

## ORIGINAL RESEARCH

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# Neuropediatrics postgraduate students' learning process through hidden curriculum at Universidad Nacional de Colombia

*Aprendizaje a través del currículo oculto en estudiantes del posgrado en Neuropediatria de la Universidad Nacional de Colombia*

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## | Abstract |

Based on the importance of a comprehensive professional training, this research aims at observing and describing the learning process achieved through the hidden curriculum of students enrolled in the Neuropediatrics Specialization Program at Universidad Nacional de Colombia in 2012 y 2013.

A qualitative study to explore students' training, transmission of attitudes, values and ethical aspects was performed through the implementation of a semi-structured interview and a focal group. For this group of students, learning through the hidden curriculum is real and educational, allows having a better approach to patients and acquiring appropriate tools for a successful job performance. Nevertheless, it is still insufficient to address ethical dilemmas such as delivery of bad news and patients' deaths. Thus, complementing this type of learning with explicit training on bioethics is required.

**Keywords:** Medical Education; Graduate Program; Curriculum; Ethics, Medical (MeSH).

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## | Resumen |

Basándose en la importancia de la formación integral del profesional, se pretendió observar y describir el aprendizaje logrado a través del currículo oculto en los estudiantes matriculados en la especialidad en Neuropediatria de la Universidad Nacional de Colombia en 2012 y 2013.

A través de la aplicación de una entrevista semiestructurada y de un grupo focal, se realizó un estudio cualitativo que exploró aspectos de la formación, la transmisión de actitudes y valores y los aspectos éticos de los estudiantes.

Para este grupo de alumnas el aprendizaje a través del currículo oculto es real y formativo, les permite una mejor aproximación a

sus pacientes y les da las herramientas para un desempeño profesional exitoso; sin embargo, es aún insuficiente para resolver dilemas éticos como enfrentar la explicación de malas noticias y el momento del final de la vida. Se requiere entonces complementar este aprendizaje con enseñanzas explícitas en el área de la bioética.

**Palabras clave:** Educación médica; Currículo; Ética médica (DeCS).

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## Introduction

Medical science has greatly progressed in the past century, and has generated a flood of information and technologies that may be overwhelming for doctors and medical students, causing both to lose sight of other important aspects of training such as social and human factors and ethics, thus, creating a gap between contents and everyday situations (1) that are essential for the training of any individual (2).

Acquisition of learning related to values, attitudes and behaviors that characterize a professional in medicine is thought to be easier when teachers set an example; this approach is known as the hidden curriculum.

The hidden curriculum, defined as a set of rules, customs, beliefs, symbols and values, unrecognized or explicitly specified in the official syllabus (3), may vary depending on the population and the context in which it is presented; for this reason, no pre-established content or a specific form of teaching is pointed out. This type of education is a significant source of learning, which can train or distort students based on how it is presented to them (4).

There is a strong debate between those who believe that such teaching method cannot rely only on learning through that which is hidden, and even argue that in reality this is not a method for meaningful learning, and those who think that such an important issue should be a specific subject and that it should be included in the regular syllabus (1,4-6).

In postgraduate medicine training, the pedagogical model is mainly based on andragogy, which relies on the interest and the experiences of students and their ability to find different routes to access information that will enable more knowledge acquisition (7). Here, the professor becomes a guide and a counselor and students are the true sculptors of their knowledge.

Then, what should be transmitted by the medicine professor to students? Other than knowledge, as expected, values such as ethics, honesty, loyalty and the ability to interact with the patient should also be transmitted (8,9). Despite the importance of this topic, studies on the learning process of values in postgraduate programs, more specifically of medicine students, are scarce, leaving a gap in this area of knowledge.

This study attempts to find an approach to the vision of students of the Specialization in Neuropediatrics on why and how these hidden contents correlated to the management of moral and ethical issues are taught, as well as their impact on the students training.

## Methods

A qualitative and descriptive research performed with the participation of graduate students of Neuropediatrics of Universidad Nacional de Colombia enrolled during the academic periods of the years 2012 and 2013 was performed. This was a two-stage study and was conducted as follows:

First, an individual semi-structured interview with students of second, third and fourth year was done with the purpose of exploring specific aspects of the hidden curriculum. This interview included topics such as the relationship with the professors and among graduate students, the perception of their situation regarding their peers, the attitudes of professors and other professionals, and how those attitudes have an impact on training.

Second, and based on the categories established through the interviews, a discussion was held within a focus group in which all active students of the graduate program in Neuropediatrics engaged.

The identity of the participants was not disclosed at any of the stages of the study; all students were instructed on maintaining the confidentiality of the information and identities, and an informed consent for participation was required.

## Results

### Semi-structured interviews

The interviews were answered by five out of six students (all female) enrolled in the second, third and fourth year of studies during 2013. The respondents were between 26 and 36 years old.

Three main categories resulted from the analysis of the results obtained in the interviews: 1) the characteristics of the graduate program in Neuropediatrics and the teaching staff, 2) the everyday life of a resident in Neuropediatrics taking into account the relationships created within the professional context and some aspects of their training, and 3) the aspects of the program related to teaching ethics and values.

The following items correspond to the findings of the categories mentioned above:

#### 1) Characteristics of the Neuropediatrics graduate program and teaching staff

According to students, the ideal professor should be honest, ethical and kind; a professor must be someone who likes and knows how

to teach, capable of empathically approaching a patient and his family and of teaching how to communicate effectively with them. However, the fact that teachers have a high knowledge level related to the profession, in order to accurately teach a subject, should not be left aside. These ideal qualities, as reported by students, are characteristic in their teachers, because they are perceived as fair, equitable and tolerant with their students and willing to teach them all.

In general, professors are able to convey knowledge not only about academics, but about a special style of medical behavior: students are taught how to create a medical record and perform a physical examination, about the way to introduce themselves, and how to communicate and behave in front of patients and their relatives, which is knowledge that is relevant for professional performance and perceived by students as positive aspects. Nevertheless, the gap occasionally found between professors and students limits this type of learning.

Three of the participants stated that they grasped techniques for addressing patients from their professors, which is considered a positive aspect; witnessing how professors approach their patients is deemed as a kind gesture and is, perhaps, one of the most valuable educational experiences for their future professional performance.

All students consider that the specialization program provides them with both academic, and care and practice opportunities; the diversity of patients and the willingness of professors and other professionals to teach them turns this environment into an optimal setting for learning.

#### 2) The everyday life of a Neuropediatrics resident

Regarding the relationships between the student group, some aspects of comprehensive training and what is considered "correct" become a complex issue and cause discrepancies. The students consider that they are well treated and have not been discriminated by professors, but there are different views on the relationships between them: on the one hand, three students believe that they have a close relationship with their professors, which has allowed them to establish a friendship and do well in the academic and healthcare environment, and that such relationship is easier to establish with a partner of the same year of study, since understanding each other is simple; on the other hand, two of them express that relationships are difficult to establish, mainly because of a competitive environment.

While respondents consider that a neuropediatrician should be an overall skilled person, in social, ethical and academic terms, for them and at that particular moment of their lives, time should be restricted to merely academic activities (research, academy and assistance) because that is what is required for their training, although spaces for other activities related to a comprehensive training are necessary.

#### 3) Aspects of the program related to teaching ethics and values

Three of the respondents believe that the program teaches them to face ethical dilemmas such as communicating with patients and their relatives, and informing bad news resulting from the diagnosis and prognosis of patients, which is essential in their training. When asked if they believed when they started their studies that giving bad news was an important part of their training in Neuropediatrics, the answer was:

"Yes, I saw once a person giving bad news in a poor way, the father was destroyed; and how he was informed [...] it could have been completely different [...] It was already a topic of interest to

me, I think, learning how to give a piece of news as humanely as possible, answering every question without giving way to false expectations. Doing it right is a challenge" (Interview No. 4).

On the other hand, three students expressed that a better approach to facing a catastrophic illness and how to present it to the family is still required. Their answer was:

"No, that's a very difficult part, nobody explains it; one hears it from professors, sometimes in relation with intellectual disabilities in children, but the most serious things that we have to face in the hospital, no one tells you [...] we do not have the space, ethics seminars or meetings to talk about a patient in ethical terms" (Interview No. 2).

Other aspects that help reinforcing the learning of ethical issues, according to students, are related to sharing and interacting with the patients and their relatives, and deal with the human aspects of these diseases, as well as participating in interdisciplinary workshops to learn different viewpoints and interacting in other environments with other specialties allow them to recognize themselves as neuropediatricians with strengths and weaknesses.

All students recognize the importance of explicitly opening such spaces in a way that allows a better development of skills.

### Focal group results

7 out of 9 graduate students in Neuropediatrics gathered for discussion; they were distributed as follows: two first-year students, two third-year students, two fourth-year students and one second-year student.

Based on the results of interviews previously conducted, the following points were discussed by this focal group:

*1. Gains and difficulties during the course of the postgraduate program.* They believe that they have had more gains than loses; they have gained good friends, good personal and professional experiences and learned about leadership besides from what is strictly academic. Nonetheless, the little time available for personal and family matters may lead to frustration. Time and money are scarce to adequately meet academic and administrative activities, to share with relatives and to have a couple and friends.

*2. Is the academy more important than the complete development of values in Neuropediatrics?* They believe that the academy is immersed in comprehensiveness; becoming a good human being is very important to meet the needs of the patient.

*3. Are the ethical dilemmas of a neuropaediatrician restricted to giving bad news or are there other aspects that influence the performance in this specialty?* There are unresolved dilemmas, for example, the relationship with other colleagues or the proper way to handle the relationship with the pharmaceutical industry; what you learn is learned by imitating other specialists, but what is good or bad remains unclear.

It is also necessary to check how far the diagnostic study and the treatment of patients with a neurological injury may go, if interest on the patients and the search for a solution to their problem becomes the starting point, as well as the moment when a doctor becomes fierce, regardless of the opinion and the situation of the family.

There is a major concern about desensitization to the pain of patients and their family, contradictory to the reason why a person

engages in Neuropediatrics; this probably occurs as a defense response to a prolonged exposure to stressful and frustrating situations that are not easy to handle or that do not allow knowing if they are being handled properly or whether related feelings are good or not.

### Discussion

It is clear that the hidden curriculum exists and constitutes a means for transferring knowledge to healthcare professionals as a part of integrality in health. Both academic and personal development, as well as ethical aspects can be communicated. This learning is achieved by observation and imitation, as well as through discussions and presentations of different dilemmas generated by daily practice.

In Medicine, interaction with patients is assessed as very positive during training; as mentioned by the participants of this study, "sharing and interacting with the patients and their families teaches us about the human aspects of these diseases". This finding is similar to that obtained by Henriksen & Ringsted (10), who created sessions during the course of a subject that included patients presenting their diseases to medical students; this experience showed how the students had a stronger learning from the academia, which was rich in experiential aspects and facilitated the relationship with patients in the future.

Also, and as part of the hidden curriculum, there is space for academic excellence in the daily work environment, which generates rivalries between students and that can hinder relations between them; as some residents refer in this work, academic excellence creates an environment of competitiveness. Haidet & Stein (11) suggest how sometimes hierarchies are set according to "scores" and that those who fail the correct answers end up being intimidated, leading to unpleasant feelings and the creation of stressful environments, far from what is known as medical professionalism.

This leads to consider that there are several sources for the hidden curriculum: one, from professors, which is valued by students consulted for this research as a positive aspect, since they are able to convey comprehensive knowledge, not only on academic matters but with a special style of physician behavior relevant for their professional development; another from the social environment of the group, which pushes towards eminently academic aspects that foster competitiveness and individuality (12) and which make students change their interest from ethical, social or familiar aspects to "academic excellence"; and finally, from patients, which makes the students want to improve both academically and personally. Studies conducted in Japan and the United Kingdom (13) show how the persistence of hierarchies and distant relationships between the medical contexts affects work performance and how the doctor-patient relationship is established.

The students acknowledged communicating bad news as one of the greatest ethical challenges. Graduate students of Pediatrics at Universidad de Chile were interviewed about these issues (14) and responded that they are rarely taught these communication skills and find it difficult to follow the example of a professor.

Regarding other ethical aspects of their professional practice, the students feel that there is a limited approach to resolving these dilemmas. In a study conducted with residents of 13 specialties (15), it was found that, for them, ethical issues are left aside and approaching them represents great difficulty. It is striking that in the study by Goold & Stern (16), the relationship with patients was the aspect that caused most concern, while giving bad news was considered less important; findings contrary to those obtained in this study, where students face a particular difficulty with giving bad news, but feel that, through the experience, they can learn about the interaction with patients and their families. This difference may

be generated because, in Neuropediatrics, chronic or involutive diseases are more common, implying greater exposure to these types of situations. This is also acknowledged by palliative care experts, who noted that in the undergraduate medical studies little is taught about these conditions and how to deal with them (16,17).

Although empathy is essential in any doctor-patient relationship, regardless of the conditions and diseases, the importance and need to integrate the academic aspects with this feeling is recognized, since treating neuropediatric patients is highly complex and emotionally charged. As Cutler *et al.* demonstrate in patients with psychiatric disorders, the need for empathy, generated by the medical and non-medical environment, is acknowledged in similar fields (18). These authors also consider that doctors find spiritual enrichment through cultural and complementary activities is essential, but different from those directly related to the medical field.

In this sense, Goldie *et al.*, in their study on undergraduate students of Medicine during their early years, found that molding obtained by observing the behavior of their instructors is key for their training as future professionals (19); the group of neuropediatrics students interviewed in this research had similar considerations: they think that observing the work performed by their professors teaches them about the content and the layout of their specialty.

These students, just like the residents of different specialties evaluated by Ratanawongsa *et al.* (20), admit that the hidden curriculum allows them to learn about ethical issues, but that it is necessary to make the learning of many related concepts that have to do with professional practice explicit.

What would be, then, the ideal model of teaching ethics and values in graduate programs of Medicine? Probably a balance between theoretical guidance on professionalism and ethics, alternated with the molding achieved directly in the practice environment that could lead to more effective learning on the acquisition of values for medical practice (21).

## Conclusions

Learning through the hidden curriculum for graduate students in neuropediatrics is achieved through observation of professor attitudes, the relationship between peers and with patients and families. Once again, the need for professorial training for doctors who serve a double role is confirmed, so that the way of teaching medicine is carried out taking into account the integrity of the patient and the student. As mentioned by Pinilla:

“A teacher is a guide and a support for each student as a citizen, whose life plans includes being an integral and competent professional [...] ; therefore the social function of the university professor, along with his team of students, is to generate solutions to problems of a person in the position of the patient, a community or a society” (22, p275)

Through the hidden curriculum, neuropediatrics students learn skills to interact properly with their patients, both in scientific and social and ethical aspects.

The professor-student relationship is based on academic and welfare aspects; other features such as encouraging humanistic, artistic or cultural activities are little known.

The development of spaces for discussion of the different ethical issues inherent to the specialty, which should be led by experts who should act as guides toward an ethical and professional behavior in neuropediatrics, is required.

While this is evidence of the need for training in ethics and values for a group of medical students in a specific context, it is worth considering generalizing these actions at different levels and areas of training, because this topic is rarely treated and needs to be more visible for the sake of professional practice and patient care.

This paper is based on the graduation paper for the Master's degree in Education pursued by the author Angélica Uscátegui Daccarett (23).

## Conflict of interests

Angelica Uscátegui is a professor of the Academic Unit of Neuropediatrics at Universidad Nacional de Colombia.

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