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TRAINING AND PROFESSIONAL PRACTICE OF THE SPORTS PHYSICIAN IN MEXICO

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Abstract: Partial results of the research “Training and professional practice of the sports doctor in Mexico” are presented. The characteristics of the sports doctor’s training are contrasted with the competency profiles developed in the professional trajectories of the specialist. The scarce production of research on transdisciplinarity leads to approaching the study from the transdisciplinary biocognitive model, in order to identify the identity competency profiles constructed by sports doctors in their professional career. The following is presented in three stages. As results, fragments of a life story are partially analyzed.

Keywords: Training of Sports Doctors, Cognitive models, Transdisciplinarity.

INTRODUCTION

This communication presents partial results of the doctoral research “Training and professional practice of the sports doctor in Mexico.” The research initially presents the characteristics of the sports doctor’s training, to contrast it with the competency profiles acquired during the specialist’s professional careers. The scarce production of research through the transdisciplinarity approach, proposed by Basarab Nicolescu (1996), leads to approaching the study from the transdisciplinary biocognitive model (Paul, 2001), seeking to identify the identity competency profiles constructed by sports doctors in their career path.

The above describes a very complete training seen from the formal curriculum, which meets the official Mexican standards and the recognition of the Ministry of Public Education, however, the sports doctor in Mexico is little known compared to other medical specialties. This is observed by not being part of the multidisciplinary team of athletes or sport teams, by not having vacancies in health units, or a very small number of

places in sports entities, also, the little social recognition of this figure, confused with areas such as Traumatology, Orthopedics, Physical Medicine, Rehabilitation or Nutrition, that although the sports doctor also has these skills, these are only part of the transdisciplinary training model of the curriculum that goes beyond its disciplinary borders.

From the formal curriculum, the question is asked: How to explain the competency identity profile of the sports doctor built from the experience acquired in his professional career, using the transdisciplinary biocognitive model?

As a general objective, it seeks to explain the training of the Sports Doctor in service in Mexico by adapting and applying the transdisciplinary biocognitive model of the person.

LITERATURE REVIEW

The origins of sports medicine date back to the emergence of humanity, since physical effort has been related to its own survival by carrying out activities such as hunting, moving to obtain shelter, water and food. Ancient civilizations such as Babylon, Egypt, India and China have left writings describing the health benefits of exercise. In Greece and Rome they sought the performance of their athletes and recovery from injuries and it was not until the Renaissance that more progress was made regarding the limitations of exercise to avoid injuries. From the 19th century to the 20th century, knowledge about physical exercise was on par with the historical context, giving rise to branches of knowledge such as physiology, traumatology, and rehabilitation (Tlatoa, 2014; Reggiani, 2016).

It was not until the 1920s that the first associations of sports doctors and sports scientists were formed, due to the rise of the Olympic Games in the modern age, a fact that occurred in the main powers of the

time, Germany, Italy, Russia, and the United States., until forming institutions such as the International Olympic Committee, federations and associations (Tobal, 2012). In the 1950s, there was the rise of sports medicine in Spain and Cuba, the main influences for its development in Mexico, which began at the National Polytechnic Institute, forming an educational training program aimed at the comprehensive care of the athlete, with the promotion of health, diagnosis, treatment and rehabilitation of processes related to physical activity and sports, which is taught in other institutions such as UNAM, UANL UAEM, UADY (Conamede, 2018; Silva, 2019). Giving a 3-year theoretical-practical training as a medical specialization. Graduates join different sports entities, educational institutions and private practice (Manonelles, 2019).

At the end of the 20th century, a research movement was born about the relationships between disciplines that considers that there are sources of knowledge that are not necessarily found in the disciplines and that each person can be a source of knowledge. When these interactions are sufficiently reciprocal, the term “trans” can be used, which means going beyond (Paul, 2001; Pineau, 2009).

Consistent with the perspective of Edgar Morin’s complex thinking, strategy is produced during action, modifying, according to the emergence of events or the reception of information, the desired behavior. The strategy, in turn, supposes: a) uncertainty; b) ability to modify the development of the action based on the opportunity and the new. (Morin, 1999, p.78).

It is, therefore, with the strategy of thinking that the complex method is committed, leaving each scientist with the challenge of choosing and constructing the set of behaviors and ways of approaching the problem to be understood.

In summary, general principles capable of dialogue with uncertainty, unpredictability and multiple causality are the foundations of the complex method (Morin, 1988).

This methodology, present in the biocognitive model (Paul, 2001), was possible thanks to the writing of his desires (dreams) for 20 years. His imagined life story provides him with the corpus to analyze. It seeks to establish whether your professional life history and your imaginative life history are linked.

Epistemologically, the model is built with “the three axioms” of transdisciplinarity, which reaffirm “the levels of reality, the logic of the included third and complexity” (Nicolescu, 1996, p. 68).

METHODOLOGY

This research is qualitative. The narrative biographical method was used. The information collected describes the dialectical relationship, the daily negotiation between aspiration and possibility, between utopia and reality, between creation and acceptance; since the data obtained comes from everyday life, from common sense, from the explanations and reconstructions that the individual makes to live and survive (Chárriez 2012). The narratives were made via the Internet, they were recorded with the informed consent of the informants.

The methodology of the present study adopts and adapts that constructed by Patrick Paul, who wrote his life story based on his professional and existential experiences, called daytime and nighttime, that contributed to forming him bio-cognitively. The events and imaginaries reveal how twenty years of professional experiences contributed to his bio-cognitive formation.

PROCEDURE

Table 1 presents an epistemic matrix in which the methodological procedure is

broken down, structured into three stages with their phases and research tasks.

Problem		Procedure	
Goal	Questions	Steps	Phases and tasks
1. Explain the training of the sports doctor	1. How is a sports doctor trained in Mexico?	I. Academic training	Curriculum diagnosis Entry and exit identity profiles.
2. Describe the professional trajectories of the sports doctor in Mexico	2. How do the professional trajectories of sports doctors develop in Mexico?	II. Professional careers	Describe what the professional career is like (moments, stages, problems, conflicts).
3. Build the competency profiles of the sports doctor in their professional life	3. What are the competency profiles that sports doctors develop in their professional life?	III. Competence identity profiles	Describe the identity competency profiles that the sports doctor develops in his professional life.

The stages followed in this investigation are described below:

Table 1. Epistemic matrix. Research problem and procedure

I. ACADEMIC TRAINING

A curricular analysis of the educational program of the specialty in sports medicine is carried out, which provides a vision of the training received by the population studied, this includes the analysis of the entry and exit identity profiles (Howes, 2014), in order to contrast them with the competency identity profiles, built in the specialist's experience. (Herrera et al., 2012; Rosas, 2011; Stecher, 2012).

II. PROFESSIONAL PATHS

It describes experiences lived by the specialist in his professional career, in the moments, events, critical incidents, problems, conflicts, advances, setbacks and

contradictions that he faces. The biographical-narrative approach is used (Bolívar, Domingo and Fernández, 2001).

POPULATION AND SAMPLE

Sports medicine in Mexico is taught in seven institutions. The narratives were made to two people per institution, for a sample of 14 people.

III. IDENTITY COMPETENCE PROFILES

The competency identity profiles that the sports doctor develops in his professional life and that provide him with identity will be built.

ANALYSIS

The information analysis method is that proposed by Demazière and Dubar (1997). It offers a technique of three interdependent levels: functions, arguments and actors. This analysis articulates the episodes of a story (the sequence), characters (the actors), in order to reveal the meaning that the narrator attributes to the story itself (the plots). The first level: the functions, listed in the episodes of the story as sequences, provide the trajectory of the biographical narrative produced by the interaction between the interviewer and the interviewee. The second level individualizes the arguments that the narrator uses to convince and defend his own point of view and propose his vision of the world. By analyzing the functions and arguments, the third level is obtained; of the actors, who appear as co-protagonists of the story alongside the narrator. The actors take a central role in the socio-affective life of the interviewee (relatives, friends, primary relational figures), likewise, those whose roles are institutional (doctors, judges, social workers, teachers) and also those who appear as background characters with a marginal relevance.

RESULTS

ACADEMIC TRAINING: THE SPORTS MEDICINE SPECIALIST

The sports doctor is an important specialist for the health system in Mexico. The professional functions of the doctor specializing in sports medicine are: 1) Theoretical and practical medical training. In theory, the teaching doctor is in charge of the study topics, the resident develops them, and is evaluated by the teacher and in groups. In practice, the resident enters the clinical field in triads composed of: a resident of the last degree, one of the second degree and the newly admitted resident, the patient, athlete or sporting event is cared for and the knowledge is acquired from the experiences of the highest ranking residents. 2) Medical research. A thesis director is assigned to the resident. This function is fulfilled by attending the time specified by the main advisor, whether in a second or third level hospital; or in a research laboratory of someone who belongs to the National System of Researchers (SNII).

By completing these activities, the graduation profile is achieved in: human-professional orientation (being), intellectual training (knowing) and the operational performance of the doctor (knowing how). The specialty curriculum has subjects in areas: basic and clinical (specializing in sports sciences); methodological (sequential for scientific research) and psychosocial (humanistic and social).

PROFESSIONAL PATHS

In these partial results there are the stories of 5 doctors: three women; two graduates from `` Universidad Autónoma de Yucatán `` , two graduates from the National Polytechnic Institute (one woman).

COMPETENCE IDENTITY PROFILES

They were built from the levels indicated for the analysis of the information. Structural analysis articulates the episodes of the story (the sequence), with the characters of the story (the actors), in order to reveal the sense and significance that the narrator attributes to his own story (the plots). Below, in a first approach to the analysis, fragments of a life story and their articulation with the three levels described are shown, in a general way:

THE SEQUENCES: EPISODES OF THE STORY AND ACTORS

“I was born on July 2, 1987, in Chilpancingo de los Bravo, in the beautiful state of Guerrero, my father’s name is Delfino GR, originally from Quiahuitlatzala located in the heart of the Guerrero Mountain and my mother Isabel CF from Chilpancingo, too”.

This episode recounts a sequence of events about family origins

“The moment to decide which professional career to choose and being one of the best averages at High School No. 7 “Salvador Allende Gossens” characterized by having the best teachers in the Port, those who were part of the movement of 68, several with master’s degrees and doctorates in humanities; I had every possibility of entering medicine, apart from choosing a profession where I would not die of hunger, I took the admission exam and passed it, at that time, and still, it is quite an achievement to enter, I remember until they told me that They bought me my place, they asked me how I had done it, as if there was a magic recipe and I just said, well, study.”

This second episode shows collective subjects (actors), “the Acapulcan society”, “the high school”, “the teachers”, “buyers of spaces”, unlike the actors of the first story, who are individual subjects and with a predominant place. in the history. In this

story, the sequence of “the genesis” takes us to the second sequence: “the entremés”, understood as the brief space where the main actor, in a single act, with an ironic tone, is going to represent one of the two interludes. (initial training at the university) of major drama (the specialty).

The following episodes relate his experience at the university, in medicine, given the space, only some of them stand out.

“The majority of the doctors who taught me were military, one of those from before, where there were always hours and hours of lectures with the discourse of high values, ethical and moral principles, giving everything for everything. For the patient, I remember I carried philosophy of Medicine, even with a headache, until little by little that was part of me.”

Here, actors, such as teachers, and the context of initial training are rescued. Likewise, the moment to opt for a specialty and its odyssey for admission.

FINE FABRIC: THE ARGUMENTS

ARGUMENT 1.

“I showed up to take the admission process, the knowledge test that each question was evidence of my ignorance, the psychometric exam of 500 questions and the interview on why to enter the Specialty, all my classmates older than me, At 23 years old, ... I didn't know anything related to sports, nor did I know where the Olympic Games were going to be. My worth in tatters, telling myself... it was the worst thing you could have done.”

ARGUMENT 2

“My interviewer was clearly upset and with a tone of annoyance she told me: Why do you want to do sports medicine? I had already given up everything for lost, thinking that I would never see her again, I gathered my courage, I brought out the Guerrero claw

and the coastal vein of my social service and I told her that, because there were none in Guerrero and I wanted to be the first, and I argued, because a profile like this is required, which helps the progress of sports in my state and collaborates in the reduction of chronic diseases.”

The two plots weave a story of desires and anxieties, of insecurities and internal harangues that place her on the plane of advances and setbacks, she faces her own contradictions, but she is encouraged and her arguments carry her forward. The actors are articulated as in actantial analysis, in pairs of actants, adjuvants and opponents; recipients and recipients of the arguments woven to convince, but full of uncertainties; subjects and objects articulated in the network of arguments that move between the symbolic (the formality of the specialty), the real (the difficulties of entry) and the imaginary (the desire to transform their environment).

ARGUMENT 3.

“I returned to Acapulco sad, defeated and seriously thinking about studying psychology, the days went by and I was just watching series on my computer and novels attracted by the TV, when I received an email Welcome to the Specialty in Sports Medicine 2011- 2013.”

The imaginary became a real possibility and the changes in moods emerged to the maximum. However

“the specialty was the same, tedious, hierarchical, nothing new, what motivated me was knowing that I could work with an Olympic medalist, I visited the best places that a resident can do, National Sports Commission, Mexican Olympic Committee, National High Center Performance. I returned to Guerrero and I couldn't find a job in my specialty, no one knew what a doctor like me did, no one wanted to pay for my services, I knocked on many doors, some were ajar. “I got an administrative job at the Ministry of

Health, teaching classes in undergraduate courses, but not in my specialty.”

The real is contrasting, this leads to the construction of new imaginaries and diverse symbolisms, the reality that hits hard places him, accommodates him and forces him to seek new balances and the need to set out and face new challenges.

“At the same time, I founded an association, I did social projects, in my case, the substantive educational training was the most lacking that I had when I graduated, which I perfected due to the need for a job, due to the experiences that were presented to me, such as being part of the curricular design of a Bachelor’s degree related to my area, the other part that was also deficient was the administrative one, which again when faced with a job as State Head of a Health program, I had to learn a whole world, of which I also consider myself competent.”

The professional career requires new skills for which the university does not prepare, those acquired in the professional career and which are decisive in the construction of the professional identity of the specialist.

CONCLUSIONS

The transitional dynamic in the construction of transdisciplinary research leads to proposing this strategy, which in this communication barely presents a first approximation, the road is long and there is much left to do and learn.

After stating its emerging transitional state, the learning of transdisciplinarity can only be developed from reflection in action, in interaction with others, understanding that there is no transsininter.

Transdisciplinary actor-researchers are still emerging and very dispersed. In experience, the means of reciprocal learning in this research is revealed to be of great heuristic value.

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