

# Knowledge about the competent patient among first- and fifth-year medical students at the University of Concepción

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## Abstract:

**Introduction and Purpose:** Bioethics guarantees the respect for the human being. Therefore, it is necessary to evaluate the patient's competence. However, there are clinical situations that make it difficult to classify a patient as competent. The main objective of this work is to compare the degree of knowledge of the first- and fifth-year students of medicine at the University of Concepción (UdeC) about patient's competence.

**Material and Method:** Cross-sectional study that considered qualitative variables. Target population was the first- and fifth-year medical students of the UdeC, Chile. The sample were students who answered the survey voluntarily. The survey was based on the study "Autonomy of the patient and the right to refuse treatment: Knowledge in Young Peruvian Doctors", adapted to the Chilean culture.

**Results:** 112 replies were obtained; 83 were first-year students and 29 were fifth-year students. 64% of the first year and 72% of the fifth year were able to correctly identify criteria to consider a competent patient. 29% of first year and 72% of fifth year knew the decisions that children can make. 57% of first year and 62% of fifth year could correctly identify the meaning of competence. Finally, regarding the exposed clinical case, 29% of the first year and 45% of the fifth year correctly classified the patient in terms of its competence. 1% of the first year and 10% of the fifth year would make a correct decision in the case.

**Conclusions:** Fifth-year students had a higher degree of knowledge than first-year students, despite being a smaller sample. Both first and fifth grade students presented greater knowledge in relation to theory, but low knowledge in relation to practice, due to a low percentage made the correct decision regarding the clinical case.

**Keywords:** Mental Competency; Clinical Competence; Bioethics; Bioethical Issues.

## I. INTRODUCTION

Bioethics is the systematic study of human behavior in the field of life and health sciences, analyzed from the point of view of moral values and principles, with the main objective of ensuring respect for the human being and the biosphere. Within this objective, an evaluation of the patient's competence is sought, understanding that the patient's competence enables him to exercise his autonomy, being able to present his beliefs, opinions, or feelings in relation to the indicated treatments and their possible alternatives, thus achieving that the patient can protect the best of their interests. In other words, a competent patient can make their own free and informed decisions regarding a proposed treatment, then they can exercise their right to autonomy. On the other hand, a patient classified as not competent will not be able to make Decisions on their own and they must be made by others. [1].

There are different levels of competence. The sliding scale model divides competent patients into three categories according to their abilities to:

- Communicate decisions.
- Understand the information offered.
- Appreciate the situation and its consequences.
- Rationally process information.

In the first category are patients with a minimum level of competence, in the second category patients with a medium level of competence and in the third category patients with a high level of competence. In the case of a patient declared not competent, as he does not belong to any of these three categories, the problem arises in defining who will decide for the patient and by virtue of which principles these decisions should be made [1].

Generally, it is the family members who decide for a non-competent patient, but the responsibility of identifying those family members who really demonstrate knowledge about the patient falls on the physician. Both physician and patient must guide decisions based on ethical values and looking out for the patient's interest [1].

Regarding the participation of the ethic's committees, they assume the responsibility of trying to clarify and resolve rationally and reasonably the value conflicts presented, having a role of suggestion, since the final decision must be made by a family member or the physician in absence of the first [1].

According to the Chilean law number 20.584, "Rights and duties of patients", it establishes in its Paragraph 6, the autonomy of the patient. Then, in paragraph 1 on informed consent, it determines in article 1: "Every person has the right to grant or deny their will to undergo any procedure or treatment related to their health care, with the limitations established in article 16". Consisting the article 16, among other statutes: "In no case, the refusal of treatment may imply as an objective the artificial acceleration of the death process". It should also be considered that article 15 establishes that informed consent will not be required in situations of risk to public health, of vital risk where the patient is unable to express its will or it is impossible to obtain the informed consent of the legal representative because it does not exist, or it is impossible to contact. In addition, in section 3 it refers to the ethic's committees, where it determines in article 17, that if the health professional doubts the competence of the patient or the decision made by its legal representative legal, that could lead the patient to exposure to serious health damage or mortal risk, the physician must seek an opinion from the ethic's committee. With these legal margins, it is established that the patient's competence is based on their autonomy, but in some situations, like in the case of a vital risk with inability to voluntarily express his will, the patient would lose his autonomy, leading to limitations in the patient's competence to make decisions regarding the procedures [2].

## II. PURPOSE

As it can be seen, it is not easy to classify a patient as competent or not competent and it depends on the judgment of each physician, so this work seeks to answer the question: Will first-year medical students of the University of Concepción, compared to fifth-year students, be able to identify when a patient is competent?

To answer the research question, the general objective is to compare the degree of knowledge of the first- and fifth-year students of medicine at University

of Concepción (UdeC). The specific objectives are: evaluate the knowledge of the students regarding the competence to make decisions and identify if students can apply their knowledge of about the competent patient in a case, recognizing whether the patient is competent and the decision to make.

## III. MATERIAL AND METHODS

The following study is an observational, descriptive, cross-sectional study that considered qualitative variables. Its target population was 1st Year Medicine students (N = 121) and 5th Year Medicine students (N = 103), from the Faculty of Medicine of the University of Concepción, in the city of Concepción, Chile. We worked with the total population, the sample corresponding to the students who answered the survey voluntarily. The data collection was carried out by a survey used in the study: "Patient autonomy and right to refuse treatment: Knowledge in Young Peruvian Doctors" (2010 survey), which was based on 3 examples cases, of which Only 1 was considered in the present study, in which a modification was made for a better interpretation. The survey consisted of questions regarding the analysis of the ethical case and application of the ethical analysis. This survey was originally validated by judgment of experts, which were 8 physicians from the Institute of Health Ethics of the UNMSM (Universidad Mayor San Marcos). In the binomial test, the agreement between them ranged from  $p < 0.05$  -  $p < 0.001$ , except in question 7, which corresponded to case 3, which was not included in the present study [3].

In addition, our own questions were added they were validated in the study population by initially applying the survey randomly to 10% of each population (1st Year Medicine students and 5th Year Medicine students), which were respectively,  $n=12$  1st Year Medicine students and  $n=10$  5th Year Medicine students, to visualize any lack of understanding. In addition, a consent annex was added to participate in the study. The survey was prepared using the "Google Forms" platform in Spanish (Fig. 1 and Fig. 2) and it was sent to by e-mail to each population. We waited five days before starting to work with the data to allow response time. The data analysis was based on the number of correct answers the respondents had in each question, comparing by year.

The Microsoft Windows Excel program was used to tabulate data and statistical calculations were performed for each question.

**Survey**

I) Which of the following elements seems most important to you in the process to consider a competent patient?

- a) Is lucid.
- b) That he can only communicate.
- c) Be able to reason and deliberate.**
- d) Be able to recognize the situation you are in.

II) Of the following options, what decision (s) are children capable of making (considering a child, less than 10 years old)? (You can check more than one option)

- Reject effective treatments
- Reject ineffective treatments**
- Consent to treatments of doubtful efficacy

III) What does the term "competition" mean?

- a) Lucid patient with the ability to reason and deliberate, who watches over their autonomy regardless of the treatment indicated by the doctor.
- b) Acts autonomously, with sufficient mental capacity to assess the disease and the benefits or consequences of a treatment.**
- c) I do not know.

IV) 24-year-old male is brought to the emergency room by a friend. Previously healthy, he began to complain of a severe headache and a stiff neck. The results of the physical and laboratory examination, including analysis of the CSF (cerebrospinal fluid), suggest a diagnosis of pneumococcal pneumonia and meningitis. When the diagnosis is informed and they tell him that he will be hospitalized for antibiotic treatment, the patient refuses the medical indication without giving reasons. Then the doctor explains the dire consequences of no treatment, which is a deadly and highly contagious disease, as well as the minimal risks of this treatment, but he persists in his refusal. Apart from the refusal of treatment, the patient shows no alteration in his mental state.

1.- Is the patient competent?

- a) No**
- b) Yes
- c) Missing information

2.- What course of action would you take?

- a) I request legal authorization.
- b) I proceed with the treatment against the wishes of the patient.**
- c) I respect the patient's decision.
- d) I request the opinion of an ethics committee.

Fig. 1. The Survey about the "Autonomy of the patient and the right to refuse treatment" which was used for this study in English.

**Encuesta**

D)Cuál de los siguientes elementos le parece más importantes en el proceso para considerar a un paciente competente?

- a) Se encuentre lúcida.
- b) Que sólo pueda comunicarse.
- c) Sea capaz de razonar y deliberar.**
- d) Sea capaz de reconocer la situación en la que se encuentra.

II) De las siguientes opciones, ¿Qué decisión(es) son capaces de tomar los niños (considerando niño, menor a los 10 años)? (Puede marcar más de una opción)

- Rechazar tratamientos eficaces
- Rechazar tratamientos ineficaces**
- Consentir en tratamientos de eficacia dudosa

III) Qué significa el término “competencia”?

- a) Paciente lúcido con capacidad de razonar y deliberar, que vela por su autonomía independientemente del tratamiento que indique el médico.
- b) Actúa de forma autónoma, con la suficiente capacidad mental para evaluar la enfermedad y los beneficios o consecuencias de un tratamiento.**
- c) No lo sé.

IV) Varón de 24 años, es traído a la sala de emergencia por un amigo. Previamente sano, empezó a quejarse de severo dolor de cabeza y rigidez de nuca. El resultado del examen físico y de laboratorio, incluyendo análisis del LCR (Líquido cefalorraquídeo), sugieren diagnóstico de neumonía y meningitis por neumococo. Cuando se le informa el diagnóstico y le dicen que será hospitalizado para tratamiento antibiótico, paciente rechaza la indicación médica sin dar razones. Luego el médico explica las consecuencias funestas del no tratamiento, que es una enfermedad mortal y altamente contagiosa, así como los riesgos mínimos de este tratamiento, pero él persiste en su negativa. Aparte del rechazo al tratamiento el paciente no muestra alteración de su estado mental.

1.- ¿El paciente es competente?

- a) No
- b) Sí
- c) Falta información

2.- ¿Qué curso de acción tomaría usted?

- a) Solicito autorización legal.
- b) Procedo con el tratamiento contra los deseos del paciente.**
- c) Respeto la decisión del paciente.
- d) Solicito la opinión a un comité ético.

Fig. 2. The Survey about the “Autonomy of the patient and the right to refuse treatment” which was used for this study in Spanish.

#### IV. RESULTS

A total of n=112 respondents were obtained, of which n=83; 74.1% were first-year medical students and n=29; 25.9% fifth-year medical students from the University of Concepción who voluntarily answered the survey and gave their consent to participate in this study.

In relation to question I, which is related to the most important criteria for determining whether a patient is competent, n=53, 64% of the first year and n=21, 72% of the fifth year answered correctly, which can be seen in Table I.

In relation to the answers obtained in question II about the type of decisions that children under 10 years of age can make, n=23; 29% of the first year and

n=21; 72% of the fifth-year students were able to identify them correctly. It should be noted that a higher percentage of first-year students n=37; 44% answered

not knowing in relation to fifth-year students n=6; 20%. The results are shown in Table II.

TABLE I. ANSWERS TO QUESTION I ON COMPETENCY CRITERIA, COMPARING THE GROUP OF FIRST-YEAR STUDENTS VERSUS FIFTH-YEAR MEDICAL STUDENTS

Answers	Medical Students	
	<i>First-year students (n; %)</i>	<i>Fifth-year students (n; %)</i>
Be lucid	1; 1%	4; 14%
That can only communicate	0; 0%	0; 0%
<i>Be able to reason and deliberate<sup>a</sup></i>	<i>53; 64%</i>	<i>21; 72%</i>
Be able to recognize the situation you are in	29; 35%	4; 14%
Total	83; 100%	29; 100%

<sup>a</sup>. The correct answer is highlighted in Italic style.

TABLE II. ANSWERS TO QUESTION II IN RELATION TO COMPETENCE IN CHILDREN, COMPARING THE GROUP OF FIRST-YEAR STUDENTS VERSUS FIFTH-YEAR MEDICAL STUDENTS

Answers	Medical Students	
	<i>First-year students (n; %)</i>	<i>Fifth-year students (n; %)</i>
Refuse effective treatments	6; 7%	1; 4%
<i>Refuse ineffective treatments<sup>b</sup></i>	<i>23; 29%</i>	<i>21; 72%</i>
Consent to treatments of doubtful efficacy	17; 20%	1; 4%
Other/Not respond	37; 44%	6; 20%
Total	83; 100%	29; 100%

<sup>b</sup>. The correct answer is highlighted in Italic style.

Regarding the meaning of the term competence in question III, n=47; 57% of the first year answered correctly compared to n=18; 62% of the fifth year. Worth mentioning that n=16; 19% of first-year

students answered that they did not know about the concept of competence, while no fifth-year student left the question without a specific answer. The results can be seen graphically in Fig. 3.

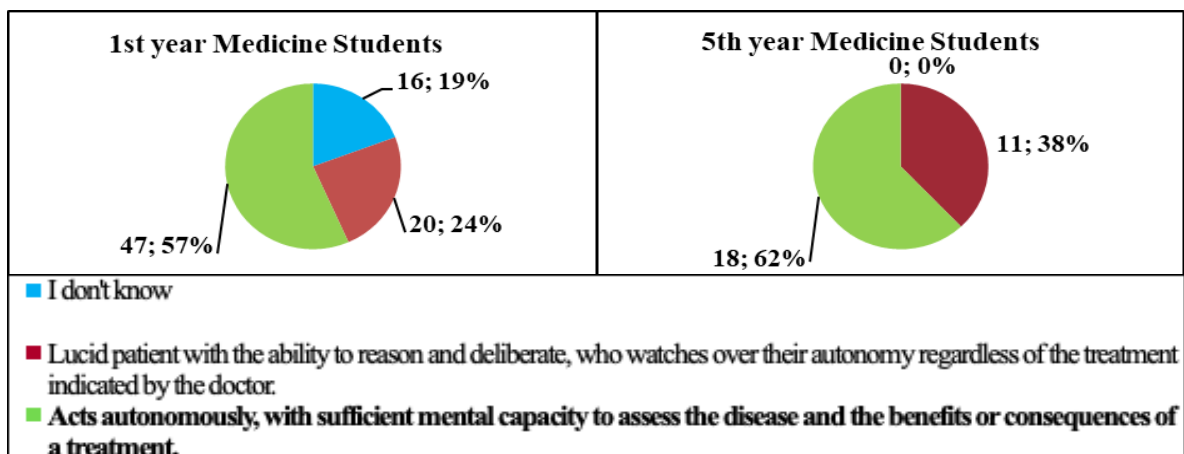


Fig. 3. Answers to question III about the meaning of competence, Comparing the group of first-year students versus fifth-year medical students. \*The correct answer is highlighted in Bold style.

In relation to the clinical case of question IV, about whether the patient was competent or not, n=24; 29% of the first-year students and n=13; 44% of the fifth-year students answered correctly (Question IV.1) which can be seen in Table III.

Finally, just n=1; 1.2% of the first-year students and n=3; 10.3% of the fifth-year students would make a correct decision regarding the case (Question IV.2), as is shown in the Fig. 4.

TABLE III. ANSWERS TO THE QUESTION "IS THE PATIENT COMPETENT?" ABOUT THE CLINICAL CASE IN QUESTION IV, COMPARING THE GROUP OF FIRST-YEAR STUDENTS VERSUS FIFTH-YEAR MEDICAL STUDENTS.

Answers	Medical Students	
	First-year students (n; %)	Fifth-year students (n; %)
Yes	33; 40%	8; 28%
<i>No<sup>c</sup></i>	24; 29%	13; 44%
Missing information	26; 31%	8; 28%
Total	83; 100%	29; 100%

<sup>c</sup> The correct answer is highlighted in Italic style.

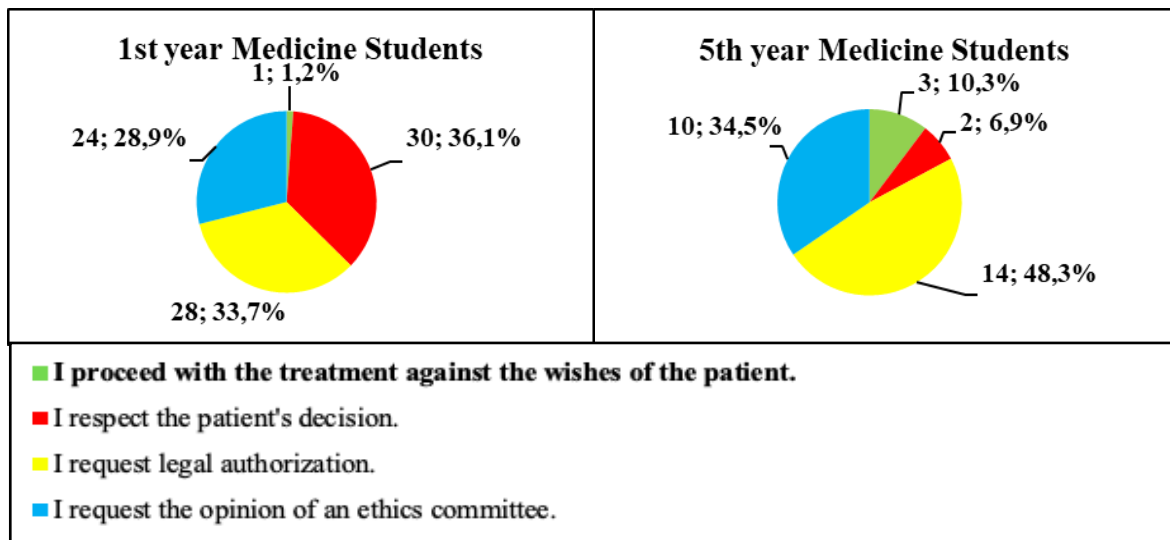


Fig. 4. Answers to question "What course of action would you take?" about the clinical case in question IV, Comparing the group of first-year students versus fifth-year medical students. \*The correct answer is highlighted in Bold style.

V. DISCUSSION:

Among the limitations of the study, it is necessary to mention the heterogeneity in terms of the size of both samples, due to the voluntary nature of participating in the study. Based on the results and considering the percentage of correct answers in each question, in general a higher degree of knowledge is observed in fifth-year students, even though the sample in that group was smaller.

In the career of medicine at University of Concepción's curriculum, Bioethics is included as a semester subject during the second year, and annually during the fourth and fifth years, which could explain the greater general knowledge of fifth-year students versus the first years. However, it is alarming that, although the theoretical part is handled relatively well, when applying the knowledge, a small percentage of students could make the correct decisions.

The clinical case raised in question IV exemplifies only one of the many clinical situations in which the limits of the definition of competence becomes blurred. In this case, it begins as an apparently competent patient, facing a refusal to an effective treatment, with high benefits and low risks. It is important to consider that since it is a seriously ill patient with a central nervous system affection, therefore his cognitive and volitional capacities are limited, however he is aware of what is happening around him.

According to Drane's Sliding Scale Model of Competency, this case is in the standard No. 1, which requires a minimum level of competence (awareness and assent) to consent to effective low risk treatments and reject ineffective treatments [4].

The conflict occurs when, in the clinical case presented, the patient must decide to accept an effective, efficient, and low-risk treatment, and, considering that a minimum level of competence is

needed, it could be clear that the person understands and decides freely, but he ends up rejecting it.

In such a situation, according to Jonsen, in his book "Clinical Ethics: A Practical Approach to Ethical Decisions in Clinical Medicine.", physicians may think that the patient's decision may be detrimental to their health and well-being, and they generally assume that people do not act contrary to their best interests, thus putting into question the real competence of the patient to make decisions regarding their situation [5].

Although the decisions made by a fully competent patient must be respected regardless of their outcome, refusing an effective treatment for an acute and serious disease is placed in the standard No. 3 of the Drane's Sliding Scale Model of Competency, and therefore, the person who makes these types of decisions must meet the highest standards of competence, must be able to appreciate the scope of their decision, which includes more than just the medical details of the disease, the options and risks of the treatment. To be qualified as competent and to make apparently irrational and potentially life-damaging decisions, the patient must appreciate the implications that these will have on his life, so both technical and personal analysis is required, plus intellectual and emotional analysis. In addition, the patient is required to be able to justify his decision by reasons that demonstrate that he has weighed the medical information with his own beliefs and values, and that decision is faithful and consistent with his belief system [4].

Given that the final determination of the competence of a patient rests with the clinician, who must respect the decisions of the patient as long as he can ensure that it is an autonomous decision, and, considering that in the clinical case presented the diagnosis is accurate and it is a serious condition that endangers the life of the patient, the physician should inquire about the reasons for the refusal, but in the same way should continue with the treatment and if time permits, request legal authorization to proceed, already that it is a medical emergency in a patient whose competence has not yet been properly identified.

#### VI. CONCLUSIONS:

Regarding the correct answers, it can be concluded that fifth-year students had higher degree of knowledge than first-year students, despite being a smaller sample. Furthermore, the fifth-year students

replied with more correct answers than the other group, corresponding to knowledge regarding competence in decision-making. The fifth-year students replied with more correct answers than the compared group, in recognizing the patient's competence and making the correct decision in the case, although few participants made the correct choice.

Both first and fifth-year students presented greater knowledge in relation to theory but low knowledge in relation to practice, since only a low percentage made the correct decision regarding the clinical case. This information could be important when rethinking the teaching of bioethics in medical schools, giving greater importance to the correct application of the concepts in clinical practice, since it is what will ultimately end up directly influencing respect for the patient's autonomy.

The competent patient makes decisions about procedures but when classified as not competent he can not decide about them. Classifying a patient as competent or not ultimately, is a verdict that rests with the judgment of the physician, therefore, relies on the importance to clearly know these concepts, to respect the principles of bioethics and finally, respect every patient always seeking an integrated care.

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