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EDITORIAL

Why must pediatricians also be scientists?

¿Por qué los pediatras debemos ser también científicos?

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In 2019, *Wired* magazine published an op-ed piece titled ''Why Your Doctor Should also Be a Scientist''.[1] The article described the manyfold advantages of doctors being scientists in addition to clinicians for both patients and the general population. Although, as was the case in that article, the rationale may be quite lengthy, the answer to the initial question is, in my opinion, exceedingly simple: we, doctors, should be scientists because research makes us better clinicians.

It has been long since doctors ceased to be professionals that solely prevent, diagnose and treat diseases, and nobody today questions that the professional activity of a doctor in the XXI century comprehends a variable combination of clinical practice, teaching, research and administrative work. Pediatricians are, logically, not an exception.

In the current issue of *Anales de Pediatría*, a group of Spanish pediatricians and researchers who are members of the INVEST-AEP group present a detailed perspective of the current situation of pediatric research in our country.[2] The article by Moreno et al. aptly and engagingly identifies the barriers and challenges of pediatric research in Spain. Some of the detected barriers are structural and require profound and far-reaching changes, but others depend on individual actions or decisions that seem to be inconsequential in the short term but end up having a sizable impact over time.

The official curriculum of the specialty of Pediatrics and its Subspecialties includes among its pursued competencies the acquisition of the ''necessary knowledge, skills and attitudes to carry out basic research and clinical research work''. This is, in my opinion, one of the greatest weaknesses of pediatric research in Spain. We are failing to provide our residents with the necessary knowledge to conduct research nor conveying to them the importance of doing so. And, to some extent, this makes sense. Leaving aside generational changes that we can do little to address and whose discussion is frequently unproductive, the importance given to research in the educational and training curricula of pediatricians in Spain continues to be low. In the various selection processes of the different health care systems, the weight given to scientific research continues to be small and in many instances research experience can be compensated by other merits of questionable benefit to professional performance. The protocols established to fill vacancies in the public health system (whether permanent or temporary) through a score calculated based on specific criteria constitute a statement of intent on the part of our health systems and become our actual recruitment agency. Thus, the profile of Spanish physicians will change based on what we demand of the market. If seniority is given more weight, we will have experienced physicians. If continuing education counts more, our physicians will hold a plethora of training certificates. If more value is given to research, we will have physician-scientists.

The hackneyed research-clinical practice dichotomy is often presented as a poor excuse to justify the scarce research activity. I agree that clinicians must be given the time to conduct research during their work hours, but we

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cannot forget that research requires an additional individual effort. To think that one can do research without that extra effort is a belief that we must stamp out to root out false expectations and keep from perpetuating a self-fulfilling prophecy in which we justify not doing research because we are not given the necessary time, yet we are not given the time because we are not proving that we do engage in research. I have yet to meet a renowned pediatrician-scientist that is not characterized by unflagging work and dedication. This is the example we must set for our residents and young pediatricians. I have no doubt that the effort pays off handsomely if only one is patient enough to wait for it to bear fruit. Today, we know that there is a clear correlation between a hospital's renown for care excellence and its investment on research, so promoting a center's research capacity will ultimately translate to improved medical services and patient care.[3]

Scientific publication is an essential part, although not exclusive, of research activity. While the ''publish or perish'' approach has well-known deleterious effects, there is no question that research findings need to be shared with the scientific community. In this context, I want to highlight the role played by *Anales de Pediatría* in promoting pediatric research in the Spanish language.[4] Many of us, and I am sure the authors of the special article are no exception, have published the results of our early studies in *Anales de Pediatría* and acquired basic skills in reading and publishing research through this journal. Consequently, we all share a responsibility as pediatricians in Spain to promote its use, to take it into account when we choose where to submit our work, and to collaborate in the development and review of its articles.

I also agree with the authors of the special article on the need to also promote research among our colleagues in primary care (PC) pediatrics, and I feel concerned by current data that show the reality is far from ideal. Our current PC model, which is very good for certain things, may not be conducive to collaborative, multidisciplinary and networked activity. Many of us would welcome an approach to concentrate PC units or promote specialization within this level of care. Both of these measures would promote collaborative work, which is indispensable for research. However, this clashes with the social demand for readily available, accessible, agile and personable health care. Many of our colleagues in PC continue to develop their activity in isolation and with little recognition, and this does not in any way promote the drive to teach or conduct research.

Clinical research is an essential tool in the advance of medicine, and it is particularly relevant in the field of pediatrics. As pediatricians, we are not only responsible for the care and monitoring of children but also play a key role in the development of specific treatments, medicines and protocols addressing the unique needs of this population. Our ethical commitment to the pediatric population extends beyond direct care delivery and must involve other aspects that have an indisputable impact on pediatric health and therefore future adult health. The active participation of pediatricians in clinical research also helps generate reliable and specific data for the pediatric population, thereby strengthening the capacity of professionals to make informed decisions and improving practice in our field.

Margarita Salas, a salient Spanish researcher, stated that ''a country without research is a country without development''. In the same vein, we may assert that pediatric practice without research is a practice without potential for growth.

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