# Gender Distribution in Medical Leadership Roles in Portugal: The Example of Candidacy to Bodies of the Portuguese Medical Association 2017-2019 

# Distribuição de Género em Cargos de Liderança na Área Médica em Portugal: O Exemplo das Candidaturas aos Órgãos da Ordem dos Médicos 2017-2019 

Miguel CABRAL ${ }^{1,2}$, Margarida PAIXÃO ${ }^{1}$, Andreia LEITE $\square^{1,3}$<br>Acta Med Port 2021 May;34(5):342-346 • https://doi.org/10.20344/amp.12955


#### Abstract

Introduction: Gender equality is one of the sustainable development goals. Low participation of women in leadership roles is an example of gender inequality. In Portugal, there are few studies regarding gender inequality in medical leadership roles. Therefore, we aimed to analyse gender distribution of candidates to regional bodies of the Portuguese Medical Association. Material and Methods: We extracted data from the candidates to the regional bodies of the Portuguese Medical Association (2017 - 2019 mandate) from the Association's magazine (issue number 175). We calculated the percentage of women candidates, overall and stratified by list, region and roles. We obtained observed-vs-expected ratios overall and by region, and respective $95 \%$ confidence intervals, assuming a Poisson distribution. Finally, we conducted a sensitivity analysis, excluding substitute candidates. Results: Women accounted for $37 \%$ of the candidates (regional variation: 29\%-51\%). The national observed-vs-expected ratio was 0.74 ( $95 \%$ confidence interval: $0.58 ; 0.92$ ), mainly driven by the ratio from the South Region: 0.58 ( $95 \%$ confidence interval: $0.41 ; 0.80$ ). Women ran mainly for alternate candidates and secretary positions (56\% and 54\% respectively). Discussion: Gender differences were identified, particularly in the South, regarding the frequency and type of candidacy. Previous works have identified maternity, the social role of women and perceptions regarding the leadership roles as possible reasons to explain such differences. Our analysis is limited to specific leadership roles and an election moment; further studies should be pursued. Conclusion: We identified a lower than expected participation of women in the elections for the Portuguese Medical Association. When they run, women are found mainly in less relevant positions or with less potential to be elected (secretary or alternate candidate). A deeper understanding and measures to fight gender inequality in leadership roles are required. Keywords: Gender Identity; Leadership; Portugal; Sexism; Societies, Medical

\section*{RESUMO}

Introdução: A igualdade de género constitui um dos objetivos de desenvolvimento sustentável. Uma manifestação de desigualdade de género é a baixa participação de mulheres em cargos de liderança. Em Portugal, são escassos os estudos sobre a desigualdade de género na liderança na área médica. Assim, o presente trabalho pretendeu analisar a distribuição de género em candidaturas aos órgãos regionais da Ordem dos Médicos. Material e Métodos: Foram extraídos da Revista da Ordem dos Médicos (número 175) os dados dos candidatos aos órgãos regionais da Ordem dos Médicos (mandato de 2017-2019). Obtiveram-se as percentagens de mulheres candidatas, globalmente, por lista, regiões e cargos. Calcularam-se razões observado-versus-esperado por secção regional e intervalos de confiança a $95 \%$ assumindo uma distribuição de Poisson. Foi realizada análise de sensibilidade, excluindo os candidatos a suplentes. Resultados: Trinta e sete por cento dos candidatos eram médicas (variação por região: 29\%-51\%). A nível nacional a razão obser-vado-versus-esperado foi de 0,74 (intervalo confiança a $95 \%$ : 0,$58 ; 0,92$ ), principalmente influenciada pela razão da região Sul de 0,58 (intervalo confiança a $95 \%$ : 0,$41 ; 0,80$ ). Existiu uma predominância de mulheres nas candidaturas para suplentes e secretário ( $56 \%$ e 54\% respetivamente). Discussão: A diferença entre géneros é particularmente acentuada na região Sul, na frequência e tipo de cargos a que se candidatam. As razões apontadas na literatura relacionam-se com a maternidade, o papel social da mulher e perceções sobre o desempenho dos cargos de lideraça. Este estudo é limitado à análise de um tipo de liderança e um momento eleitoral, sendo necessárias análises mais abrangentes. Conclusão: Houve menor participação do que o expectável por parte das médicas no processo eleitoral da Ordem dos Médicos. Quando participam, as mulheres tendem a fazê-lo em cargos de menor relevância ou com menos potencial para eleição (secretário ou suplente). É necessário aprofundar o estudo e introduzir medidas de combate à desigualdade de género em cargos de liderança. Palavras-chave: Identidade de Género; Liderança; Portugal; Sexismo; Sociedades Médicas


## INTRODUCTION

Gender equality is one of the founding values of the Universal Declaration of Human Rights and of the Euro-
pean Union and, since the 1990s, it has been one of the highlights of the European agenda. ${ }^{1,2}$ The importance of

[^0]2. World Health Organization Collaborating Centre for Health Policy, Governance and Leadership in Europe. Università Cattolica del Sacro Cuore. Rome. Italy.
3. Centro de Investigação em Saúde Pública. Escola Nacional de Saúde Pública. Universidade NOVA de Lisboa. Lisboa. Portugal.
$\boxed{\Delta u t o r ~ c o r r e s p o n d e n t e: ~ A n d r e i a ~ L e i t e . ~ a n d r e i a . l e i t e @ e n s p . u n l . p t ~}$
Recebido: 14 de outubro de 2019 - Aceite: 20 de janeiro de 2020 - First published: 09 de dezembro de 2020 - Online issue published: 03 de maio de 2021 Copyright © Ordem dos Médicos 2021
achieving gender equality is also included in the United Na tions Sustainable Development Goals, specifically in goal number five. ${ }^{3}$

One of the manifestations of gender inequality is the low participation of women standing for leadership positions. This issue has been discussed with specific focus on leadership positions in the political area and in the economic sector. ${ }^{1}$ In Portugal, studies carried out within a business environment showed that the representation of women in management bodies was below what had been found in Nordic countries. ${ }^{4}$ A study in Portuguese leading companies (listed in the PSI-20) showed that in 2016, six of the 19 companies analysed included no women on the board of directors and found a $33.3 \%$ maximum female participation. ${ }^{5}$ Low feminisation in political appointment positions in all areas of government has been shown in more recent analyses. ${ }^{6}$

Studies in the United States of America have shown that only $18 \%$ of hospital chief executive officers, $15 \%$ of heads of department in medical schools and $16 \%$ of members of the board of directors of medical schools were women. These were found despite an increasing number of female graduates and that over half of the students graduating from college are now women. ${ }^{7}$ In Portugal, the ratio of women in the medical profession has increased over recent decades, with $40.2 \%$ female doctors in 1991, $50.2 \%$ in 2010 and $55.3 \%$ in $2018 .{ }^{8}$ Therefore, a greater number of leadership positions being held by female doctors would be expected. However, in line with other countries, this trend of a higher ratio of women in medicine did not translate into a higher percentage of women in leadership positions. ${ }^{7,9,10}$ This also seems to be the case in the scarce literature focused on this specific area in Portugal. At the end of the last century, only $20 \%$ of the teaching staff were female at the Faculty of Medicine of the University of Porto. In one of the largest hospitals in Lisbon, $52 \%$ of the doctors were women and only $17 \%$ of the heads of department. ${ }^{11}$ However, there are no known nationwide studies focused on gender inequality in leadership positions in the medical area (including hospitals and medical faculties). The Ordem dos Médicos (OM) (Portuguese Medical Association) currently congregates all physicians working in Portugal ${ }^{12}$ and, although it is a national entity, it is divided into three regional sections: Northern, Central and Southern, with the Autonomous Regions included in the latter. ${ }^{12}$ As a democratic institution, the OM is led by structures including individuals elected after an electoral process open to all physicians. However, the most prominent leadership position, the position of President of the Board of Trustees, was never held by a female physician. ${ }^{12}$ Given the lack of national studies on gender distribution in leadership positions in the medical area, this study was aimed at describing the gender distribution of the candidates within the different lists standing for the regional bodies of the three OM sections (Northern, Central and Southern) for the 2017-2019 triennium. It was also aimed at the identification of gender differences in candidates.

## MATERIAL AND METHODS

Data from the Revista da Ordem dos Médicos nº. 175, December 2016 were analysed. ${ }^{13}$ The name of all the candidates, boards and positions they were standing for, as well as the lists and regional sections for which they were doing so, were obtained. The gender of the candidates was based on their name. In doubtful cases regarding the gender of the candidate, Google search engine was used to obtain a gender identification through photo search of the candidate and recognition of gender phenotypic traits. Based on gender identification, the ratio of female candidates was calculated at the national level, per section, per list and per position for which individuals were running. Since there were differences between the different lists, only the positions that were common to all the lists were analysed.

In order to estimate what would be expected according to the number of doctors, observed-versus-expected (O/E) ratios by regional section were obtained and $95 \%$ confidence intervals assuming a Poisson distribution were considered. The values were those used to calculate the ratio of female candidates. The expected values were obtained by applying the ratio of female physicians ${ }^{8}$ to the total number of candidates in each regional section. Given that the ratio of female doctors has been increasing and it is expected that candidates already had some experience, two ratios were used - one regarding 2009 and one regarding 2016. The expected number based on 2009 corresponded to the number of female doctors if the group of candidates followed the gender distribution found in 2009. Similarly, the expected number based on 2016 corresponded to what would be expected if the group of candidates followed the existing gender distribution in 2016. A ratio < 1 means that there were fewer female candidates than what would be expected according to the gender distribution of physicians, a ratio of 1 corresponded to the expected value and $>1$ was higher than the expected value.

As alternate candidates have a lower possibility of actually standing for the position, sensitivity analyses were carried out excluding alternate candidates. The analyses were carried out using Microsoft Excel software (version 2016, Microsoft, Redmond, Washington, USA) and R programming language. ${ }^{14}$

As only data existing in the public domain were used, the study was not submitted for Ethics Committee approval.

## RESULTS

Data regarded 214 candidates included into the lists of all the three regional sections ( 78 female, around $37 \%$; $51 \%, 46 \%$ and $29 \%$ regarding Northern, Central and Southern sections, respectively). The distribution by lists, divided by regional section, is shown in Table 1, where half or more than half of the elements in only one of the six lists were female.

The results of the observed-versus-expected ratio analysis are shown in Table 2. Lower-than-expected numbers of female candidates has been found, taking into account the distribution of female doctors. The distribution in the

Northern region is in line with what was expected, while in Lisbon the number of female candidates was almost half of what was expected. The results are similar considering the distribution of female doctors in 2009 and 2016. When alternate candidates were removed, a lower ratio has been found in all groups.

The ratio of female candidates per position is shown in Table 3. One female candidate out of a total of 18 stood for the positions described as president (Regional Assembly Board, Regional Council and Regional Supervisory Board), while $33 \%$ of female candidates stood for the position of vice-president of the list and only one for the position of treasurer (17\%). In a total of six list trustees and six delegates, only one female stood for each of these positions. In the Southern Regional Section, no female candidates stood as trustee, delegate or candidate standing for organ chairperson. On the other hand, $56 \%$ and $54 \%$ of female candidates stood for secretary and alternate candidates for the different bodies.

## DISCUSSION

This was the first study aimed at the characterisation of gender inequality in candidates standing for leadership positions in the Portuguese medical area. A lower-thanexpected participation of female physicians in the electoral process has been found, considering the number of female physicians and becoming even more relevant when alternate candidates were removed.

Gender differences were particularly significant in the

Southern region, with half of the expected number of female candidates. However, it is worth mentioning that the apparent better result is due to one list in the Northern Regional Section showing a high ratio of female candidates. This list included an increase in the number of women standing for permanent positions in its electoral campaign mission. ${ }^{13}$ This apparent geographical difference should also be carefully taken into account, given the small numbers and therefore with great variability. Further studies could analyse other examples of leadership positions and deepen the analysis in terms of geographical distribution.

A predominance of male applicants standing for leadership positions has been found, while there is a greater predominance of women standing for positions with less exposure (such as secretary) or lover chance of reaching a permanent position (alternate candidates). There is evidence of a greater predisposition to criticise office-holders in positions to which their gender is not typically associated. ${ }^{15}$ When considering that leadership positions are not traditionally associated with female gender, this could show that, in addition to greater constraints in reaching this type of position, women may feel the focus of criticism, opting to choose positions with lower exposure or less active involvement.

In addition to the above, aspects related to the social role of women are among the reasons described in the literature as possible explanations for a lower participation in leadership positions: (i) maternity, especially in the early years; (ii) the social image of women prioritising the family ${ }^{10,16,17}$;

Table 1 - Female candidates involved in the electoral process by regional section and list (total and excluding the alternate candidates)

| Regional section | List | Female candidates $\%(n, T)$ | Female candidates, excluding alternate candidates \% ( $\mathrm{n}, \mathrm{T}$ ) |
| :---: | :---: | :---: | :---: |
| Northern | 1 | 29 (7/24) | 25 (5/20) |
|  | 2 | 76 (16/21) | 71 (12/17) |
|  | Total | 51 (23/45) | 46 (17/37) |
| Central | 3 | 46 (16/35) | 41 (11/27) |
| Southern | 4 | 33 (15/45) | 30 (11/37) |
|  | 5 | 36 (16/45) | 37 (14/38) |
|  | 6 | 18 (8/44) | 11 (4/36) |
|  | Total | 25 (39/134) | 26 (29/111) |
| Total | - | 37 (78/214) | 33 (57/175) |

T: total of candidates for each group

Table 2 - Observed-versus-expected (O/E) ratios with and without alternate candidates in 2009 and 2016 nationwide and by the three regional sections (Northern, Central and Southern)

|  | 2009 O/E |  |  | 2016 O/E |  |
| :--- | :--- | :--- | :--- | :---: | :---: |
| Region | With alternates | No alternates | With alternates | No alternates |  |
| National | $0.74(0.58 ; 0.92)$ | $0.66(0.50 ; 0.85)$ | $0.67(0.53 ; 0.84)$ | $0.60(0.45 ; 0.78)$ |  |
| Northern | $1.05(0.66 ; 1.57)$ | $0.94(0.55 ; 1.51)$ | $0.92(0.58 ; 1.38)$ | $0.85(0.50 ; 1.36)$ |  |
| Central | $0.94(0.54 ; 1.53)$ | $0.85(0.42 ; 1.51)$ | $0.89(0.51 ; 1.44)$ | $0.79(0.39 ; 1.41)$ |  |
| Southern | $0.58(0.41 ; 0.80)$ | $0.52(0.35 ; 0.74)$ | $0.54(0.39 ; 0.74)$ | $0.48(0.32 ; 0.69)$ |  |

Table 3 - Female candidates involved in the electoral process by position and region

| Position* | Regional section | Female candidates \% ( $\mathrm{n}, \mathrm{T}$ ) |
| :---: | :---: | :---: |
| Trustee | Northern | 0 (0/2) |
|  | Central | 100 (1/1) |
|  | Southern | 0 (0/3) |
|  | Total | 17 (1/6) |
| Delegate | Northern | 50 (1/2) |
|  | Central | 0 (0/1) |
|  | Southern | 0 (0/3) |
|  | Total | 17 (1/6) |
| President | Northern | 20 (1/5) |
|  | Central | 0 (0/3) |
|  | Southern | 0 (0/7) |
|  | Total | 7 (1/15) |
| Vice-president | Northern | 50 (2/4) |
|  | Central | 50 (1/2) |
|  | Southern | 17 (1/6) |
|  | Total | 33 (4/12) |
| Treasury | Northern | 0 (0/2) |
|  | Central | 0 (0/1) |
|  | Southern | 33 (1/3) |
|  | Total | 17 (1/6) |
| Secretary | Northern | 83 (5/6) |
|  | Central | 33 (1/3) |
|  | Southern | 44 (4/9) |
|  | Total | 56 (10/18) |
| Voting member | Northern | 50 (8/16) |
|  | Central | 71 (5/7) |
|  | Southern | 30 (7/23) |
|  | Total | 42 (20/46) |
| Alternate candidate | Northern | 75 (6/8) |
|  | Central | 63 (5/8) |
|  | Southern | 44 (10/23) |
|  | Total | 54 (21/39) |

*: Only positions with candidates on all the lists are shown; therefore, there are different sums from the total candidates
T: total candidates for each group
(iii) remaining women's longer dedication to household tasks than their partners. ${ }^{7}$ In addition to the role of motherhood and household tasks, it has been described that women could be less interested in assuming leadership positions due to perceptions associated with these positions (e.g. possible alienation from medicine ${ }^{9}$ and overvaluation of the associated challenges). ${ }^{18}$ Some medical organisations are disclosing examples of women leadership and changing institutional policies regarding motherhood to make it easier to reconcile this with professional practice, in order to achieve greater gender equality in leadership
positions. ${ }^{9,10}$ The implementation of mentoring schemes could also correspond to another possible intervention. ${ }^{10,16}$ Although these aspects require concerted measures at various levels of action and are beyond the scope of this study, we consider that the results of this study contribute to the discussion of the role of women in leadership in the medical area and the measures to be implemented in response to inequality.

This study has several limitations. There is a not complete overlap of the OM sections with the regions obtained at the NUTS II level. However, given the limited extent of the non-overlap zone and the magnitude of the results found, it is unlikely that this limitation could have significantly biased the results. On the other hand, only one election for some of the OM bodies was considered and therefore reflects a limited picture of the situation at the national level within a specific electoral period. This example was selected due to the public availability of data and was the first contribution in characterising the national situation of gender inequality in leadership positions in the medical area, due to the absence of any other previous studies. A more comprehensive characterisation of the situation should be considered in further studies. Furthermore, given the recent obligation to present more parity lists of candidates, ${ }^{19}$ it will also be relevant to find out how this conditioning factor reflects in future lists.

## CONCLUSION

A lower-than-expected participation by female doctors in the OM's electoral process has been found, which was statistically significant at a national level and in the Southern Regional Section. When they do participate, women tend to stand for less relevant positions or with less potential for election (e.g. secretary or alternate candidate). These results have shown the need for a greater understanding of the issue and measures to fight against gender inequality in leadership positions.

## HUMAN AND ANIMAL PROTECTION

The authors declare that this project complied with the regulations that were established by the Ethics and Clinical Research Committee, according to the 2013 update of the Helsinki Declaration of the World Medical Association.

## DATA CONFIDENTIALITY

The authors declare that they have followed the protocols of their work centre on the publication of patient data.

## CONFLICTS OF INTEREST

The authors declare that there were no conflicts of interest in writing this manuscript.

## FINANCIAL SUPPORT

The authors declare that there was no public or private financial support in writing this manuscript.

## REFERENCES

1. Equality European Institute for Gender. Gender Equality in Power and Decision-Making [e-report]. 2015. [consultado 2019 out 14]. Disponível em: http://eige.europa.eu/sites/default/files/documents/mh0215090enn. pdf\#page=1\&zoom=auto,-22,842.
2. United Nations. Gender equality. [consultado 2019 out 14]. Disponível em: https://www.un.org/en/sections/issues-depth/gender-equality/.
3. United Nations. Sustainable Development Goals - Goal 5: Achieve gender equality and empower all women and girls. [consultado 2019 ut 14]. Disponível em: https://www.un.org/sustainabledevelopment/ gender-equality/.
4. Diário de Notícias. Portugal na cauda da Europa em equilíbrio de género nas empresas. 2019. [consultado 2019 out 14]. Disponível em: https://www.dn.pt/pais/interior/portugal-a-meio-do-pelotao-a-nivel-do-equilibrio-de-genero-nas-empresas---estudo-10597686.html.
5. Rodrigues MS. A representatividade das mulheres na liderança de topo: análise das atuais empresas do PSI-20 (2005 a 2016). 2017. [consultado 2019 out 14]. Disponível em: https://repositorio-aberto. up.pt/bitstream/10216/108193/2/224382.pdf.
6. Alves H . Gender equity in the medical profession as a democratic culture: the Portuguese experience. In: Bellini MI, Papalois V, editors. Gender equity in the medical profession. Hershey: Medical Information Science Reference; 2020. p. 199-2013.
7. Hitti E, Faaem M, Moreno-Walton L, Faaem M. The gender gap in medical leadership: glass ceiling, domestic tethers, or both? American Academy Emergency Medicine News. 2017. [consultado 2019 out 14]. Disponível em: https://www.aaem.org/UserFiles/file/MayJune17_WiEM. pdf.
8. PORDATA. Médicos: total e por sexo. 2019 [consultado 2019
out 14]. Disponível em: https://www.pordata.pt/Portugal/ Médicos+total+e+por+sexo-1966.
9. Glauser W. Rise of women in medicine not matched by leadership roles. CMAJ. 2018;190:E479-80.
10. Boylan J, Dacre J, Gordon H. Addressing women's under-representation in medical leadership. Lancet. 2019;393:e14.
11. Machado MC. A feminização da medicina. Análise Social. 2003;38:12737.
12. Ordem dos Médicos. História da Ordem. [consultado 2019 out 14]. Disponível em: https://ordemdosmedicos.pt/historia-da-ordem/.
13. Ordem dos Médicos. ROM. 2016;32:81-93.
14. RStudio Team. RStudio: Integrated Development for R. 2016. [consultado 2019 out 14]. Disponível em: http://www.rstudio.com/.
15. Brescoll VL, Dawson E, Uhlmann EL. Hard won and easily lost. Psychol Sci. 2010;21:1640-2.
16. Mangurian C, Linos E, Sarkar U, Rodriguez C, Jagsi R. What's holding women in medicine back from leadership. Harv Bus Rev. 2018. [consultado 2019 out 14]. Disponível em: https://hbr.org/2018/06/whats-holding-women-in-medicine-back-from-leadership.
17. Jolly S, Griffith KA, DeCastro R, Stewart A, Ubel P, Jagsi R. Gender differences in time spent on parenting and domestic responsibilities by high-achieving young physician-researchers. Ann Intern Med. 2014;160:344-53.
18. Cajigal S, Weiss G, Silva N. Women as physician leaders. Medscape. 2015. [consultado 2019 out 14]. Disponível em: https://www.medscape. com/features/slideshow/public/femaleleadershipreport2015.
19. Lei n. ${ }^{\circ}$ 26/2019. Diário da República, I Série, n. ${ }^{\circ} 62$ (2019/03/28). p.1751-2.

[^0]:    1. Unidade de Saúde Pública António Luz. Agrupamento de Centros de Saúde da Amadora. Damaia. Portugal.
