15	9	13.43	
Age (years)									0.937†
Less than 25	0	0.00	2	33.33	4	66.67	0	0.00	
25 to 40	1	1.02	23	23.47	62	63.27	12	12.24	
41 to 59	0	0.00	1	9.09	9	81.82	1	9.09	
60 or more	0	0.00	1	20.00	4	80.00	0	0.00	
Years of Experience									0.609†
Less than 5	1	1.33	19	25.33	49	65.34	6	8.00	
5 to 9	0	0.00	3	15.00	13	65.00	4	20.00	
10 to 14	0	0.00	3	30.00	5	50.00	2	20.00	
15 or more	0	0.00	2	13.33	12	80.00	1	6.67	
Health System									0.893†
MINSA-GR (Public)	0	0.00	11	26.83	26	63.41	4	9.76	
EsSalud (Public)	0	0.00	2	13.33	12	80.00	1	6.67	
P.N.P y FF.AA.	0	0.00	2	40.00	3	60.00	0	0.00	
Private	1	1.69	12	20.34	38	64.41	8	13.56	
Physician Type									0.888†
General Physician	1	1.85	11	20.37	35	64.81	**7**	12.96	
Rural Year Physician	0	0.00	3	27.27	7	63.64	1	9.09	
Resident Physician	0	0.00	8	30.77	17	65.38	1	3.85	
Specialist Physician	0	0.00	5	17.24	20	68.97	4	13.79	
Area of Work									0.543†
Internal Medicine	1	0.00	20	22.99	54	62.07	12	13.79	
Gynecology	0	0.00	2	33.33	4	66.67	0	0.00	
Pediatrics	0	0.00	2	50.00	2	50.00	0	0.00	
Surgery	0	0.00	3	13.04	19	82.61	1	4.35	
Place of Work									0.847†
Lima	1	1.01	21	21.21	66	66.67	11	11.11	
Outside Lima	0	0.00	6	28.57	13	61.91	2	9.52	
Training in Medical School									0.339†
No	0	0.00	23	23.47	64	65.31	11	11.22	
Yes	1	4.55	4	18.18	15	68.18	2	9.09	

Notes: †Fischer's exact test; **Sample size of 98 physicians.

Table 4. Crude Model and Adjusted Lineal Regression to evaluate factors associated to knowledge in Palliative Care among Peruvian physicians.

Variables	Palliative Care Knowledge Test (PCKT)					
	Crude model[a]			Adjusted model[a,b]		
	β	CI 95%	*p* value	β	CI 95%	*p* value
Sex						
Female	Ref.	—	—	Ref.	—	—
Male	0.94	0.01 to 1.87	**0.048**	0.79	-0.23 to 1.80	0.128
Age (years old)						
Less than 25	Ref.	—	—			
25 to 40	0.57	-1.61 to 2.74	0.606		Not evaluated*	
41 to 59	1.33	-1.29 to 3.96	0.317			
60 or more	1.13	-2.00 to 4.27	0.475			
Years of experience						
Less than 5	Ref.	—	—	Ref.	—	—
5 to 9	1.04	-0.25 to 2.33	**0.113**	0.79	-0.70 to 2.29	0.296
10 to 14	0.74	-0.99 to 2.47	0.398	0.73	-1.38 to 2.84	0.495
15 or more	0.84	-0.61 to 2.29	0.254	0.20	-1.91 to 2.32	0.852
Health System						
MINSA-GR (Public)	Ref.	—	—			
EsSalud (Public)	0.37	-1.20 to 1.94	0.642		Not evaluated*	
P.N.P and FF.AA.	0.10	-2.36 to 2.56	0.934			
Private	0.31	-0.75 to 1.37	0.563			
Physician Type						
General Physician	Ref.	—	—	Ref.	—	—
Rural Year Physician	-0.28	-1.97 to 1.41	0.744	-0.16	-1.86 to 1.54	0.856
Resident Physician	-0.83	-2.05 to 0.39	**0.180**	-0.99	-2.24 to 0.26	0.119
Specialist physician	0.56	-0.62 to 1.74	0.348	0.01	-1.77 to 1.79	0.994
Area of Work						
Internal Medicine	Ref.	—	—			
Gynecology	-0.35	-2.55 to 1.83	0.748		Not evaluated*	
Pediatrics	-1.11	-3.76 to 1.55	0.411			
Surgery	-0.01	-1.22 to 1.21	0.989			
Place of Work						
Lima	Ref.	—	—			
Outside Lima	-0.13	-1.37 to 1.11	0.832		Not evaluated*	
Training in Medical School						
No	Ref.	—	—			
Yes	-0.48	-1.69 to 0.74	0.437		Not evaluated*	
Training in Post Graduate Years**						
No	Ref.	—	—			
Yes	1.29	-0.33 to 2.92	0.217		Not evaluated *	

Notes: β: Coefficient of linear regression, **CI 95%**: Confidence Interval 95%;
[a]Model of simple lineal regression, [b]Adjusted by sex, years of experience.;
*Not included in the adjusted model according to epidemiologic criteria, $p > 0.2$ in crude model;
**Sample size of 98 physicians.

foundational understanding of the necessity for palliative care in specific patient scenarios. However, domains related to symptom control, such as pain, dyspnea, psychiatric issues, and gastrointestinal problems, demonstrated a less robust knowledge base, despite these areas being integral components of palliative care. Notably, there are associated barriers for healthcare providers, encompassing a lack of knowledge, requisite skills, and adequate time for the comprehensive assessment and management of pain[9].

The origin of the knowledge gap among Peruvian physicians in the realm of palliative care is exemplified by a study conducted in non-cancer healthcare services in Peru. This study revealed a substantial demand for the establishment of palliative care units and an enhancement of educational resources, as 82% of physicians and 69% of nurses reported inadequacies in palliative care education, with only one in ten physicians having received formal instruction on the subject[9]. Nevertheless, it is noteworthy to mention that significant strides have been taken at the national level to address the training and education of palliative care providers in Peru, including the introduction of programs such as the Master in Palliative Care and Pain Management and Certification in Palliative Care.

It is imperative to commence the dissemination of information regarding the implications and benefits of palliative care at both the population level and among healthcare professionals, starting from undergraduate education. The demand for palliative care in both inpatient and outpatient settings is evident, emphasizing the need for a comprehensive patient-centered approach. As observed in the results, the overall level of awareness and understanding is relatively high. However, when examining specific aspects, it becomes apparent that there is a substantial amount of work yet to be undertaken in this regard.

CONCLUSION

Peruvian physicians exhibit a commendable level of knowledge regarding palliative care, but issues arise in the comprehensive management of palliative patients since most of the medical practitioners lack specific expertise in this domain. Furthermore, the deficiency of undergraduate and postgraduate education on the subject is noteworthy. Considering these observations, we recommend that instruction related to the issues be integrated into all facets of medical professional development, encompassing both physicians and healthcare personnel, considering that the care of palliative patients necessitates an interdisciplinary approach.

ETHICAL ASPECTS

All participants unanimously agreed to take part after providing informed consent online. Participants were volunteers and had the option to withdraw from the study at any time. Data collection was conducted anonymously, and confidentiality was rigorously maintained.

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