

# Are Argentine Shoulder and Elbow Surgeons the Worst Treated in Ibero-America?

## Comparison of Fees and Level of Satisfaction Between Members of the Asociación Argentina de Cirugía de Hombro y Codo and Colleagues From Ibero-America

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### ABSTRACT

An adequate level of job satisfaction of the members of a health team is essential to guarantee the quality of the services provided, generate personal commitment, stimulate the desire to update, and promote retention within the system. We have not found any publication that specifically addresses this issue in the field of Orthopedics and Traumatology in our setting. The objective of this study is to know how the specialists who belong to the Argentine Association of Shoulder and Elbow Surgery perceive their working conditions, what their remuneration is and their degree of satisfaction, and to compare them with equivalents from other Ibero-American countries. The results of the survey showed low average levels of satisfaction in the Argentine professionals surveyed. There are statistically significant differences with professionals from other Ibero-American countries both in terms of remuneration and wellbeing indices. If there are no profound changes in the healthcare system, the remuneration and the working conditions, sooner or later consequences will appear that will affect not only professionals but also patients and the system in general.

**Key words:** Survey; shoulder; elbow; job satisfaction.

**Level of Evidence:** IV

### ¿Somos los cirujanos de hombro y codo argentinos los peor tratados de Iberoamérica? Comparación de los honorarios y el nivel de satisfacción entre los miembros de la Asociación Argentina de Cirugía de Hombro y Codo, y los colegas de Iberoamérica

### RESUMEN

Un nivel de satisfacción laboral adecuado de los miembros del equipo de salud es esencial para garantizar una buena prestación de servicios, generar compromiso personal, estimular el deseo de actualización y fomentar la retención dentro del sistema. No hemos encontrado ninguna publicación que aborde específicamente este tema en el ámbito de la Ortopedia y Traumatología en nuestro medio. El objetivo de este estudio es conocer cómo perciben los especialistas que pertenecen a la Asociación Argentina de Cirugía de Hombro y Codo sus condiciones de trabajo, cuál es su remuneración y su grado de satisfacción y compararlos con equivalentes de otros países iberoamericanos.

Los resultados de la encuesta mostraron niveles promedio de satisfacción bajos en los profesionales argentinos encuestados. Existen diferencias estadísticamente significativas con profesionales de otros países de Iberoamérica tanto en lo relativo a la remuneración como en los índices de bienestar. Si no se producen profundos cambios en el sistema de atención, la remuneración y las condiciones de trabajo, tarde o temprano aparecerán consecuencias que afectarán no solo a los profesionales, sino también a los pacientes y al sistema en general.

**Palabras clave:** Encuesta; hombro; codo; satisfacción laboral.

**Nivel de Evidencia:** IV

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## INTRODUCTION

An adequate level of job satisfaction of the members of the health team is essential to guarantee the quality of the services provided, generate personal commitment, stimulate the desire to update, and encourage retention within the system.<sup>1</sup> It has been stated that the quality of health services is directly related to the level of satisfaction of their professionals.<sup>2-6</sup> This aspect of our profession is regularly evaluated in other countries.<sup>7-12</sup> In Argentina, on the other hand, the institutions are very interested in evaluating the degree of satisfaction of the patients (“clients”), but it is not common to find studies on the opinion of the professional (“provider”). In fact, we have not found any publication that specifically addresses this issue in the field of Orthopedics and Traumatology, in our setting.

Among colleagues, the deterioration of the image of the health professional, the underestimation of the medical act, the poor working conditions, professional fraud, and low remuneration generate concern. However, this has not been scientifically investigated.

Based on the hypothesis of being “the worst treated” in Ibero-America, the objective of this study was to research how the specialists who belong to the Asociación Argentina de Cirugía de Hombro y Codo (Argentine Association of Shoulder and Elbow Surgery) perceive their working conditions, what their remuneration and degree of satisfaction are, and to compare them with equivalents from other Ibero-American countries.

As a secondary objective, it was proposed to identify if there were differences in remuneration between surgeons in the Autonomous City of Buenos Aires (CABA), the Province of Buenos Aires (Buenos Aires) and the rest of the country (Interior).

## MATERIALS AND METHODS

A semi-structured survey was carried out and sent to the specialists included in the database of the registry of members of the Asociación Argentina de Cirugía de Hombro y Codo. The Board of Directors of the Association gave its approval. The study also had the approval of the Bioethics Committee of the Universidad Católica Argentina.

Members of the registry who did not practice the profession in our country (foreign corresponding members and honorary members) and those who had abandoned the practice of medicine were not included.

The survey contained a series of questions related to medical activity and degree of satisfaction ([Annex](#)). The questions were based on previous studies and others were specially designed for our context. Informed consent was included on the survey platform explaining the characteristics and scope of the study. To start responding, the participant had to read and agree to the consent.

The questions were grouped into five areas: 1) Personal data, 2) Work environment, 3) Level of satisfaction, 4) Remuneration, 5) Improvement, teaching and research.

The survey and data collection were carried out using the Survey Monkey® platform. The responses were anonymous.

When appropriate, an ordinal analysis of the data was performed with values from 1 to 5. The open answers were coded independently by two researchers and a consensus was reached for their qualitative analysis.

The results obtained were compared with the experience of an equivalent group of specialists in shoulder and elbow surgery who represented the Ibero-American countries. An interview was previously conducted with them. This strategy was chosen to ensure that the objective of each question was clearly understood, in order to avoid interpretation errors generated by differences in nomenclature or the health system in each country. The inclusion criteria of these participants were: traumatologists dedicated to shoulder and elbow surgery, and being part of the scientific institutions of the subspecialty in their respective countries. They also received an informed consent.

The reference value used to express remuneration was the “stock market dollar”. The MEP dollar or “stock market dollar” is obtained with the purchase of a bond in pesos for its subsequent sale in dollars. The price was 195 Argentine pesos with 33 cents at the time of the study. The value of the informal dollar at the same time was 210 pesos.

## Statistical Analysis

As they do not assume a normal distribution, the continuous variables of remuneration are reported as median and interquartile range 25-75 (IQR). Categorical variables are expressed as presentation number and percentage. To determine the distribution of the sample, the Shapiro-Wilk test was used.

To compare the remuneration between Argentine and Ibero-American surgeons, the Mann-Whitney test was used because the variables were not Gaussian. For the comparison of subgroups of surgeons from Argentina (Interior, Buenos Aires and CABA) the non-parametric one-way ANOVA test (Kruskall-Wallis) and a *post hoc* test (Dunn) were used. A p value <0.05 was considered significant. For the statistical study of the nominal qualitative variables, the  $\chi^2$  test was used.

Data were analyzed using the IBM SPSS Macintosh program, version 25.0 (IBM Corp., Armonk, NY, USA).

## RESULTS

A total of 107 of the 157 members of the Asociación Argentina de Cirugía de Hombro y Codo answered the survey, which represents 68.15%. This is considered a high response rate as expected in this type of query. Eight surveys were incomplete, which could affect the statistical results; therefore, they were removed. The survey forms correctly answered were 99.

Only questions 33, 34 and 35 were allowed to be left unanswered, since not all members of the registry practice all surgical procedures. In these cases, when analyzing the answers, the size of the sample for each procedure was taken into account, and those who did not answer were discarded because they did not carry out a specific technique, which would have affected the average results.

In the case of Argentines, 34.3% work in CABA; 24.2%, in Buenos Aires and 41.4%, in the Interior.

The Ibero-American sample was made up of 16 colleagues who represented, in alphabetical order, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Spain, Guatemala, Mexico, Panama, Paraguay, Peru, Puerto Rico, the Dominican Republic, Uruguay and Venezuela.

### Personal information

The average age of the 99 Argentine physicians was 45.3 years (range 32-78) and that of the group of Ibero-American colleagues, 48.4 years (range 37-58).

The Argentine group was made up of five (5%) women and 94 (95%) men. In the control group, all were men.

Both Argentines and Ibero-Americans reported treating patients in the private field. In the case of the former, the percentage was 67.6% and, in the latter, 93.7%. 44% of Argentines and 25% of Ibero-Americans work in public hospitals. The largest difference was related to health insurance, 59% of Argentines work for this system, while only 6.25% do so in the rest of the countries. In many cases, this health system does not exist abroad.

### Work environment

Although 25% of Ibero-American colleagues work in state-run hospitals, none chose this work environment as the most comfortable. 44% of Argentines work in a state-run hospital and 29.5% of them reported being comfortable in that work environment, while 34% considered it the least comfortable. 75% of foreign colleagues who work in a public hospital considered it the least professionally comfortable place to work.

Work in the private sector was considered the most comfortable both professionally and humanly by 31% of Argentines, it was the most chosen option. In the case of Ibero-American colleagues, the most chosen option was also the private field, both professionally and humanly, it represented 56% of the preferences of the respondents in this group.

35% of Argentines reported doing active on-call work against 12% of Ibero-Americans. The geographical distribution showed that they are more frequent in CABA (41%) and Buenos Aires (45%) than in the interior (24.3%). On the other hand, colleagues from the Interior (46.3%) and Ibero-America (37.5%) have more passive on-call shifts than those from CABA (20.5%) and Buenos Aires (20.8%).

66.6% of Argentines considered that their workload is excessive compared to 37.5% of Ibero-Americans. The geographical area of our country in which this claim was most marked was in those who do not work in CABA or in Buenos Aires, 70.8%. In CABA, we obtained the lowest value (61.7%).

When asked if working conditions have improved, worsened or remain the same, 80.8% of Argentines consider that working conditions have worsened, with no significant differences due to the geographical location where they work. 68.7% of foreigners agree with this assessment. Only 9% of Argentines consider that working conditions have improved against 25% of Ibero-Americans.

70.7% of the Argentine doctors who responded to the survey stated that the risk of being legally sued influences their practice, with no significant differences depending on the jurisdiction in which they work. There were no significant differences in the response of foreign doctors (68.7%).

### Satisfaction level

Respondents were asked about their degree of satisfaction with their choice of medical career, and in particular, orthopedics and traumatology. Responses included: if they felt very satisfied, somewhat satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied or dissatisfied. 47% of Argentines responded that they were very satisfied with their choice of medical profession, the lowest rate was recorded in CABA (37.5%) and the highest in the Interior (53.6%). The rate of very satisfied in foreigners was 75%.

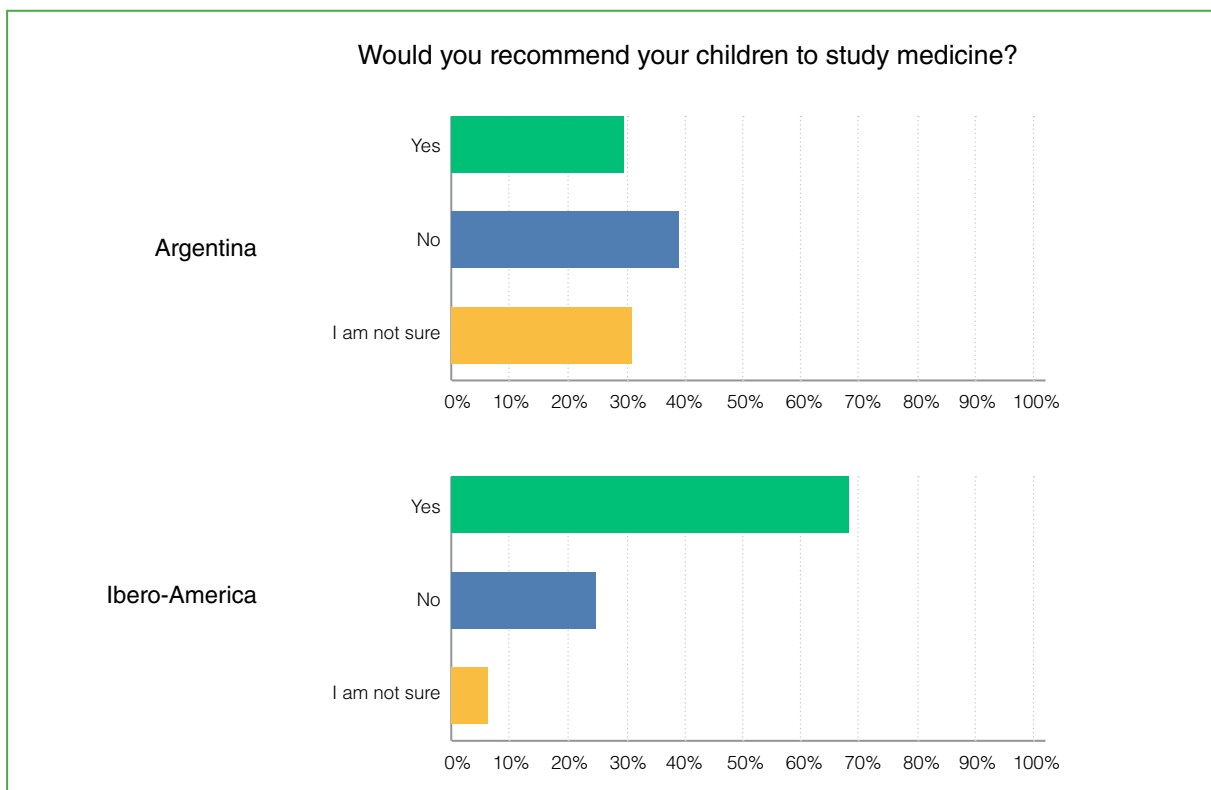
5% of Argentines expressed dissatisfaction regarding the choice of medical career, the highest rate was recorded in CABA (12%) and the lowest in the interior (0%). None of the Ibero-Americans stated that they were somewhat dissatisfied or dissatisfied with respect to their choice of profession.

37% of Argentines would choose medicine again. Among those who chose another profession, the most popular was engineering (11%), followed by law (3%), architecture (3%), economics (3%) and another great variety ranging from archeology to dentistry. 68.7% of Ibero-Americans would choose medicine again.

81.4% of Argentines and 100% of Ibero-Americans expressed being very satisfied with the choice of orthopedics and traumatology specialty. 40.5% of Argentines would choose orthopedics and traumatology again, against 62.5% of Ibero-Americans. Of those who chose another option, Argentines would choose: anesthesiology (20.2%), other surgical specialties (19%), plastic surgery was the most chosen (47% of surgical), clinical specialties were also mentioned (9%), and the rest did not respond or did not know.

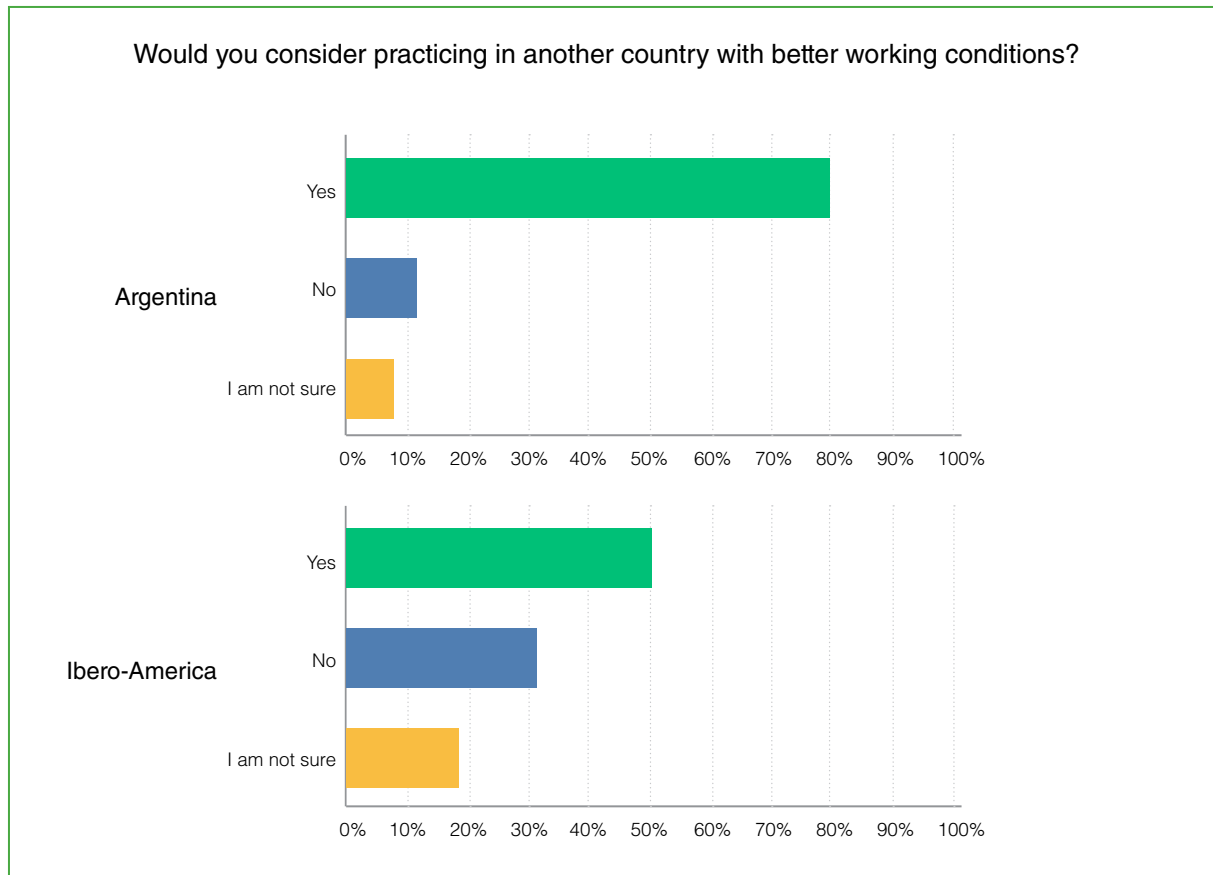
Given the choice of another specialty, Ibero-Americans would choose surgical specialties as their first option, the most popular being plastic surgery. None chose anesthesiology.

Only 29.9% of Argentines would recommend their children to pursue a medical degree, unlike 69% of Ibero-Americans (Figure 1). The difference with Ibero-American colleagues was statistically significant ( $p < 0.05$ ).



**Figure 1.** Graph showing the percentage of Argentine and Ibero-American doctors who would advise their children to pursue a career in Medicine.

79.3% of Argentines would consider working in another country if the conditions were met, against 50% of Ibero-Americans (Figure 2). Also, in this case, the difference was statistically significant ( $p < 0.05$ ).



**Figure 2.** Comparison of the aspiration to work in another country, according to Argentine and Ibero-American doctors.

When asked if they would change something to feel professionally more comfortable in their workplace, 55.5% of the Argentine doctors referred to the value of the fees; 35.3%, to working conditions and 5%, to mistreatment of the professional. In some cases, there was more than one response. 12.5% of Argentines would not change anything. Among Ibero-American colleagues, 37.5% referred to fees; 37.5%, to working conditions and 12.5% complained of professional mistreatment.

When asked what they would change to feel better humanly in their workplace, 18.2% of Argentines referred to fees again; 23%, to working conditions and 7%, to safety and respect in the workplace. 51.8% did not propose changes. In the case of Ibero-American doctors, 6.25% mentioned changes in fees, 62.5% mentioned working conditions, and 31.3% did not propose changes.

### Recognition

On a 5-star scale, Argentine doctors considered the prestige level of their profession to be 2.9 stars. In the case of Ibero-American doctors, the average was 3.6. The lowest value was in the Buenos Aires subgroup (2.7 out of 5).

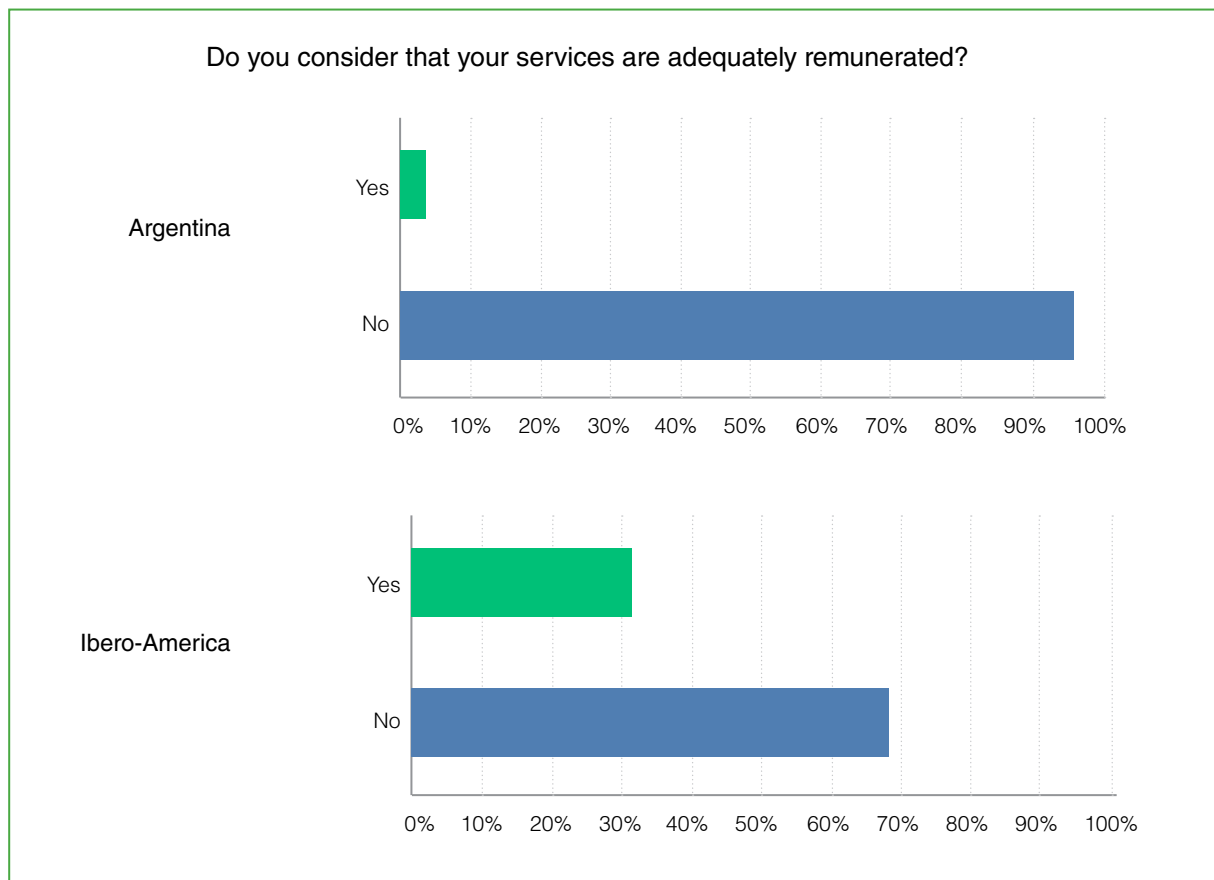
The recognition of patients for their work was highlighted by 74% of Argentines and 75.6% of Ibero-Americans. Instead, the situation is the opposite when responding with respect to the recognition of the professional activity by health companies and employers. The response was negative in 76.2% of Argentines and 62.5% of Ibero-Americans.

95% of Argentines consider that the patient is not concerned about whether or not their doctor has a fair remuneration compared to 87.5% of Ibero-Americans.

### Remuneration

Those who worked for a fixed salary because they were under a contract or in a Fellowship were left out. The values of those who carry out consultations and practices in an independent way were not incorporated.

Only 4% of the Argentines surveyed consider having a fair remuneration (CABA 0%, Buenos Aires 4.1%, Interior 7.32%). 31.2% of Ibero-Americans considered themselves to be well paid (Figure 3). The difference between Argentines and Ibero-Americans was statistically significant ( $p < 0.05$ ).



**Figure 3.** Graph of the evaluation of remuneration in Argentine and Ibero-American doctors.

21.2% cannot set their fees freely in any case; in Ibero-Americans this value corresponds to 18.75%. 67% of Argentines surveyed answered that they could set their fees in less than 10% of cases compared to 50% of foreigners.

The median of the minimum value declared by the Argentines for a consultation was 3 dollars (range 2-8), while for the Ibero-American control group it was 20 dollars (range 10.5-45). Regarding the maximum consultation values, the median of the Argentines was 9 dollars (range 5-15) and that of the Ibero-Americans, 57.5 dollars (range 31.25-100) (Figure 4). The difference in the value of minimum and maximum consultations between Argentine and foreign respondents was statistically significant ( $p < 0.0001$ ).

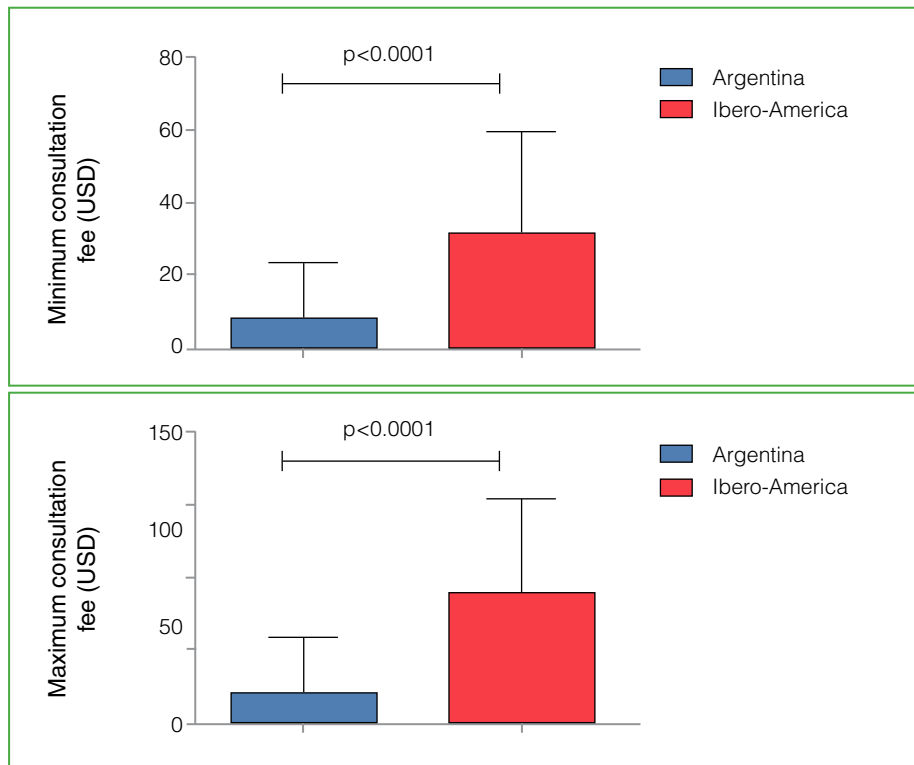
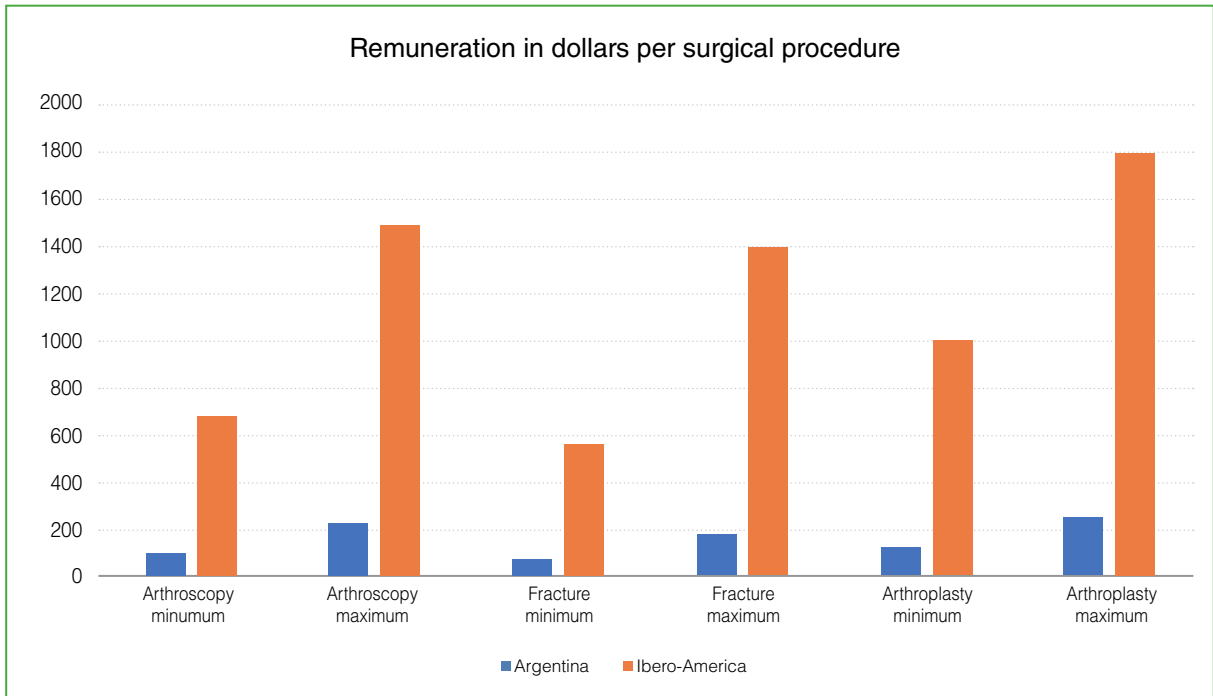


Figure 4. Minimum and maximum consultation fees for Argentine and Ibero-American doctors.

A response was also requested regarding the minimum and maximum values of different surgical techniques. For complex shoulder arthroscopy (rotator cuff repair and treatment of glenohumeral instability), the median minimum fee in Argentina was \$102 (range 61-189) in Argentina and \$681.5 (range 395-975) in Ibero-America. The maximum values for these procedures turned out to be 235 dollars (range 154-398) for Argentina and 1500 dollars (range 850-2450) for Ibero-America. The difference in the minimum and maximum remuneration for complex arthroscopy between Argentine and foreign respondents was statistically significant ( $p < 0.0001$ ) (Figure 5).

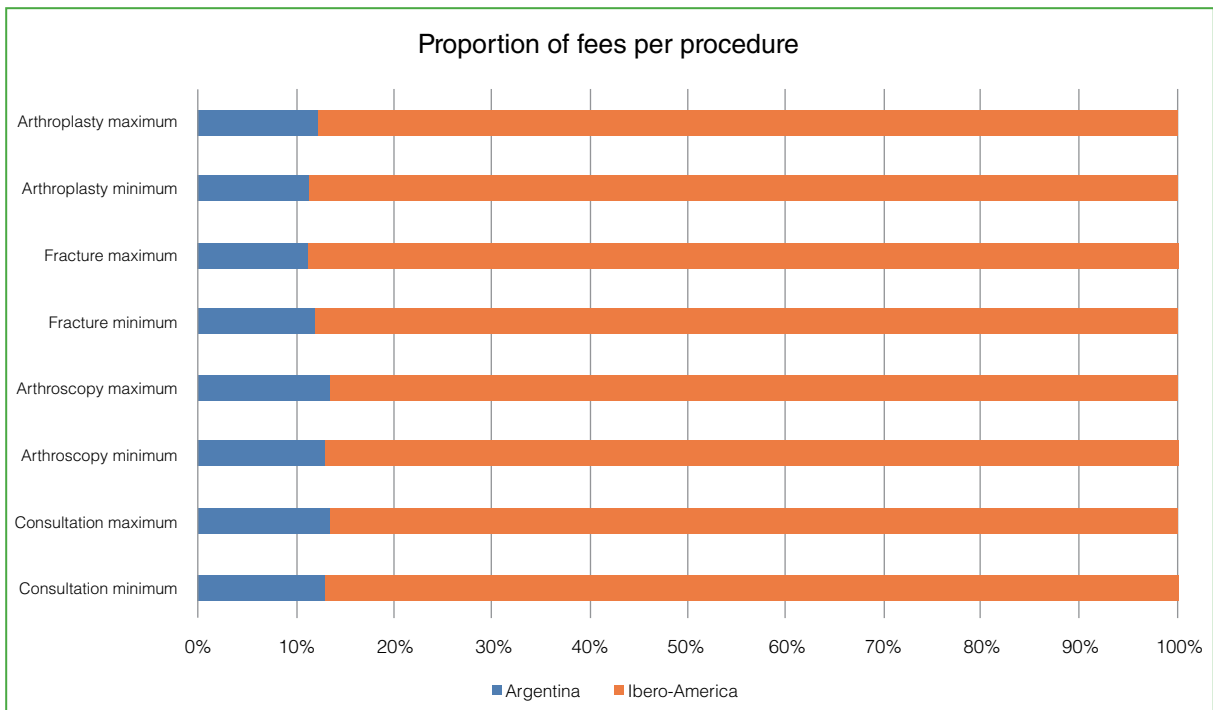
Regarding the osteosynthesis of a fracture of the proximal end of the humerus, the median of the minimum value for Argentines was 77 dollars (range 41-165.3) and for Ibero-Americans, 560 dollars (range 412-1125). While the maximum median remuneration for this procedure was 179 dollars (range 102-324) for Argentines and 1400 dollars (range 650-1825) for Ibero-Americans. The difference in the minimum and maximum remuneration for a proximal humerus fracture between Argentine and foreign respondents was statistically significant ( $p < 0.0001$ ) (Figure 5).

Finally, the comparison of minimum fees for total shoulder arthroplasties showed a median of 128 dollars (range 72-246) for Argentina, against 1000 dollars (range 515-1875) for Ibero-America. Regarding the maximum values in Argentina, the median was 256 dollars (range 179-511.5) and, in Ibero-America, 1800 dollars (range 900-2900). The difference in the minimum and maximum remuneration for total shoulder arthroplasty between Argentine and foreign respondents was statistically significant ( $p < 0.0001$ ) (Figure 5).



**Figure 5.** Comparison between the remuneration obtained in Argentina and Ibero-America for the aforementioned surgical procedures.

In all values evaluated, there is a relatively stable proportional difference in fees. Considering all the procedures and consultations, an Argentine earns, on average, 14.3% (range 12.7-15.6%) of what his or her colleagues in all of Ibero-America charge for the same work ( $p < 0.001$ ) (Figure 6).



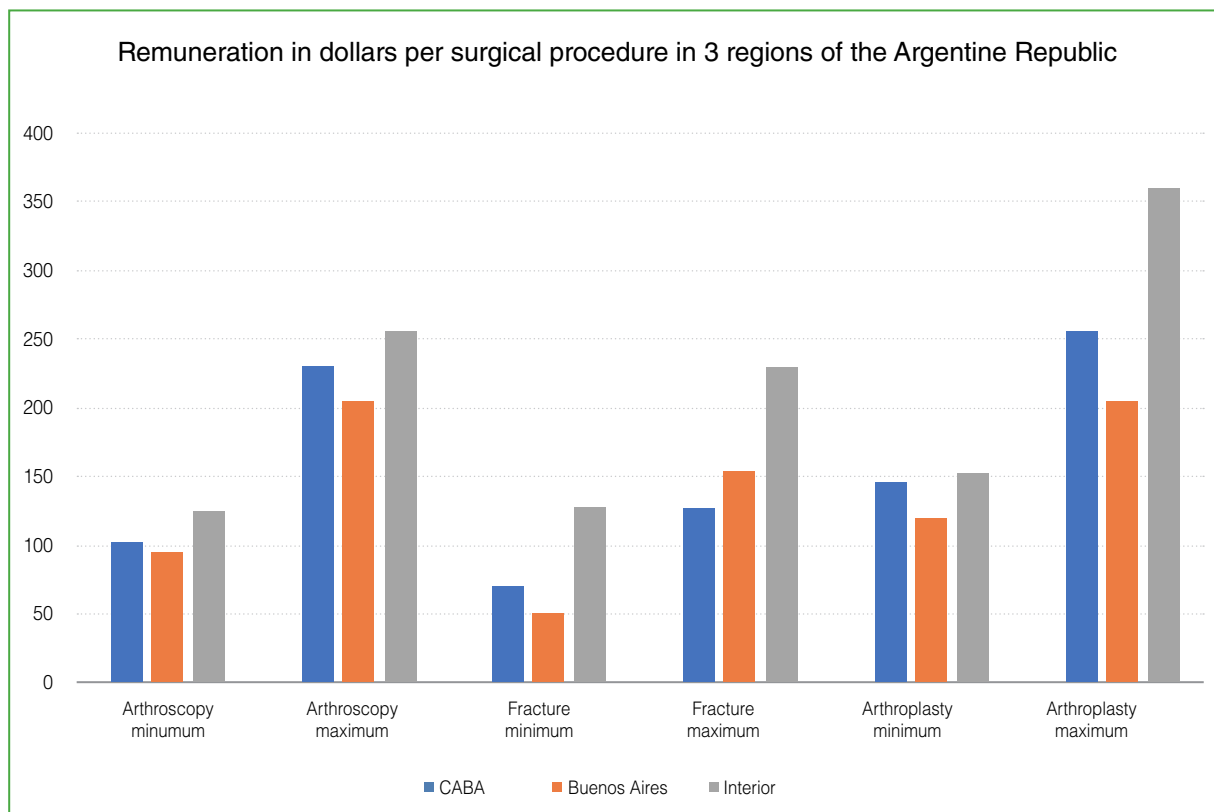
**Figure 6.** Proportional comparison of fees for surgical procedures between Argentine and Ibero-American surgeons.



Regarding the differences in fees between the different regions of Argentina, the values are reflected in the [Table](#) and [Figure 7](#). A constant tendency has been observed for the Interior to receive better fees in all procedures over CABA and Buenos Aires. This difference is significant in the values of minimum consultations (4 dollars in the interior and 2.5 dollars in Buenos Aires,  $p < 0.001$ ). The maximum values for consultations were 10 dollars in the Interior, 9 dollars in Buenos Aires, and 5 dollars in CABA. In this respect, the doctors of CABA are significantly disadvantaged in the payments with respect to the Interior and Buenos Aires ( $p < 0.0001$ ).

**Table.** Difference of medians with interquartile ranges 25-75 of remunerations per procedure in dollars between three regions of Argentina.

Practice	Autonomous City of Buenos Aires	Buenos Aires province	Rest of the country
Consultation - minimum	3 (2.5-4.5)	2.5 (2-3)	4 (2-10)
Consultation - maximum	5 (4-9.5)	9 (6-15)	10 (8-15)
Minimum - arthroscopy	102 (41-192.5)	94.5 (72-128)	125.5 (75-250)
Maximum - arthroscopy	230 (113-384)	205 (156-256)	256 (166-400)
Minimum - fracture	72 (26-102)	51 (38-148)	128 (61-256)
Maximum - fracture	128 (32-205)	154 (77-230)	230 (128-500)
Minimum - arthroplasty	146 (73-295)	120 (51-261)	154 (98-428)
Maximum - arthroplasty	256 (113-500)	205 (154-241)	361 (198-788)



**Figure 7.** Median difference between the remuneration obtained in different regions of Argentina for the aforementioned surgical procedures.

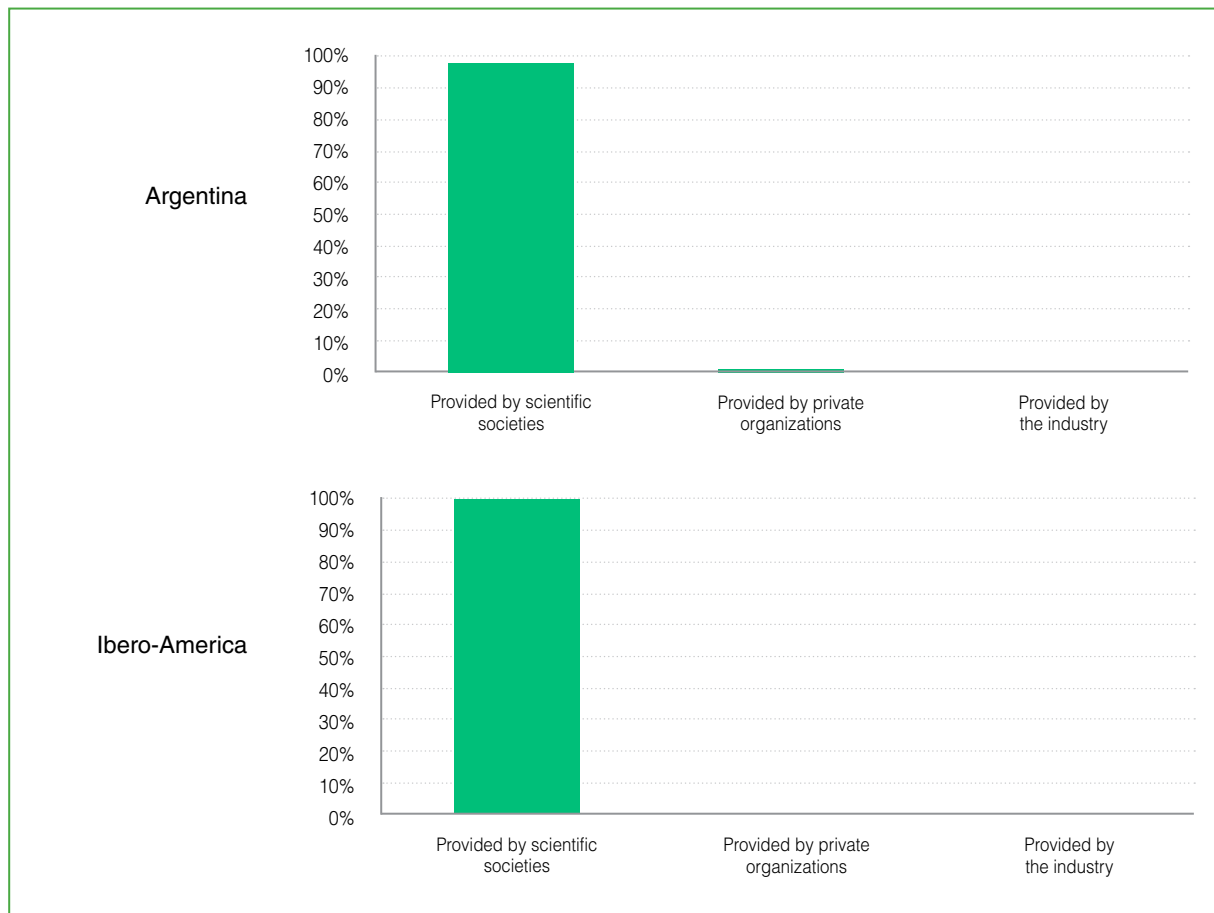
When evaluating the surgical procedures, significant differences were observed in the proximal humerus fractures in the Interior versus CABA, with minimum values of 128 dollars and 72 dollars, respectively, ( $p < 0.003$ ) and maximum values of 230 dollars and 128 dollars, respectively ( $p < 0.001$ ). There was also a difference of 205 dollars in Buenos Aires against 361 dollars in the interior for the maximum values of total arthroplasties ( $p < 0.009$ ).

### Research and teaching

There were no major differences in the main aspects of continuing medical education and academic activities. The training options offered by the different health systems was recognized by 32.3% of Argentines and 25% of foreigners. The highest rate corresponded to the CABA subgroup (44%).

100% of foreigners and 95% of Argentines (CABA: 91%, Buenos Aires: 91.6% and Interior 100%) invest personal funds in their professional training.

98.9% of Argentines and 100% of foreigners consider that the most reliable updating system is the one provided by scientific societies. Only one of the professionals of all the respondents of both groups chose the private postgraduate training systems as more reliable. None of the 115 respondents chose the one offered by industry as the most reliable postgraduate training system (Figure 8).



**Figure 8.** Degree of confidence in medical update systems.

With regard to academic activity, 46% of Argentines teach undergraduate courses, the highest rate was recorded in CABA (61.7%) and the lowest in the Interior (31.7%). The participation rate of Ibero-American colleagues was similar to that of CABA (62.5%).

53.5% of Argentines practice postgraduate teaching, the highest rate corresponds to the CABA (73%) and the lowest, to Buenos Aires (37%). Once again, the rate of Ibero-Americans is close to that of the CABA surgeons (75%).

Finally, in relation to scientific production, 75% of Ibero-Americans stated that they had published in international scientific journals, while the figure among Argentines was less than half (32.3%). Surgeons from CABA had the highest rate (55%), while those from the Interior subgroup had the lowest (14.6%).

With regard to scientific publications in the country itself, Ibero-Americans did so in 81.2% of cases. Once again, the highest rate in our country was from the CABA (94%) and the lowest, from the Interior subgroup (51.2%).

69.7% of Argentines and 87.5% of Ibero-Americans have expectations of making a publication in the next two years. CABA had the highest rate among ours (82.3%) and Interior, the lowest (58.5%).

## DISCUSSION

The survey carried out has allowed us, for the first time, to have a real picture of the degree of satisfaction and the remuneration of a subspecialty of Orthopedics and Traumatology in our country compared to the international Ibero-American context.

Physician satisfaction can be influenced by intrinsic (age, gender, race, and specialty) and extrinsic (work environment, practice setting, patient characteristics, and income) factors.<sup>2,7</sup> It would be a mistake to consider remuneration as the only or the most important factor. Locke<sup>13</sup> defined job satisfaction as a positive and pleasant emotional state resulting from the subject's subjective perception of work experiences, beyond economic considerations.

When evaluating the degree of professional satisfaction in medical practice, there is an even more comprehensive concept that is "work commitment". This may be a more useful construct than job satisfaction per se, since the latter also includes satisfaction with the choice of career and with the system.<sup>6</sup>

The results obtained show us a significant degree of dissatisfaction with working conditions. Less than half of the 99 Argentine doctors (47.42%) who responded to the survey expressed being "very satisfied" with their choice of medical career, compared to 75% of Ibero-Americans. In a study published in 2014, 88% of Australian orthopedists reported being satisfied or moderately satisfied with their career.<sup>14</sup> 84% of a group of US orthopedists >50 years old stated that they were satisfied or very satisfied with their career.<sup>15</sup>

31% of Argentines would choose medicine again, as opposed to 68.7% of Ibero-Americans. The difference is even greater if we compare with American orthopedists, 81% of them would choose the medical career again according to a survey carried out in 2020.<sup>16</sup>

40.5% of Argentines would opt again for Orthopedics and Traumatology against 62.5% of Ibero-Americans. In the aforementioned survey, 91% of Americans would choose the same specialty again.<sup>16</sup>

The tendency to advise or not advise their children to follow the same profession is an indicator widely used in this type of survey. Only 29.9% of Argentines would recommend their children to choose medicine compared to 69% of Ibero-Americans.

In a question whose response surely exceeds the conditions of medical practice, almost 80% of the Argentines surveyed would consider working in another country if the conditions were met, against 50% of Ibero-Americans.

*What are the reasons that led to this degree of dissatisfaction?* The cause of dissatisfaction is multifactorial. The degree of recognition felt by the Argentine doctor is lower than that of the Ibero-Americans. The perception about the recognition of patients for their work is similar in Argentines and Ibero-Americans surveyed, but 95% of Argentines consider that the patient is not concerned about whether or not their doctor has a fair remuneration. 76.2% of Argentines do not feel recognition of their professional activity by health companies and employers. 80.8% of Argentines consider that working conditions have worsened.

Low pay is a constant in the answers. Orthopedists are the highest paid medical specialty in some countries.<sup>16</sup> Even the concern in such cases becomes whether orthopedic surgeons earn too much.<sup>17</sup>

60% of American orthopedists feel that they are well rewarded for their work.<sup>17</sup> In our survey, 31.2% of Ibero-Americans considered themselves to be well paid, while for Argentines, this figure barely reached 4%.

Health insurers impose, in our field, an arbitrary value and recognition of medical practice based on their own interests. Only 4% of the Argentines who responded to the survey stated that they could freely set their fees for surgical procedures.

The average remuneration per health insurance consultation and in institutions comparable to our health insurers was much lower among Argentine doctors, with statistically significant differences with respect to Ibero-Americans. In some cases, Argentine colleagues responded that they had a percentage of patients that they had to see free of charge as part of the contract with certain institutions. These cases were left out when calculating the average value of the consultations, because they would have determined a much lower value. It should also be considered that the dollar value used is the “stock market dollar” and that if the value of the informal dollar had been used, the fees of the Argentines would have been even worse.

The minimum consultation value stated in the survey was 3 dollars for Argentines, a marked difference with the minimum value in one of the Ibero-American countries represented in the study in which charging less than 70 dollars for an orthopedic consultation could bring ethical problems to the professional with his or her medical college. The difference in consultations is also reflected in surgical practices. In all cases, the values charged in our country are enormously lower than those abroad, on average, they are a proportion of 14.3%.

It could be argued that the devaluation of our currency influences the results, that is undoubtedly true, but there is also a marked disproportion with respect to the values of other goods and services. If we compare the minimum value of consultations, in Spain, 26 kilos of bread could be bought; in Chile, 20 kilos and, in Argentina, a little less than two kilos. The value of an average consultation in Argentina is equivalent to between a dozen and a dozen and a half pastries.

The value of a square meter of construction in the city of Santiago de Chile

(\$3,441)<sup>18</sup> is equivalent to 2.4 shoulder arthroplasties performed in that city at the average value. A Buenos Aires surgeon would have to do 16.5 total shoulder arthroplasties to reach a square meter, which, moreover, at an international price is much lower than in Santiago de Chile (2,600 dollars).<sup>18</sup> We could continue comparing products and, with all of them, the proportion is the same.

CABA doctors have low fees in all the practices considered in this survey. This contrasts with their greater academic production and teaching activity. The lower income of doctors in large cities has been described. In the United States, doctors in rural areas and low-cost-of-living cities tend to earn higher salaries than those in large cities.<sup>19</sup> There will be many arguments that justify it, but this fact, somehow, is opposed to the well-known statement “for equal work, equal remuneration” based on article 14 bis of our National Constitution and the Labor Contract Law.

Finally, the effect on family life is not a minor fact. The time dedicated to family activity and leisure is valued by different medical satisfaction surveys. 45.8% of the Argentine doctors consulted expressed being dissatisfied with the amount of time available for family, social and recreational activities, unlike 6.5% of Ibero-Americans.

*Does it make sense that our employers and society “waste” time considering our degree of satisfaction?* Clearly, the level of satisfaction of physicians must be taken into account and should be a primary interest in Public Health.<sup>7,20</sup> It has been shown that the level of job satisfaction, regardless of the profession, influences the worker’s performance, determining lower rates of absenteeism, higher productivity and loyalty to the system. Medicine does not escape this phenomenon.<sup>2,5,6</sup>

There is a proportional relationship between the physician’s level of satisfaction with the perception of patients and the outcome of treatment. Linn et al.<sup>21</sup> compared the levels of patient satisfaction with those of job satisfaction of the doctors who provided their care in 16 centers of hospitals teaching general internal medicine. Sites with more satisfied patients were more likely to have more satisfied staff and teaching physicians.

In an observational study involving patients and physicians, Urriago Niño<sup>2</sup> demonstrated that the greater the physician’s personal satisfaction, the greater the patient’s satisfaction with the perceived quality of care.

The results of medical practice are also markedly influenced by the level of professional satisfaction. Prins et al.<sup>22</sup> found that physicians who are more committed to their work are significantly less likely to make mistakes. Stressed, depressed, and dissatisfied physicians report a higher likelihood of making errors and more frequent instances of suboptimal patient care.

In a survey carried out by the British National Health Service (NHS), employee engagement affected many aspects of patient care, including infection and death rates.<sup>23</sup> Staff intention to leave their jobs has also been shown to be strongly related to lower levels of patient satisfaction.

Linn et al.<sup>21</sup> cited lower rates of patient absence, more efficient use of ancillary staff to provide direct patient care, and more reasonable charges for a routine follow-up visit at centers with satisfied providers. Patients treated by professionals with a higher degree of satisfaction have more adherence to the indicated treatments.

Low satisfaction also affects the adherence of professionals to the system. The media have recently reflected the desertion of specialists from the prepaid health care system.<sup>24</sup>

Finally, prolonged low satisfaction is associated with self-reported psychiatric symptoms and worse perceived mental health.<sup>25</sup> Physicians have more psychological distress than most other working populations. The stages that follow dissatisfaction are stress, depression, burn-out, drug addiction and early abandonment of the profession.

### Alternative solutions

The Argentine professionals surveyed showed a strong commitment to their career despite markedly unfavorable working conditions. A high percentage (95%) invest personal funds in their professional training. The survey showed a great predisposition to get involved in teaching and research tasks, beyond the fact that they are not valued by the system.

Fortunately, satisfaction is not a static variable, on the contrary, it reflects a dynamic interaction between the expectations of professionals and the environments in which they work. This always gives the possibility to modify the result of this interaction. Intrinsic factors, such as age, cannot be modified. Extrinsic factors, on the other hand, can be modified and the solution should focus on them.

The assessment of this problem often not perceived by the rest of society, disdained by employers and insufficiently exposed by ourselves, is the first step to find solutions. To be effective, these must include all the protagonists of the health system. As long as this does not happen, we have the right to feel that we are not well treated by a society whose quality of life and health we care for.

### Study limitations

This study is based on the opinion of 115 traumatologists from all over Ibero-America. This gives strength to the results, but they can also be influenced by subjectivities.

The average fee values between the minimum and the maximum were taken, but this does not necessarily represent the reality of daily care. It is likely that the average values tend to be overestimated, since it is more frequent to receive payments close to the minimum than to the maximum in the professional activity.

In these calculations, we did not subtract from the fees the values corresponding to taxes, debits and the effect of inflation due to the delay in collection. This last factor was also mentioned by colleagues as problematic along with the bureaucracy and intermediaries in the payment.

## CONCLUSIONS

The results of the survey showed low average levels of satisfaction in the Argentine professionals surveyed. There are statistically significant differences in professionals from other Ibero-American countries both in terms of remuneration and wellbeing indices. The feeling of being the “worst treated” in Ibero-America has objective reasons demonstrated by the results of this survey.

If there are no profound changes in the care system, remuneration and working conditions, sooner or later consequences will appear that will affect not only professionals, but also patients and the system in general.

### Disclaimer

When carrying out the study, the exchange rate per dollar in Argentina were 195 Argentine pesos with 33 cents in the official market and 210 pesos in the informal market. Five months later, at the time of publication, the value of the dollar is 314.85 and 338 pesos, respectively. This represents a devaluation of our currency higher than 60% and implies a sharp drop in the value of the fees with certain repercussions in the levels of satisfaction found in this survey.

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Conflict of interest: We are shoulder and elbow surgeons exposed to the same working conditions as our Argentine colleagues participating in the study.

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## Annex

### Questionnaire for Argentine doctors

Dear colleague, you have been invited to participate in the study on “Remuneration and level of satisfaction of the members of the Asociación Argentina de Cirugía de Hombro y Codo,” in your capacity as a member of the Asociación Argentina de Cirugía de Hombro y Codo.

It is important for you to keep in mind that participation in the study is voluntary and anonymous. Please read all the information provided in this document before answering the survey.

This study aims to find out how specialists who belong to the Asociación Argentina de Cirugía de Hombro y Codo perceive their working conditions and to compare them with experts from other Latin American countries. To do this, you are asked to answer this survey as honestly as possible, which has closed questions and open questions in which you can express your personal opinion. All responses will be analyzed anonymously and the results will be analyzed together. The Board of Directors of our Association has approved this study.

1. I have read the information sheet of the Informed Consent, I have received a satisfactory explanation about the study procedures and their purpose. I am satisfied with the information received, I have understood it and all my doubts have been answered.

I understand that my decision to participate is voluntary, and that not participating will not result in any negative consequences for my participation in the Association.

- I agree. - I do not agree.

2. In order to participate in this survey it is necessary to be a physician and member of the Asociación Argentina de Cirugía de Hombro y Codo. Are you a member?

3. Please indicate your age.

4. Sex.

5. How many years ago did you graduate from medical school?

6. Field in which you work.

7. Main place of work.

8. In which of your workplaces do you feel most comfortable professionally?

9. In which of your workplaces do you feel least comfortable professionally?

10. What would you change to feel more comfortable? If you are comfortable with all of them, you can answer “nothing”.

11. In which of your workplaces do you feel most comfortable regarding the human aspect?

12. In which of your workplaces do you feel least comfortable regarding the human aspect?

13. What would you change to feel more comfortable? If you are comfortable with all of them, you can answer “nothing”.

14. Does your workload seem excessive?

15. Does the risk of being sued by patients influence your decision-making?

16. How do you perceive that the working conditions of physicians have evolved (remuneration, relationship with employers, job stability, etc.) throughout your career?

17. Do you work on-call shifts?

18. Do you consider that our profession is socially respected? One star corresponds to nothing, 5 stars to a lot.

19. Are you satisfied with your choice of a medical profession?

20. If you are dissatisfied or somewhat dissatisfied, what are the two main causes of dissatisfaction?

21. What other profession would you choose if you could do it again?

22. Are you satisfied with your choice of orthopedics and trauma specialty?



23. What other specialty would you choose if you could do it again?
24. Would you recommend your children to study medicine?
25. How satisfied are you with the amount of time you have left each year for family, social, and recreational activities?
26. Do you feel recognition from most of your patients for your work?
27. Do you feel recognition from your employers and health companies for your work?
28. Would you consider practicing in another country with better working conditions?
29. Do you consider that your services are adequately remunerated?
30. Do you feel that your patients care that you are fairly compensated?
31. In what percentage of your surgeries can you freely set your fees?
32. What is the minimum and maximum value in pesos that you receive for making a consultation, leaving aside the places where you work for a fixed salary and the cases in which you can set your fees freely?
33. What is the minimum and maximum value in pesos that you receive for performing a complex shoulder arthroscopy, leaving aside the places where you work for a fixed salary and the cases in which you can set your fees freely?
34. What is the minimum and maximum value in pesos that you receive for performing an osteosynthesis of a proximal humerus fracture, leaving aside the places where you work for a fixed salary and the cases in which you can set your fees freely?
35. What is the minimum and maximum value in pesos that you receive for performing a total shoulder arthroplasty, leaving aside the places where you work for a fixed salary and the cases in which you can set your fees freely?
36. Are you currently involved in undergraduate teaching activity?
37. Are you currently involved in graduate teaching activity?
38. Does the health system offer you opportunities for improvement?
39. Which update system do you think is more reliable?
40. Do you regularly invest funds from your own pocket in professional training?
41. Have you published scientific papers in international media?
42. Have you published scientific papers in national media?
43. Do you see the publication of a study of your authorship in a scientific journal in the next two years feasible?

## Questionnaire for foreign doctors

1. I have read the information sheet of the Informed Consent, I have received a satisfactory explanation about the study procedures and their purpose. I am satisfied with the information received, I have understood it and all my doubts have been answered.

I understand that my decision to participate is voluntary, and that not participating will not result in any negative consequences for my participation in the Association.

- I agree. - I do not agree.

2. Please indicate your age.

3. Sex.

4. How many years ago did you graduate from medical school?

5. Field in which you work (you can check more than one option). Private patients are understood to be those who pay their fees directly to the professional without intermediaries. Healthcare plans are entities managed by trade unions. Health insurance corresponds to mutual or prepaid plans in which the patient pays a monthly fee and the doctors work for a value for each practice they provide.

6. Country in which you work.

7. In which of your workplaces do you feel most comfortable professionally?

8. In which of your workplaces do you feel least comfortable professionally?

9. What would you change to feel more comfortable? If you are comfortable with all of them, you can answer "nothing".

10. In which of your workplaces do you feel most comfortable regarding the human aspect?

11. In which of your workplaces do you feel least comfortable regarding the human aspect?

12. What would you change to feel more comfortable? If you are comfortable with all of them, you can answer "nothing".

13. Does your workload seem excessive?

14. Does the risk of being sued by patients influence your decision-making?

15. How do you perceive that the working conditions of physicians have evolved (remuneration, relationship with employers, job stability, etc.) throughout your career?

16. Do you work on-call shifts?

17. Do you consider that our profession is socially respected? One star corresponds to nothing, 5 stars to a lot.

18. Are you satisfied with your choice of a medical profession?

19. If you are dissatisfied or somewhat dissatisfied, what are the two main causes of dissatisfaction?

20. What other profession would you choose if you could do it again?

21. Are you satisfied with your choice of orthopedics and trauma specialty?

22. What other specialty would you choose if you could do it again?

23. Would you recommend your children to study medicine?

24. How satisfied are you with the amount of time you have left each year for family, social, and recreational activities?

25. Do you feel recognition from most of your patients for your work?

26. Do you feel recognition from your employers and health companies for your work?

27. Would you consider practicing in another country with better working conditions?

28. Do you consider that your services are adequately remunerated?

29. Do you feel that your patients care that you are fairly compensated?

30. In what percentage of your surgeries can you freely set your fees?
31. What is the minimum and maximum value in pesos that you receive for making a consultation, leaving aside the places where you work for a fixed salary and the cases in which you can set your fees freely?
32. What is the minimum and maximum value in US dollars that you receive for performing a complex shoulder arthroscopy, leaving aside the places where you work for a fixed salary and the cases in which you can set your fees freely?
33. What is the minimum and maximum value in US dollars that you receive for performing an osteosynthesis of a fracture of the proximal humerus, leaving aside the places where you work for a fixed salary and the cases in which you can set your fees freely?
34. What is the minimum and maximum value in US dollars that you receive for performing a total shoulder arthroplasty, leaving aside the places where you work for a fixed salary and the cases in which you can set your fees freely?
35. Are you currently involved in undergraduate teaching activity?
36. Are you currently involved in graduate teaching activity?
37. Does the health system offer you opportunities for improvement?
38. Which update system do you think is more reliable?
39. Do you regularly invest funds from your own pocket in professional training?
40. Have you published scientific papers in international media?
41. Have you published scientific papers in national media?
42. Do you see the publication of a study of your authorship in a scientific journal in the next two years feasible?