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ORIGINAL ARTICLE

Urology training in Mexico: Residents' perspective

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Abstract

Objective: *To assess and identify from the resident's perspective the current state of the urology residency training in the surgical, research, affective domain and its working future.* **Material and Methods:** *We performed an anonymous survey of 98 urology residents during 2014. The survey included 62 questions and assesses the surgical, the clinical research, and the affective domain, and also its working future.* **Results:** *We reviewed a total of 98 surveys, average age 29 years, 92% men and 8% women. The scholarship average was 12,000-14,000 pesos. Most of them have had at least one research work in a national congress, but not in an international one. Less than 10% has published papers in PubMed, although most consider clinical research as mandatory in their urology training programs. Most residents consider their training in laparoscopy to be inadequate, but they consider the relationship between partners and teachers is adequate and most of them are satisfied with their program.* (Gac Med Mex. 2016;152:304-8)

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KEY WORDS: *Resident. Training. Laparoscopy. Satisfaction. Urologist. Endourology. Urology. Papers.*

Introduction

The objectives of a training program and the training requirements of institutions should be balanced with the residents' personal expectations and adapted to their individual performance, since becoming a fully-prepared urologist requires highly qualified personnel, quality education and experience enough at the hospital center where the residence takes place[1,2].

Most urology training programs require research activities as an integral part of their curriculum, but very few offer facilities and sufficient time to carry out research activities, which causes a lack of interest among residents in participating in and taking advantage of research activities that arise[3]. Some programs abroad consider lack of time to be a crucial factor for the development of research and, therefore, offer a period of time for this purpose, but it is important understanding that, in our environment, the presence or absence of an additional year of research might influence on the decision to choose one urology program over another. There are individuals at both extremes: those who consider an extra year as an unnecessary burden, and those with intellectual curiosity and interest on programs that might offer research opportunities.

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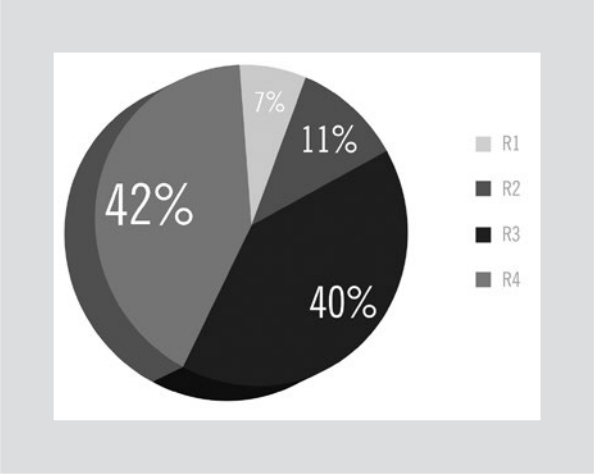

Figure 1. *Residency level.*

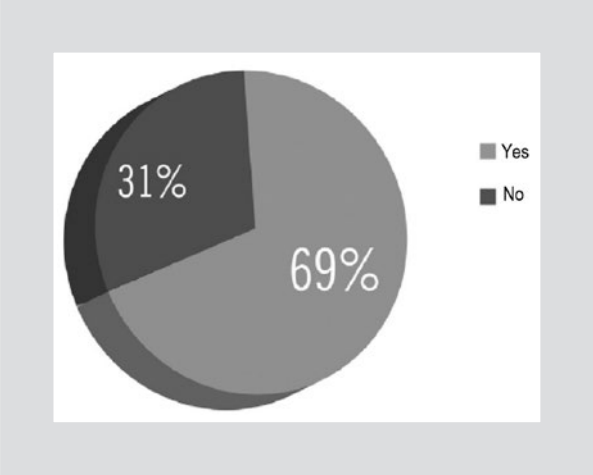

Figure 2. *Work/residency.*

A fundamental aspect to be covered is the surgical setting, i.e., the hospital center should have adequate and sufficient surgical spaces for urology trainees according to current requirements[4,5]. With this work, we address the need to make a first approach to the urology residency in Mexico, including the affective area and future expectations.

Material and methods

An anonymous survey was applied to 98 residents of the urology residency who attended several academic forums over the year of 2014. The survey consisted of 62 questions, which included the research, surgery, emotional and affective areas.

Results

A total of 98 survey interviews were conducted and analyzed, with average age of the interviewed subjects being 29 years; 92% are males and 8% females. Seventy-eight percent are single, 17% married, 2.5% separated, 2.5% live in domestic partnership; 85% has no children and 15% has at least one child. The residents have an average scholarship of 12-14 thousand pesos per month. Forty-two percent of the residents corresponded to the fourth year of residency (R4), 40% to R3, 11% to R2 and only 7% to R1 (Fig. 1); in addition, 31% of the residents had to do shifts at the hospital, 64% just had to remain on call and 5% answered not having to do shifts at the hospital; 69% of the residents have worked outside the hospital during their training period (Figs. 2 and 3). Ninety-four percent refer having academic meetings at their hospitals (difficult cases, morbidity and mortality sessions, etc.) (Fig. 4), but 80% refer not having personal academic time during their training (Fig. 5). Seventy percent have no adequate comfort areas (where to have their meals, places to rest and study), 68% consider not having the bases to carry out research, although for 66% of the surveyed residents, research is a requirement in their training program (Fig. 6). This could partially explain the low productivity in terms of publications (Fig. 7), since 78% of them have no indexed works in PubMed and only 12% have one or two published papers. Nearly 70% of the residents have presented one work in a national congress (case report, poster, presentation, etc.). Forty-two percent would be willing, at least theoretically, to devote one year to research. In the clinical aspect, 57% of the residents consider their training on flexible ureteroscopy to be adequate, while 87% consider their training on laparoscopy to be deficient (Fig. 8); 53% of the surveyed residents consider themselves skilled for the performance of procedures such as radical nephrectomy and radical prostatectomy. Seventy-seven percent of them think training on laparotomy should be emphasized within their program (Fig. 9), but 56% want to have extra training in the area of endourology, although they feel there is a lack of training on laparoscopy. Fifty-seven percent of the surveyed residents refer feeling satisfied within their residency program (Fig. 10). We also assessed the most common procedures within the urologic training program (Table 1). In the affective area, 78% refer interpersonal relationship between residents as being adequate (Fig. 11). Something very important

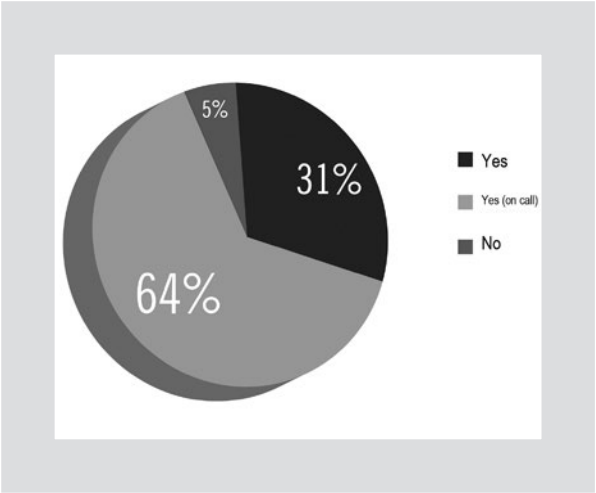

Figure 3. *Complementary clinical activities (shifts at the hospital).*

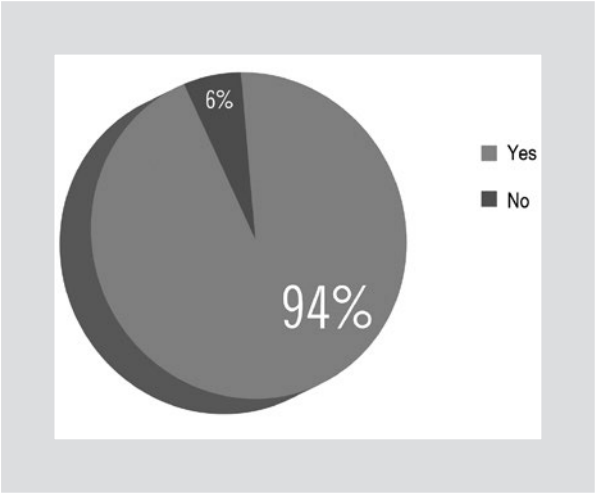

Figure 4. *Academic activities (sessions).*

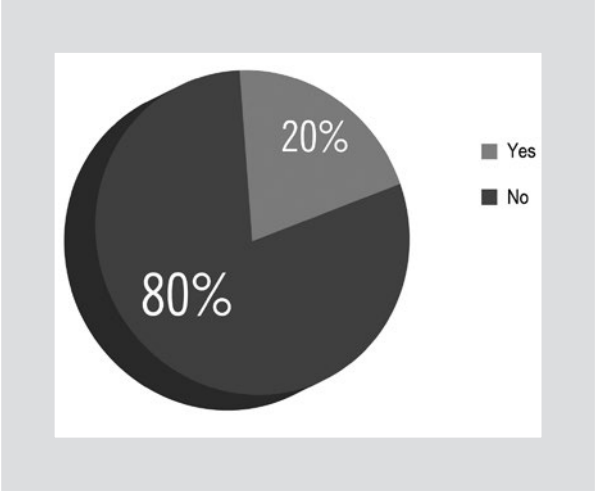

Figure 5. *Personal academic time.*

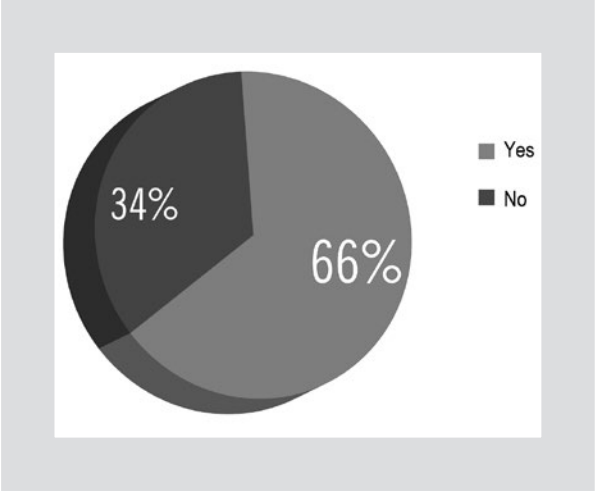

Figure 6. *Research as a requirement.*

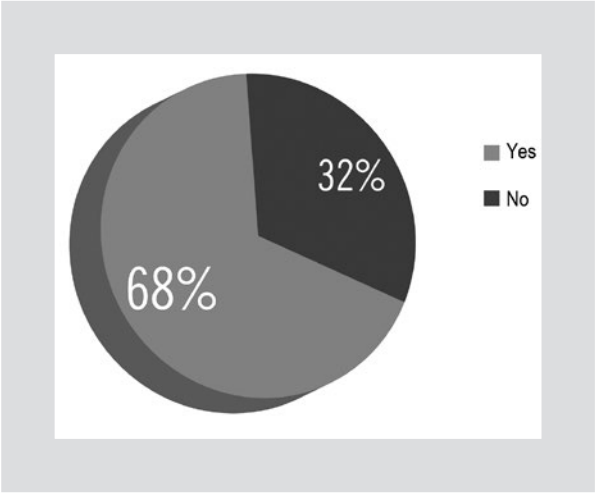

Figure 7. *Bases for academy and research.*

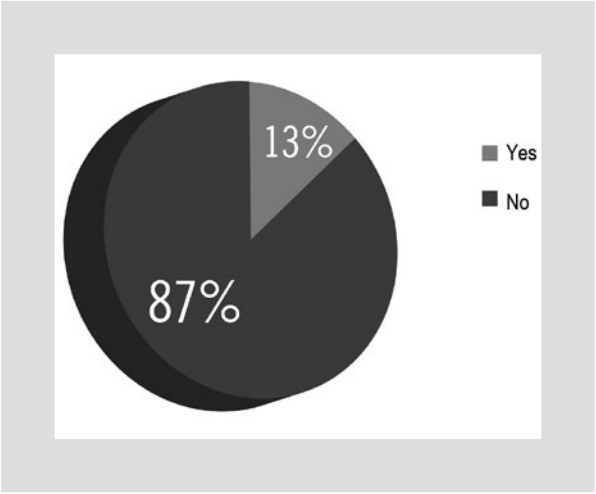

Figure 8. *Training on laparoscopy.*

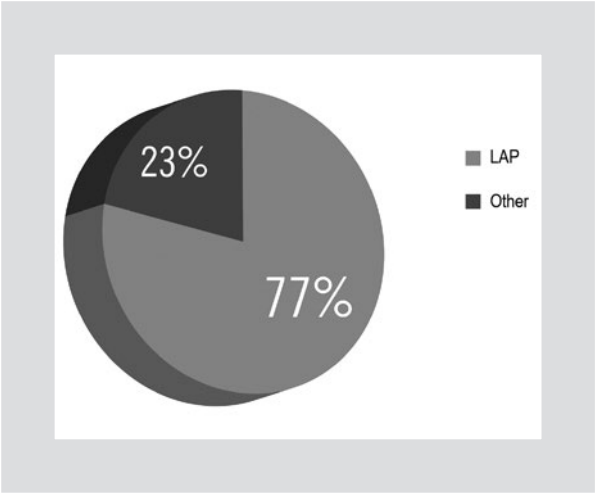

Figure 9. *Aspects to emphasize in the residency program.*

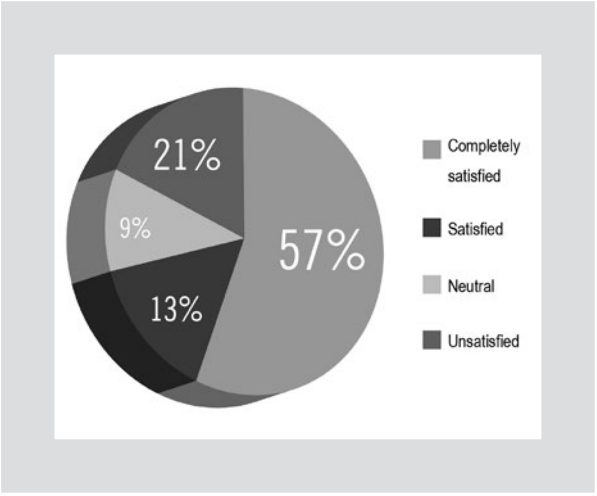

Figure 10. *Personal satisfaction with the residency program.*

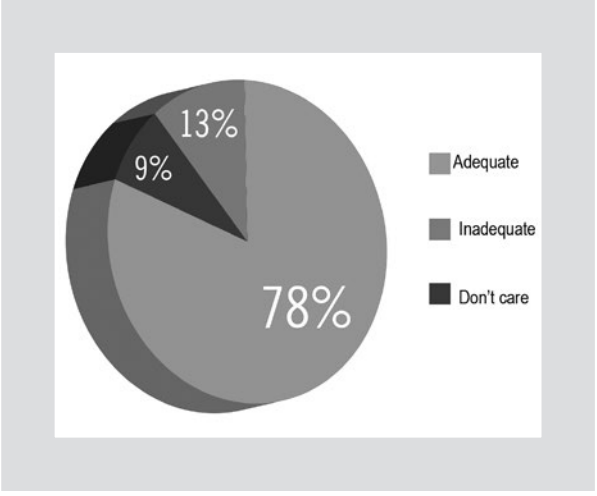

Figure 11. *Interpersonal relationships between residents.*

Table 1. Record of procedures

	Number of procedures	
	Surgeon	**Assistant**
Inguinoscrotal procedures	50 (0-200)	
Adenectomies	8 (0-50)	
TURP	33 (0-150)	
Radical prostatectomies	4.6 (8-25)	12.85 (0-60)
Cystoprostatectomies	1.46 (0-7)	4.79 (0-20)
Percutaneous nephrolithotomies	5.01 (0-25)	15 (0-80)
Nephrectomies	17.91 (0-100)	

in our study is the residents' self-perception within their hospital, since 47% consider themselves as being student workforce, 28% see themselves as students on training, and 21% as workforce. Within the working area, 37% want to work in Mexico City and 39% in the rest of the country. Sixty-nine percent of surveyed subjects see themselves practicing in the future in a public institution with residents and in the private sector. Ninety-one percent would consider participating in activities within the Mexican Society of Urology. At the conclusion of their training program, most residents have a salary expectation of an average of 61-71 thousand pesos per month, in spite of having information on an average salary of 20-30 thousand pesos per month.

Discussion

As a surgical discipline with clinical aspects, urology has to surmount specific challenges, many of which were assessed in this work. For the analysis of results, it should be taken into account that two thirds of the surveyed residents are at third and fourth year of the specialty program, which entails a different perception on the specialty in aspects related to future expectations and some demographic aspects such as marital status, which would be an important factor to decide their professional future, and interpersonal relationships within their residency, which are likely to be different during the first years of training.

The vast majority of urology residents in Mexico work over 70 weekly hours, with daytime work days exceeding 12 hours, a figure that is above the accepted standards in other countries and that exposes residents to a higher probability of making preventable mistakes within their training process, which might influence on their academic performance and family setting.

Research is mandatory in all programs, but residents do not consider having the bases and resources required to develop it, and, in addition, more than 50% of the interviewed residents refer not having the time required for it, since most of this time is employed in healthcare activities, and this could be part of the explanation for the poor academic production in our urology schools, always bearing in mind that there are other factors that were not evaluated in this study, such as scarcity of economic resources of each specific center, lack of incentives by the schools for this type of production and/or poor motivation and, most importantly, lack of interest of training residents themselves.

Overall, the residents' level of satisfaction for having selected urology as their specialty is good. The vast majority is completely satisfied with what they have found in the postgraduate program, and more than 90% would choose urology again as their specialty.

Paradoxically, most residents consider that the conditions to perform as residents are adequate and are satisfied with the treat given by their teachers and peers, as well as with the treat received within their healthcare activities.

They also consider that surgical opportunity and training are adequate, since most teachers in all different programs possess the required knowledge to carry out the training of their students.

Most residents clearly desire to have access to a sub-specialization program, which is paradoxical considering the poor offer of this type of programs in the country. Sub-specializations are the driving force of most publications abroad, since fellows are the ones who bear the heaviest load with regard to literary production. Most programs require a minimum acceptable of time dedicated to investigation, others demand an entire year exclusively devoted to this, which makes academic production volume much higher.

The residents' job expectations confirm that 50% will practice in middle-sized cities and hinterlands, and only 38% would prefer staying in the capital city. It is the duty of the State and scientific societies to conduct investigations to determine the number and regions in need of trained urologists; this way, adjustment policies can be proposed to ensure that all resources are available in order to efficiently carry out their tasks throughout the country, since in the years to come, a new generation of residents will ask for new answers about their education and future professional life, and only a well structured residency program in every aspect will train quality urologists to participate in all areas of the specialty.

Conclusions

Most urology residents consider their training program and interpersonal relationships with their peers and teachers to be adequate and acknowledge that their teachers are qualified for the training of residents, but we identified different areas of opportunity for improvement, such as support and time for updating and research, as well as training on new technologies and laparoscopy, all this to ensure better urologic quality of the generations on training and to produce excellent urologists.

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