

# Labor Equity, Gender Violence and Cardiovascular Risk Factors in Cardiology Specialists

*Equidad laboral, violencia de género y factores de riesgo cardiovascular en especialistas en cardiología argentinos*

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## ABSTRACT

**Background:** Cardiology specialists may suffer from stressors that affect their health, such as labor inequity and gender violence, in addition to traditional cardiovascular risk factors (RF) for cardiovascular disease (CVD).

**Objective:** The aim of this study was to detect the level of well-being, labor equity and gender violence and to establish the prevalence of CRF in cardiology specialists in Argentina.

**Methods:** This was an observational, cross-sectional study through an anonymous survey conducted in September 2021 among specialists included in the Argentine Society of Cardiology registry. Data on labor equity, labor and domestic violence and CRF were collected.

**Results:** Six hundred and eleven professionals (40.5% women) participated in the survey: 63% worked more than 44 hours per week; 3 out of 10 were on duty for 12 or 24 hours (38.5% women vs. 28% men,  $p < 0.01$ ). Seventy-two percent of respondents considered the workload excessive while 70% thought their payment was not in accordance with the academic training. Half of female cardiologists surveyed considered that motherhood limited professional development in the specialty. Work-related violence was more frequent in female cardiologists (58% vs. 10%  $p < 0.01$ ), as was domestic violence (16% vs. 6%  $p < 0.01$ ). Men were more overweight (67% men vs. 34% women,  $p < 0.01$ ) and obese (16% vs. 11%,  $p < 0.01$ ) and women were more sedentary (53% vs. 45%,  $p < 0.01$ ).

**Conclusion:** The disconformity in working conditions experienced by both genders was evident, as was the evidence of higher workplace and domestic gender violence in the female specialists surveyed. Despite having knowledge about CVD and cardiovascular RF, the surveyed specialists have a high prevalence of RF.

**Keywords:** Cardiologists - Gender Equity - Heart Disease Risk Factors - Gender-Based Violence - Workplace Violence - Argentina.

## RESUMEN

Los especialistas en cardiología pueden sufrir estresores que afecten su salud, como inequidad laboral y violencia de género, además de padecer factores de riesgo (FR) tradicionales para enfermedad cardiovascular (ECV)

**Objetivo:** detectar el nivel de bienestar, equidad laboral y violencia de género y conocer la prevalencia de los FR en especialistas en cardiología en Argentina

**Método:** Estudio observacional, de corte transversal a través de una encuesta anónima realizada en septiembre de 2021 a los especialistas del padrón de la Sociedad Argentina de Cardiología. Se recabaron datos sobre equidad laboral, violencia laboral y doméstica y FR.

**Resultados:** Participaron 611 profesionales (40,5% mujeres). El 63% trabajaba más de 44 horas semanales; 3 de cada 10 cumplían guardias de 12 o 24 horas (38,5% mujeres vs 28% varones,  $p < 0,01$ ). El 72% consideró excesiva la carga laboral, con remuneración no acorde a su formación académica (70%). La mitad de las cardiólogas encuestadas consideró que la maternidad limitó el desarrollo profesional en la especialidad. La violencia de género laboral fue más frecuente en las cardiólogas (58% vs 10%  $p < 0,01$ ) al igual que la violencia doméstica (16% vs 6%  $p < 0,01$ ). Los varones tenían más sobrepeso (67% vs 34% las mujeres,  $p < 0,01$ ) y obesidad (16% vs 11%,  $p < 0,01$ ) y las mujeres resultaron ser más sedentarias (53% vs 45%,  $p < 0,01$ ).

**Conclusión:** resultó evidente la disconformidad en las condiciones laborales en ambos generos y la mayor prevalencia de violencia de género laboral y doméstica en las especialistas mujeres encuestadas. A pesar de contar con el conocimiento sobre ECV y FR los especialistas encuestados tienen una alta prevalencia de FR.

**Palabras claves:** Cardiólogos - Equidad de Género - Factores de Riesgo de Enfermedad Cardíaca - Violencia de Género - Violencia Laboral - Argentina

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## INTRODUCTION

The practice of healthcare can operate as a stressor, and it is very likely that in the face of the health emergency generated by the COVID-19 pandemic, situations of work overload and labor inequity were exacerbated. Undoubtedly, the COVID-19 pandemic had a strong impact on the professional, personal and emotional lives of health professionals. (1,2) In the case of women, the effort to adapt to this new reality was aggravated by the historical caring role of their family environment.

In addition, evidence shows that women face more professional limitations, discrimination, gender harassment, inadequate remuneration and lack of opportunities in hierarchical positions. (3-5)

Recently, certain under-recognized conditions have been described that affect cardiovascular health in both genders, but which have a greater impact on the female gender, such as gender violence, low socioeconomic status, literacy level and environmental factors (6). These psychosocial and socioeconomic determinants can affect health, predisposing to the development of cardiovascular disease (CVD) and/or accelerating the progression of preexisting disease, adding their impact to that of traditional cardiovascular risk factors (CRF).

Cardiovascular disease is the leading cause of morbidity and mortality today. Cardiology specialists strive every day to control the CRF for CVD in their patients with the aim of reducing it. (7,8)

The impact of classic CRF such as hypertension (HTN), hypercholesterolemia, cigarette smoking, overweight, and sedentary lifestyle is widely known in both genders. In the case of women, gender-specific factors are added (early menarche, early menopause, and pregnancy complications, among others). (9-13)

Health professionals are not exempt from suffering from these CRF for CVD and, in the current conditions of health emergency it is very likely that they have postponed self-care and control of these CRF. Moreover, despite understanding the risks, cardiology specialists do not always put into practice the recommendations they give to their patients.

## OBJECTIVE

We conducted a survey with the aim of detecting the level of well-being, work equity and gender violence and to assess the prevalence of CRF in cardiology specialists in Argentina.

## METHODS

This was an observational, cross-sectional study, carried out through an on-line digital form survey with 49 closed, self-referential, anonymous and voluntary questions. The RedCap platform was used.

The survey was sent during the month of September 2021 by e-mail and Whatsapp inviting cardiology specialists belonging to the member registry of the Argentine Society of Cardiology (SAC) to participate.

Data on age, weight, height and waist circumference,

traditional CRF, and personal and family history of CVD were collected.

Information was obtained on the profession, years of specialty, scope of work activity, population density and region of the site where they practice, weekly workload in hours, 12- or 24-hour medical shifts, and travel time to workplace. Questions were also asked about professional well-being. Both genders were interrogated about labor and domestic gender violence (physical, psychological, sexual and institutional violence based on sexual orientation and/or gender identity, UN) (14), as well as on their emotional sphere and personal life data, such as marital status and cohabitation situation.

Women were also asked about professional growth in relation to motherhood; in addition to questions about gender-related CRF such as obstetric history and menopause.

In both genders, information was collected on behaviors and habits (exercise, alcohol consumption, type of diet, sleep quality), and health controls as well as other non-conventional CRF (cancer and autoimmune diseases).

## Statistical analysis

Qualitative variables are presented as frequencies and percentages with their confidence intervals. Mean  $\pm$  standard deviation (SD) or median and interquartile range (IQR 25-75) were used to describe quantitative variables, according to their distribution.

The analysis of discrete variables was performed using the chi-square test or Fisher's test, as appropriate, and that of continuous variables with the t test or Mann Whitney test, and in the case of 3 or more groups with ANOVA or Kruskal Wallis tests, as appropriate. A p value  $<0.05$  was considered significant.

The analysis was performed using Epi Info 7.2.2.6.

## Ethical considerations

Given that it was an anonymous, self-referential and voluntary participation survey, the SAC ethics committee waived an informed consent.

## RESULTS

A total of 611 cardiology specialists participated. Among them, 59.5% were men, 40.5% women and 75% were between 30 and 60 years of age. Women were younger than men (age between 30 and 60 years, 87% vs. 67%,  $p < 0.01$ ).

Forty-four per cent of the specialists surveyed reported more than 20 years of professional experience and the majority (71%) resided in Buenos Aires (Autonomous City or province).

There were no differences by gender in the number of hours worked, with 63% of them working over 44 hours per week. Medical shifts of 12 or 24 hours prevailed in female specialists (38% vs. 28%  $p < 0.01$ ).

Regarding the perception of well-being and labor equity, 66% of specialists considered that the workload was excessive, with no differences by gender.

Eighty-four per cent of those surveyed considered that the COVID-19 pandemic had generated an overload in the working or personal sphere, and this perception was higher among women (88% vs. 80%,  $p < 0.01$ ).

More than half (66%) of specialists considered that

their remuneration was not in line with their professional and academic training, (75% women vs 60% men,  $p < 0.01$ ), but despite this, 72% would choose the same specialty again and only 18% would choose another non-medical profession.

Sixty-two per cent of female specialists considered that motherhood limited their professional development.

Married status was higher among men (70% vs. 46%,  $p < 0.01$ ).

Regarding exposure to gender violence, this reality was significantly more frequent in women, both in the workplace (58% vs. 10%,  $p < 0.01$ ) (Figure 1) and at home (16% vs. 10%,  $p < 0.01$ ) (Figure 2).

Regarding the conventional CRF surveyed, 19% admitted having HTN, which was more frequent in men (26% vs. 18%,  $p < 0.01$ ). There were no gender differences in the occurrence of diabetes (4%), current (3%) or former (28%) cigarette smoking, and family history of CVD (50%). Men had more frequently history of CVD (6% vs. 1%  $p = 0.03$ ). Autoimmune disease was more frequent in women (16% vs. 5%,  $p < 0.01$ ) and there were no differences in the history of oncological disease (Table 1).

Overweight and obesity were more frequent in men. A total of 54% of respondents, mainly men, pre-

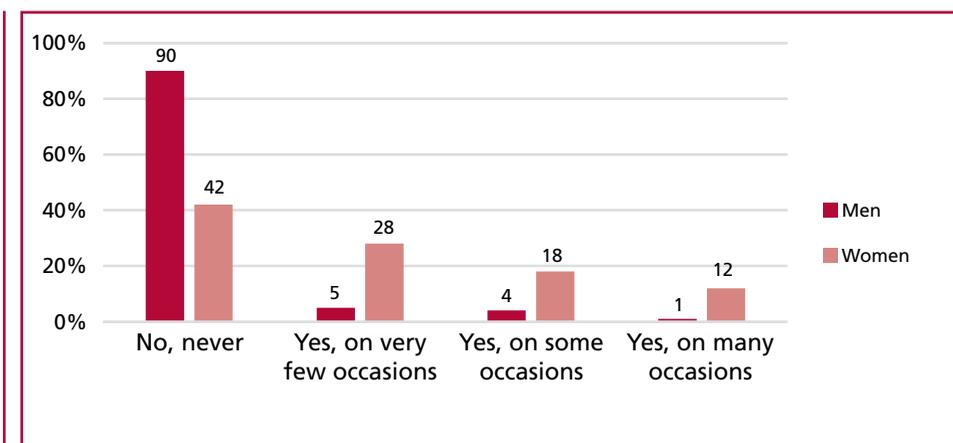
sented a body mass index (BMI)  $> 25$  (67% vs. 34%,  $p < 0.01$ ). A BMI  $> 30$ , in the obesity range, was recorded in 14% of all the specialists surveyed (16% vs. 11%,  $p = 0.04$ ).

Women were more sedentary (47% vs. 55%,  $p = 0.03$ ). In 78% of cases, specialists considered that they followed a healthy diet; 6% reported regular alcohol consumption, which was more frequent in men (7% vs. 3%  $p < 0.01$ ). In 9% of cases, respondents reported sleeping difficulties which was a more frequent disorder in women (11% vs. 8%,  $p < 0.01$ ) and 5% reported disinterest, negative thoughts or unhappiness, again more frequent in women (7% vs. 3%,  $p = 0.02$ ) (Table 1).

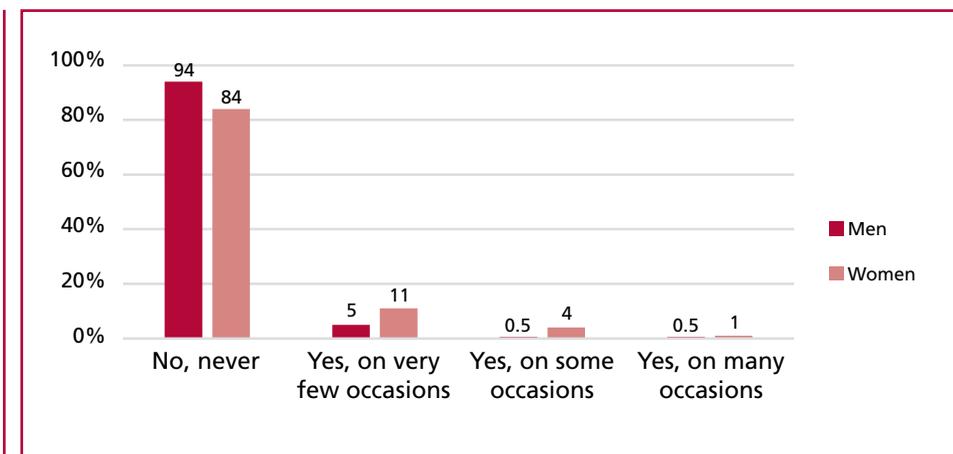
Regarding health controls, men and women had the same blood pressure assessments (94%); however, men had a more frequent cardiological check-up (81% vs. 73%,  $p < 0.01$ ). Median total cholesterol was 180 mg/dL, LDL cholesterol 101 mg/dL and HDL cholesterol 51 mg/dL, the latter higher in women (56 mg/dL vs. 48 mg/dL,  $p < 0.01$ ). In the case of triglycerides, the median value was 112 mg/dL, significantly higher in men (125 mg/dL vs. 96 mg/dL,  $p < 0.01$ ). (Table 2)

In 57% of cases, respondents reported consuming some type of medication on a regular basis, with no differences by gender. Among the most used drugs

**Fig. 1.** Exposure to gender-based violence in the workplace



**Fig. 2.** Exposure to gender-based violence at home



were antihypertensives (27%) and lipid-lowering drugs (26%), both more frequently in men (26% vs. 8%,  $p < 0.01$  and 36% vs. 11%,  $p < 0.01$ ) and no differences by gender were encountered for anxiolytics (11%), aspirin (3%) and antidepressants (2%).

## DISCUSSION

This survey was unbiased in terms of gender, since the participation of women was 40.5%.

Most specialists fulfill a workload that they perceive as excessive, and show some disagreement regarding the remuneration received based on their academic training. Labor inequity operates as a chronic stress factor for workers and healthcare professionals, and the enormous work and emotional burden of the pandemic has been added to this condition. (15)

More than half of females considered that motherhood limited their professional development to some extent, given the inequality faced by women to fulfill their work and the assignment of the role of care in the family environment. In countries of the European Union and the United States, gender differences among cardiology specialists have been documented for years, but in Latin America it still is a relatively unexplored field. (16). Globally, a trend towards the feminization of medical work has been detected and some authors propose that women have qualities that allow a different medical practice from that of men. Women can improve doctor-patient relationship and promote teamwork due to personality characteristics attributable to the female gender such as compassion, empathy, responsiveness to patient needs, and com-

**Table 1.** Characteristics of the population surveyed

	Global n= 611	Women n=247	Men n=364	p
Age between 30 and 60 years (n,%)	460 (75)	217 (88)	243 (67)	<0.01
HTN (n,%)	114 (19)	21 (18)	93 (26)	<0.01
Diabetes (n,%)	22 (4)	9 (4)	13 (4)	NS
Smoking (n,%)	21 (3)	11(4)	10 (3)	NS
Former smoking (n,%)	171 (28)	67 (27)	104 (28)	NS
Total cholesterol (median and IQR)	180 (160-202)	183 (160-201)	180 (162-203)	NS
LDL cholesterol (median and IQR)	101 (85-121)	106 (86-122)	100 (85-121)	NS
HDL cholesterol (median and IQR)	51 (45-60)	56 (50-68)	48 (44-56)	<0.01
TG (median and IQR)	112 (90-144)	96 (73-120)	125 (100-154)	<0.01
Exercise >150 min/week	315 (52)	116 (47)	199 (55)	0.03
Waist >88 cm (n,%)	-	73 (30)	-	-
Waist >102 cm (n,%)	-	-	91 (26)	-
BMI >25 (n,%)	329 (54)	84 (34)	245 (67)	<0.01
BMI >30 (n,%)	87 (14)	28 (11)	59 (16)	0.04
Family history. (n,%)	306 (50)	133 (54)	173 (47)	NS
CVD (n,%)	27 (6)	3 (1)	24 (6)	0.03
Cancer (n,%)	36 (6)	15 (6)	21 (6)	NS
Autoimmune disease (n,%)	59 (10)	39 (16)	20 (5)	<0.01
Alcohol >4 times/week (n,%)	36 (6)	9(3)	27 (7)	<0.01
Healthy diet <4 times/week (n,%)	194 (32)	73 (29)	121 (33)	NS
Sleep disturbances >4 times/week (n,%)	58 (9)	27 (11)	31 (8)	<0.01
Disinterest >4 times/week (n,%)	31 (5)	18 (7)	13 (3)	0.02
Irritability >4 times/week (n,%)	40 (6)	17 (7)	23 (6)	NS

CVD: Cardiovascular disease. HTN: Hypertension. TG: Triglycerides. BMI: Body mass index. IQR: Interquartile range

**Table 2.** Controls of the population surveyed. BP: Blood pressure.

	Global n= 611	Women n=247	Men n=364	p
BP control <1 year (n,%)	572 (94)	231 (94)	341 (94)	<0.01
Laboratory control <1 year (n,%)	469 (77)	201 (82)	268 (75)	NS
Dietary-hygienic measures (n,%)	475 (78)	195 (78)	280 (77)	NS
Any cardiological check-up (n,%)	472 (78)	179 (73)	293 (81)	<0.01

munication skills. Despite these qualities, there is an ambivalent view on the growing number of women in medicine, both in the healthcare role and in the scientific and academic fields. (17) In this sense, they are greatly underrepresented in the positions of author, reviewer and editor in scientific and medical journals. (18) There are many determinants that prevent the full participation and contribution of women in these spheres, the result of which is their unjustified invisibility. (19-21) Differences in lifestyle and the responsibilities of motherhood have been proposed as possible factors; however, the American College of Cardiology “Women in Cardiology” Professional Life Survey found that women are significantly less likely to interrupt their medical practice for a year or more as mothers. (22,23)

In the surveyed population, gender violence was significantly higher in women, both in the workplace and at home. This type of violence has serious consequences by preventing women from participating fully and on an equal footing in society. (24-26) The emotional effect associated with gender violence has been widely demonstrated as a CRF associated with CVD, with alterations in platelet reactivity and increased risk of coronary heart disease, in addition to a higher incidence of depression and suicide. (27-30)

When analyzing the conventional CRF in the surveyed population compared with the data obtained from the general Argentine population in the National Risk Factors Survey (NRFS) carried out in 2018 (31), it is observed that specialists in cardiology are a healthier group since their HTN prevalence is lower (19% vs. 34.7%), there is a lower prevalence of diabetes (4% vs. 12.7%) and they smoke less (3% vs. 22.2%). Undoubtedly, the sanction of the anti-tobacco law 26 687 generated a strong impact on the health of the Argentine population, (32) and among the specialists surveyed the condition of ex-smoker was higher than in the NRFS (28% vs. 17.6%), which suggests a greater awareness about this important modifiable RF. Questions about the level of knowledge of one's own health were also included, showing a high perception of health control and knowledge of cholesterol levels. The overweight detected was higher than in the NRFS (54% vs. 36.3%) and, like obesity, both were more frequent in men.

The conditions and workloads of cardiology specialists in Argentina could explain the lack of regular adherence to healthy habits, resulting in overweight and a sedentary lifestyle.

Similarly to other countries, women continue to represent the group with the greatest labor demand regarding labor gender equity and the excess claim to fulfill different roles. (33)

## CONCLUSION

The disconformity in working conditions in both genders was evident and the greater exposure to labor and domestic gender violence in the women surveyed was alarming.

Despite having knowledge about CVD and CRF, cardiology specialists are unable to internalize and transfer to themselves the recommendations they make to their patients.

## Limitations

By having a non-probabilistic sampling, it is difficult to accurately establish the prevalence of CRF in the target population. There is also a disproportion, with a high participation of doctors from Buenos Aires, and low representation from the rest of the country. The information collected was reported by the participants, without corroborating the answers.

## Conflicts of interest

None declared.

(See authors' conflict of interests forms on the web/Additional material.)

## Ethical considerations

Not applicable.

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