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Personal Satisfaction and Perception of Success among Female Orthopedic Surgeons: Key Factors in the Choice of Specialty and Professional Development

Satisfacción personal y percepción de éxito en mujeres en Traumatología: Factores determinantes en la elección de la especialidad y desarrollo profesional

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Abstract

Historically, female doctors have been associated with certain specialties. In recent years, these stereotypes have been slowly reversed with an increased participation of women in surgical specialties. The importance of models and mentors in the learning process is known. We seek to evaluate the level of professional satisfaction and success of women in Traumatology, as well as the factors that may have played a positive role in the decision to pursue this specialty.

We surveyed 108 women working in Traumatology and evaluated the positive influences and mentors as models in the decision-making regarding the specialty and the degrees of personal and professional satisfaction.

Despite a greater perception of difficulties in achieving the purpose, the high degrees of professional and personal satisfaction of women in Traumatology stands out: 95% reported having chosen the correct specialty, 100% stated that the difficulties are offset by the results obtained, and 96% would choose the same specialty again.

Keywords
- gender
- orthopedics
- women

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Regarding the perception of success, 73% consider themselves successful in their occupation, and 85% consider themselves successful in their personal lives.
The role played by teachers, mentors, as well as an interest in surgery and sports are very relevant in choosing the specialty. In total, 84% of the sample received some positive influence 61% had a female traumatologist as a model during their training, and 98% would recommend other women in training to dedicate themselves to Traumatology.
The strategies to increase female participation in the specialty could be aimed at promoting female role models during learning.

Resumen

Históricamente, las médicas han sido asociadas a especialidades determinadas. En los últimos años, estos estereotipos han sido lentamente revertidos con mayor participación de la mujer en especialidades quirúrgicas. En el proceso de aprendizaje se sabe la importancia que tienen los modelos y mentores. Buscamos evaluar el grado de satisfacción y el éxito profesional de las mujeres en Traumatología, y qué factores cumplieron un rol positivo en la decisión de optar por ella.
Se encuestó a 108 mujeres dedicadas a la Traumatología, y se evaluaron las influencias positivas y los mentores como modelo en la toma de decisión por la especialidad y los grados de satisfacción personal y profesional.
Pese a una mayor percepción de dificultades en lograr el objetivo, destacan los altos grados de satisfacción profesional y personal de las mujeres en Traumatología: 95% refirió haber elegido la especialidad correcta, 100% afirmó que las dificultades se compensan con los resultados obtenidos, y 96% volvería a elegir la misma especialidad.
En relación con la percepción de éxito, 73% se considera exitosa en su vida profesional, y en la vida personal, 85%.
Muy relevante en la toma de decisión por la especialidad es el rol que cumplen docentes, mentores, y el gusto por la cirugía y los deportes. Un 84% recibió alguna influencia positiva, 61% tuvo como modelo en su formación una traumatóloga, y un 98% recomendaría a otras mujeres en período de formación que se dedicaran a la Traumatología.
Las estrategias de incremento de la participación femenina en la especialidad pudiesen orientarse a fomentar modelos femeninos durante el aprendizaje.

Palabras Clave
- género
- ortopedia
- mujeres

Introduction

Historically, women in Medicine have been associated with certain specialties, and Traumatology and Orthopedics have traditionally been considered a predominantly male specialty.

There are studies[1–6] on the participation of women in Orthopedics, mainly in the United States, that show an increase in the number of female residents in recent years, which has not been proportional to the increase in the female population among undergraduate medical students. According to a report from the United States,[1] between 1981 and 2001, the increase in the proportion of women in General Surgery, Neurosurgery, Ophthalmology, Obstetrics and Gynecology, Otorhinolaryngology, and Urology was greater than in Orthopedics and Traumatology, an evolution that was also evidenced in the study by Poon et al.,[6] who observed that the increase in the number of women in Orthopedics and Traumatology between 2006 and 2015, from 10.9% to 14.4%, was lower than in all other specialties evaluated, except Urology. Another study[7] reports a percentage of women in Traumatology in 2006 that is lower than that of all other surgical specialties (12.4% versus 30.7%), only surpassing female participation in Neurosurgery programs (11.1%).

In Chile, women make up 51.1% of the general population.[8] The participation of women in the total enrollment in higher education has shown constant growth, equaling male enrollment in 2008 and reaching 51.9% nationally in 2017.[8]

Although this change has gone hand in hand with the numbers of female medical students in Chile, who today make up 50% of qualified doctors, this growth has not been reflected in training programs for specialists in Traumatology and Orthopedics. Although the number of women enrolling in orthopedic training programs has increased in recent years, only 6.3% of traumatologists who are members

of Sociedad Chilena de Ortopedia y Traumatología (Chilean Society of Orthopedics and Traumatology, SCHOT, in Spanish) in 2020 were women.

On the other hand, within the learning process, the importance of early exposure is known as a determinant of professional decisions, as well as the importance of the presence of role models and mentors during the process of professional training. In 2016, the Association of American Medical Colleges (AAMC)[9] reported that 81.7% of medical students consider that the presence of a mentor strongly influences the choice of specialty.

The objective of the present study is to evaluate the degree of satisfaction and professional success of women dedicated to Traumatology and Orthopedics in Chile and to know which factors played a positive role in the decision to opt for it, and which were decisive in the choice of specialty.

Materials and methods

The present is an epidemiological study that was approved by the institutional scientific ethics committee. Between October and December 2019, an online survey was filled out by 108 women dedicated to Traumatology, including specialists and residents. This survey was self-administered, anonymous, and contained questions aimed at evaluating positive influences and the presence of mentors as models in the decision for the specialty. The degrees of personal and professional satisfaction and the balance regarding difficulties and results were also evaluated. The statistical analysis was performed using the Fisher test for categorical variables and the Mann Whitney test for numerical variables, since they were not distributed parametrically.

Results

The survey was sent to 135 women working in the field of Traumatology and Orthopedics in Chile, and was filled out by 108 (80%) of them. Of these, 87% were aged under 40 years, and 13% were older than this age, with a clear increase in women entering the field of Traumatology over the years.

A total of 62.1% of the respondents were practicing traumatologists, while 37.9% were still in training, either as residents or subspecialty fellows, and 40.7% of women who answered the survey were members of SCHOT, which corresponded to 58% of those who had already completed their residency.

A great centralization can be observed, with a majority distribution in the Metropolitan Region (MR), which concentrated 65.7% of the respondents. In total, 68.6% worked exclusively in the public sector, and 31.4% either worked exclusively in the private sector or split their hours between the public and private health systems.

Regarding the factors deemed decisive in the choice of specialty on the part of the respondents, 84.3% reported that they had received some positive influence or mentorship from a professor, scholarship holder or fellow, and 60.7% had had a female traumatologist professor in their training period, which was relevant in their decision.

The factors that influenced the respondents to choose Traumatology as their specialty included an interest in surgery (85.2%), vocation (46.2%), a male professor (44.4%), an interest in sports (39%), a female professor (14 .8%), and others (3.7%).

In terms of personal and professional development, 19% of women in the field of traumatology had held a leadership position, and 32% held an academic position, with 73% feeling successful in the professional field and 85% feeling successful on a personal level. Regarding the question "do you consider yourself personally successful?", significant differences were found regarding those who held an academic position and the SCHOT members ($p < 0.05$), with more positive responses in these two groups compared to those who did not hold an academic position and who were not SCHOT members. Regarding this same question, no differences were found in terms of to age, level of schooling, the fact thy they had children, the place of work (public or private), and weekly working hours. Faced with the question "do you consider yourself professionally successful?", the differences were significant regarding women from the MR and the SCHOT members, in favor of these two groups, with no differences in the rest of the parameters ($p < 0.05$). When asked "do you feel happy in your current job?", 92% responded positively.

As an overall balance between the difficulties and benefits involving professional training and career, 95% considered that they had chosen the correct specialty, 96.3% would choose the same specialty again, and 98.2% stated that they would recommend that other women in training choose the field of Traumatology. Despite the fact that 58% reported having felt greater difficulties than their male colleagues and that 73% consider that being a woman has reduced their chances of success at work, 100% think that the difficulties are compensated by the results obtained.

Discussion

The presence of women in Traumatology and Orthopedics has been increasing in recent decades; however, it is still a very low percentage compared to those of other medical specialties and does not represent the participation of women in higher education and in undergraduate medical training in our country.

The factors influencing women's decision against Traumatology as a specialty are unclear and could be multifactorial. Possible causes have been postulated, such as the lack of early exposure of women to the specialty, negative perceptions about the future quality of life, the absence of role models, misconceptions of the physical ability required to work in this specialty, and incompatibility with the role of mother, among other cultural and sociological factors that determine female versus male roles.[1,10–13] Within these, lifestyle has been proposed as the main dissuasive factor in choosing specialties in the surgical field; however, this factor would not influence women more than men.[14]

On the other hand, perceptions of the different specialties are developed through personal experience and through

cultural messages called "hidden curricula". Hidden curriculum consists of information, which is not a formal part of the medical curriculum, that is transmitted by peers, patients, and teachers to physicians in training.

In Medicine, these cultural messages perpetuate a distinctly masculine stereotype of a "typical surgeon". They teach students to anticipate barriers in the field of surgery based on their gender. An example of this is the perception that Traumatology is not a suitable career for women.

Although these messages do not negatively influence more confident and committed students from pursuing a surgical career, students who are less sure of which area of specialization to pursue may feel discouraged to consider Traumatology.

It is important to facilitate positive female exposure to surgery and deliberately challenge stereotypes perpetuated by hidden curricula. Medical schools, through mentoring, for example, could play a role in increasing the number of students considering careers in surgical specialties.

Medical students consider that the presence of a mentor strongly influences the choice of specialty.[9] At the University of Toronto,[15] female medical students identified the absence of female role models as a probable cause for not choosing surgery rotations. These female role models are needed to excite female students to continue their studies in surgical specialties,[16–18] and, in their absence, few women choose Traumatology based on their experience as undergraduates. The early exposure of female medical students to Traumatology during their careers positively influences their decision to pursue this field.[19,20] Mentors act as role models,[21] offer professional support and, in the case of female mentors, they will have a better understanding of inherent gender issues.[22] In medical schools with a higher percentage of female academics, the number of women applying for surgical specialties is considerably higher,[23,24] which is also true regarding schools with a higher number of female residents.[25]

However, although it seems that mentoring could be a key point in attracting women to the field, women have more difficulty finding mentors and sponsors, especially those who hold important positions or have influence in terms of decision-making. As more women hold academic or managerial positions, they will serve as visible role models and mentors for future generations. In the present study, the percentage of female traumatologists with an academic position was of 32%, and only 19% held or had held managerial positions.

Increasing diversity among health professionals, including women and other minority groups, improves patient communication and may improve health disparities, leading to improved quality of the care provided to patients. The need for diversity in Medicine is a vital component in ensuring the delivery of quality care to patients as has been recognized by the American Academy of Orthopaedic Surgeons (AAOS),[2,26] especially as we are an increasingly diverse society. Patients who have cultural, racial, and ethnic backgrounds similar to that of their treating physicians tend to have better outcomes due to better physician-patient interaction and communication.[27] In addition, minority doctors are more likely to work in less sought-after locations.[28]

A specialty that continues to present itself as attractive only to the male population, as it seems to be the case of Traumatology, will only be able to attract applicants from a group that constitutes approximately 50% of medical students, thus losing good and excellent candidates.[29,30]

Conclusion

Despite a greater perception of difficulties in achieving the goal, the high levels of professional and personal satisfaction of women in the field of Traumatology and Orthopedics stand out. Another aspect that also stands out is the high quantity of female orthopedists who consider they have chosen the correct specialty, of those who would choose the same specialty again, as well as the percentage of those who would recommend that other women in training specialize in Traumatology. These considerations show that Traumatology is an attractive option for women and generates high levels of satisfaction.

The role played by professors, mentors, positive role models, as well as the interest in surgery and sports are very relevant in making the decision to dedicate oneself to this specialty. Therefore, strategies to increase the participation of women in the specialty could be geared towards fostering female role models during residency, as well as temporary exposure to the specialty.

Conflict of interests
The authors have no conflict of interests to declare.

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