

# Survey on Professional Quality of Life of Argentine Cardiologists

## *Encuesta sobre la calidad de vida profesional de los cardiólogos en la Argentina*

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### ABSTRACT

**Background:** Despite studies on professional quality of life have included different types of health care professionals, there are no publications addressing the professional quality of life of cardiologists in Latin America, particularly in Argentina.

**Objective:** The aim of this study is to use a survey to evaluate the professional quality of life of Argentine cardiologists.

**Methods:** This observational, cross-sectional study consisted of a questionnaire validated according to different metric characteristics. The survey was conducted from April to June 2007 and was anonymous. The self-administered questionnaire consisted of 14 questions, separated in three domains measuring the cardiologist perception of the work situation, self-fulfillment and expectation about the future.

**Results:** Among 972 cardiologists from all the country contacted by e-mail, 717 (74%) completed the survey. The indicators of professional quality of life demonstrated that 53.5% (383) of cardiologists believe that their current work situation is fair or bad and 61.0% (437) believe that this situation will not improve in the future; 77.4% (555) are worried about their job security and 82.9% (595) believe they could be sued for malpractice. Regarding the expectation about the future domain, 17.3% (124) of cardiologists would not choose the specialty again, 24.3% (174) would not study medicine again and 37.7% (270) would not be satisfied if one of his/her children decided to study medicine.

**Conclusions:** This first survey on professional quality of life of Argentine cardiologists describes how these specialists perceive their work situation, self-fulfillment, professional achievement and expectation about the future. This information reveals a clear state of dissatisfaction among Argentine cardiologists within the current organization of the health care system.

**Key words:** Quality of Life - Job Satisfaction - Physicians, Cardiologists

### RESUMEN

**Introducción:** Pese a que los estudios sobre calidad de vida profesional han incluido distintas clases de profesionales de la salud, no existen publicaciones al respecto de los médicos cardiólogos en Latinoamérica y en particular en la Argentina.

**Objetivo:** Estudiar mediante una encuesta la calidad de vida profesional de los cardiólogos en la Argentina.

**Material y métodos:** Se trató de un estudio observacional y transversal con un cuestionario validado de acuerdo con distintas características métricas. La encuesta se realizó desde abril a junio de 2007 y tuvo carácter anónimo. El cuestionario autoadministrado estuvo constituido por 14 preguntas separadas en tres dominios que midieron: la percepción de la situación laboral del cardiólogo, la realización personal y la expectativa de futuro.

**Resultados:** De 972 cardiólogos de todo el país contactados por e-mail, completaron la encuesta 717 (74%). Los indicadores de calidad de vida profesional mostraron que el 53,5% (383) de los cardiólogos cree que su situación laboral actual es regular o mala y el 61,0% (437) cree que esto no mejorará en el futuro. El 77,4% (555) está preocupado por su estabilidad laboral y el 82,9% (595) cree que podría ser demandado por mala praxis. En relación con la expectativa de futuro, el 17,3% (124) de los cardiólogos no volvería a elegir la especialidad, el 24,3% (174) no volvería a estudiar medicina y el 37,7% (270) no estaría satisfecho si un hijo decidiese estudiar medicina.

**Conclusiones:** Esta primera encuesta sobre calidad de vida profesional de los cardiólogos en la Argentina describe la percepción de estos especialistas sobre su situación laboral, realización personal y profesional y expectativa de futuro. Los datos que surgen de la encuesta revelan un claro panorama de insatisfacción de los cardiólogos argentinos en el actual sistema organizativo de la salud.

**Palabras clave:** Calidad de vida - Satisfacción en el trabajo - Médicos, cardiología.

### Abbreviations

PQL	Professional quality of life
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## INTRODUCTION

Health care providers and doctors in particular, constitute one of the main assets of health care organizations. In this sense, job satisfaction among physicians can be measured through the concept of professional quality of life (PQL). This results from the balance between work demands and the perceived capability to deal with them, expressed as physician satisfaction or distress with the performance and adaptation in his/her work in line with his/her personal and family well-being. (1)

Professional quality of life is usually evaluated through questionnaires that relate the respondent's demographic, working and economic aspects with his/her perception of well-being or distress. (2-4) Measurement of PQL may vary depending on the instrument used, the health care organization and the type of professional surveyed. For example, some studies demonstrated that in public health care systems, nurse staff perceives a better PQL compared to family doctors; on the contrary, in managed health care organizations, the latter think their PQL is better. (5-7)

Despite studies on PQL have included different types of health care professionals, there are no publications about the PQL of cardiologists in Latin America, and in particular in Argentina. A survey was thus performed using a questionnaire developed ad hoc and duly validated, with the aim of studying the PQL of Argentine cardiologists, identifying the possible factors associated with such quality and describing the influence of the current status of the health care system on doctors' well-being.

## METHODS

An observational, cross-sectional study was conducted to evaluate the PQL of Argentine cardiologists. A questionnaire validated according to different metric characteristics was used. The survey was conducted from April to June 2007 and was anonymous. The Argentine Society of Cardiology member registry is made up of 2887 cardiologists. Applying nonprobability sampling, one third of the registry (972 cardiologists) nationwide was asked to participate. They were contacted by email and 717 (74%) completed the survey.

The self-administered questionnaire consisted of 14 questions, separated in three domains or dimensions measuring: 1) perception of the cardiologist's work situation (5 questions), self-fulfillment (4 questions) and, 3) expectation about the future (5 questions). Most of the response options had a 5-point Likert scale; the higher the score, the greater the well-being or quality of life. The sum of the scores obtained by each survey respondent corresponded to the total score of the instrument and showed the individual level of PQL, a maximum score of 57 points being admitted by the questionnaire. In addition to the questionnaire, demographic (age, sex, marital status and number of children) and work-related characteristics (income level, workload and level of responsibility) were investigated in order to relate them with the other domains. There were no issues in the administration of the questionnaire and all the fields were completed. The questionnaire also considered other personal characteristics, as performing sports and recreational activities, concern about job security, spending more hours in work activity than with the family group, age planned for

retirement and other aspects about the satisfaction of having chosen the career and the specialty.

For the descriptive statistics analysis, the variables were expressed as frequency distributions, percentages or averages, as applicable. Parameter variability was expressed as 95% confidence interval (95% CI) and the goodness-of-fit test was used to test for normality. The results were compared using the corresponding hypothesis tests (Student's t test, chi square test, ANOVA or the Kruskal-Wallis test). Exploratory factor analysis using the principal component extraction method was performed to determine the metric characteristics of the questionnaire. Cronbach's alpha was used to calculate reliability or internal consistency. All calculations were performed using Stata® software package. A p value < 0.05 was considered statistically significant

## RESULTS

### Metric characteristics of the questionnaire

The overall score of the PQL scale ranged between a minimum of 13 points and a maximum of 51 points, with an average of  $32.7 \pm 6.89$  points. The questionnaire validation was based on an exploratory factor analysis (principal component extraction method) using as retention criteria three factors with eigenvalues > 1, which explained 46% of the overall instrument variability. In turn, factor rotation showed good correlation between the three factors or domains and the questions. The overall instrument reliability, measured using Cronbach's alpha, was 0.76. The complete information of this analysis was previously published. (8)

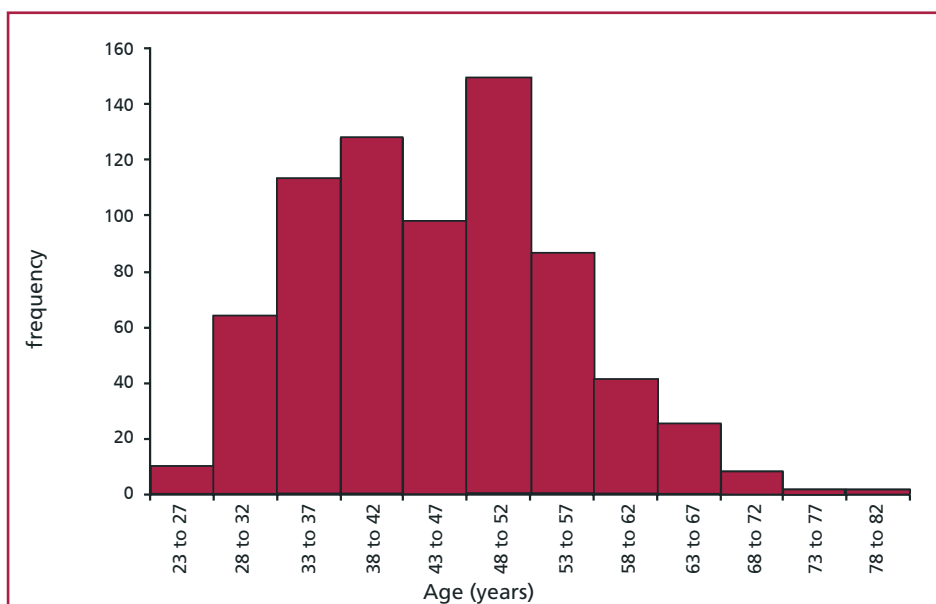
### Demographic characteristics of the sample

The population analyzed corresponded to 717 cardiologists with an average age of 45 years (95% CI 44.3-45.7 years) and 79.1% were men. Moreover, men were older than women 45.6 years (95% CI 44.7-46.4) vs. 43.6 years (95% CI 42.2-45.0),  $p = 0.03$ . Figure 1 shows the frequency distribution of the survey respondents' age. Table 1 summarizes the characteristics of the survey population, and the relationship between the characterization demographic variables and the PQL average score calculated by univariate analysis. There was no association between sex or marital status and PQL; however, there may be some kind of relationship between PQL and the number of children, though these results are not conclusive. Survey respondents who had graduated more 15 years ago reached a higher PQL score than younger cardiologists. Teaching activity was also associated with better PQL. A clear inverse association was observed between the number of hours worked per week and PQL. Finally, a direct relationship was observed between income per month and PQL.

### Indicators of professional quality of life

Tables 2 and 3 show the results of the survey divided by questions and their correlation with the average score and PQL. The PQL indicators demonstrated that 53.5% (383) of cardiologists believe that their current work situation is fair or bad and 61.0% (437) believe that this situation will not improve or worsen

**Fig. 1.** Frequency distribution by age group among the cardiologists surveyed. reoperative variables



**Table 1.** Characteristics of the population surveyed and relationship between the characterization demographic variables and the average professional quality of life score calculated by univariate analysis.

Variable	% (n)	PQL score	(95% CI)	p
Sex				
Female	20.9 (150)	32.1	30.99-33.16	0.1970
Male	79.1 (567)	32.9	32.32-33.46	
Marital status				
Married	69.7 (500)	32.1	30.92-33.32	0.5313
Single	16.2 (116)	33.0	32.38-33.59	
Divorced	8.1 (58)	32.6	30.69-34.52	
Cohabitation	4.3 (31)	31.5	28.64-34.33	
Widower	1.7 (12)	31.3	27.29-35.21	
N° of children				
> 2 children	64.8 (465)	32.3	31.27-33.30	0.0101
1 child	14.4 (103)	31.1	29.67-32.42	
Without children	20.8 (149)	33.2	32.59-33.87	
Years since graduation				
< 5 years	12.7 (91)	31.7	30.27-33.02	0.0184
5-15 years	28.3 (203)	31.8	30.80-32.79	
15-25 years	26.4 (189)	33.5	32.48-34.51	
> 25 years	32.6 (234)	33.3	32.48-34.15	
Teaching activity:				
Yes	52.6 (377)	33.4	32.75-34.08	0.0001
No	47.4 (340)	31.7	30.95-32.49	
Medical practice:				
< 24 h	11.6 (83)	34.1	32.46-35.75	0.0056
24-48 h	37.0 (265)	33.4	32.56-34.26	
48-72 h	31.9 (229)	32.2	31.40-33.08	
> 72 h	19.5 (140)	31.4	30.23-32.49	
Annual income (USD)				
< 8000	15.9 (114)	31.1	29.71-32.46	0.0001
8000-16 000	33.9 (243)	31.8	30.95-32.60	
16 000-24 000	25.0 (179)	32.2	31.13-33.18	
> 24 000	25.2 (181)	35.6	34.67-36.48	

in the future. In addition, 62.3% (446) perceive that their wages are inadequate to their efforts, and 16.7% (120) do not feel satisfaction with the practice of their profession. Also, 77.4% (555) are worried about their job security and 82.9% (595) believe they could be

sued for malpractice.

Five-hundred and two (69.9%) cardiologists admitted that they spent time they could share with the family group in their professional fulfillment and 442 (61.9%) responded that their jobs frequently prevented

Question	% (n)	PQL score	(95% CI)	p
How would you define your current work situation?				
1 bad	19.3 (138)	26.6	25.61-27.67	0.0001
2 fair	34.2 (245)	20.7	30.09-31.38	
3 good	37.2 (267)	35.7	34.99-36.31	
4 very good	7.9 (57)	40.3	39.00-41.57	
5 excellent	1.4 (10)	44.1	39.52-48.68	
Are you worried about being sued for malpractice?				
1 very much	14.5 (104)	27.7	26.47-29.01	0.0001
2 quite a lot	32.1 (230)	30.5	29.79-31.30	
3 moderately	36.4 (261)	34.4	33.68-35.17	
4 very little	13.9 (100)	37.1	35.88-38.26	
5 not at all	3.1 (22)	39.0	35.20-42.80	
Do you feel supported by your work in malpractice situations?				
1 not at all	31.1 (223)	28.9	28.06-29.77	0.0001
2 very little	34.3 (246)	32.2	31.44-32.91	
3 moderately	20.5 (147)	35.6	34.72-36.56	
4 quite a lot	10.3 (74)	37.9	36.50-39.34	
5 very much	3.8 (27)	38.9	36.23-41.70	
Does the lack of job security bother you?				
1 very much	29.1 (209)	27.7	26.95-28.52	0.0001
2 quite a lot	27.2 (195)	31.7	30.98-32.48	
3 moderately	21.1 (151)	35.4	34.47-36.35	
4 very little	11.4 (82)	37.5	36.11-38.84	
5 not at all	11.2 (80)	38.2	36.92-39.51	
Do you perceive that your wages are adequate to your efforts?				
1 not at all	23.2 (166)	28.5	27.60-29.43	0.0001
2 very little	39.1 (280)	31.4	30.70-32.11	
3 moderately	22.3 (160)	35.3	34.39-36.28	
4 quite a lot	9.9 (71)	39.0	37.60-40.40	
5 very much	5.6 (40)	37.8	35.79-39.76	
Has your professional fulfillment affected your family relationship?				
1 always	4.7 (34)	25.1	22.93-27.19	0.0001
2 frequently	31.2 (224)	29.6	28.79-30.42	
3 occasionally	34.0 (244)	33.4	32.66-34.18	
4 rarely	16.5 (118)	35.3	34.09-36.40	
5 never	13.5 (97)	37.8	36.58-38.96	
Do you believe that your work prevents you from practicing recreational, sports or leisure activities?				
1 always	16.3 (117)	28.0	26.89-29.16	0.0001
2 frequently	45.6 (326)	31.6	30.91-32.23	
3 occasionally	23.0 (165)	34.8	33.80-35.69	
4 rarely	7.7 (55)	37.9	36.11-39.82	
5 never	7.5 (54)	38.3	36.63-39.96	

**Table 2.** Proportion of answers for each question and its relationship with the average professional quality of life score

**Table 3.** Proportion of answers for each question and its relationship with the average professional quality of life score (Table 2 continuation)

Question	% (n)	PQL score	(95% CI)	p
Do you consider that your professional activity is a routine work and takes away your wish of professional growth?				
1 always	3.9 (28)	23.6	20.82-26.39	0.0001
2 frequently	23.7 (170)	27.5	26.71-28.27	
3 occasionally	30.1 (216)	32.2	31.48-32.83	
4 rarely	22.2 (159)	36.3	35.43-37.24	
5 never	20.1 (144)	37.5	36.55-38.49	
Do you feel personal satisfaction with the practice of your profession?				
1 not at all	3.3 (24)	27.9	24.28-31.55	0.0001
2 very little	13.4 (96)	25.5	24.47-26.55	
3 moderately	30.1 (216)	30.3	29.57-30.92	
4 quite a lot	36.0 (258)	35.4	34.74-36.04	
5 very much	17.2 (123)	38.0	36.88-39.17	
How do you think your work situation will be in 10 years?				
1 very bad	7.8 (56)	24.2	22.67-25.69	0.0001
2 worse than now	21.8 (156)	29.0	28.16-29.85	
3 the same	31.4 (225)	32.1	31.33-32.79	
4 good	30.5 (219)	36.3	35.56-37.07	
5 very good	8.5 (61)	39.6	38.09-41.09	
Thinking about the future, at what age do you think you could retire from your profession?				
1 > 70 years old	38.5 (276)	32.6	31.77-33.51	0.0210
2 between 60 and 70 years old	47.7 (342)	33.0	32.35-33.71	
3 between 50 and 60 years old	11.4 (82)	32.8	31.30-34.34	
4 < 50 years	2.4 (17)	27.4	23.73-30.97	
Would you study medicine again?				
0 no	24.3 (174)	27.4	26.44-28.26	0.0001
1 yes	75.7 (543)	34.4	33.91-34.97	
Would you choose the specialty?				
0 no	17.3 (124)	27.0	25.85-28.05	0.0001
1 yes	82.7 (593)	33.9	33.41-34.44	
Would you be satisfied if one of your children decided to study medicine?				
0 no	37.7 (270)	28.5	27.74-29.16	0.0001
1 yes	62.3 (447)	35.3	34.73-35.87	

them from practicing recreational activities. Regarding the expectation about the future, 38.5% (276) of respondents believe that they will not be able to retire before the age of 70. In addition, the survey revealed that 17.3% (124) of cardiologists would not choose the specialty again, 24.3% (174) would not study medicine again and 37.7% (270) would not be satisfied if one of his/her children decided to study medicine.

### DISCUSSION

This first survey on PQL of Argentine cardiologists describes how these specialists perceive their work situation, self-fulfillment, professional achievement and

expectation about the future. In general, this information reveals a clear panorama of dissatisfaction among cardiologists within the current organization of the health care system. The PQL indicators demonstrated that more than half of cardiologists consider that their current work situation is fair or bad and that it will not improve in the future. Moreover, nearly 80% are worried about their job security and of being sued for malpractice. In the same sense, most of the survey respondents admit they do not dedicate enough time to the family group, recreation and sports. Regarding expectation for the future, the survey revealed that about 20% of cardiologists would not choose the

specialty or study medicine again, and more than a third would not be satisfied if one of his/her children decided to study medicine.

There is abundant literature about physician dissatisfaction in the last few years. Dissatisfaction seems to be related with loss of autonomy in professional practice and reduction in standard of living. (9, 10) The results of several surveys suggest deterioration in PQL and physician satisfaction over the past decades. In a study performed in 1973 with the participation of thousands of doctors, less than 15% reported doubts in having made the correct career choice. (11) In contrast, surveys administered within the past 10 years have shown that 30 to 40% of the physicians surveyed would not choose the profession again and would not encourage their children to become doctors. (12, 13) In a telephone survey of 2000 physicians that was conducted in 1995, 40% of doctors said they would not recommend the medical career to a student. (14) A longitudinal study performed among 2600 physicians between 1996 and 2001 revealed that 58% expressed that their enthusiasm for medicine had declined in the past five years, and 87% referred a demoralizing process during the same period. (13) In the United States, other studies have shown physician dissatisfaction with workload, income and time consumed by administrative tasks. (12) Manrique (15) studied PQL of surgeons in Argentina. This author found that this activity was not well recognized, had low income and was subject to legal risks, provoking an evident damage in the vocation and disappointment with the profession.

The demographic characteristics of the sample surveyed should be taken into account when the results of the PQL are compared, as sex, age, geographic location, specialty and income appear to influence satisfaction. (16-21) In our study, we did not observe significant differences between men and women; yet, there was a clear association between the years since graduation and PQL, with a 15-year cut-off point of professional practice. The survey also showed that higher income and less number of hours worked correlate with improved PQL. In particular, the income level was directly associated with PQL, with an evident cut-off point of 24 000 American dollars per year.

Some investigations suggest that female doctors are more likely than male doctors to say they are satisfied with the profession, but they are more likely than men to report burnout. (16) In contrast, in a study comparing age of female physicians, younger doctors reported lower levels of job satisfaction than those with more years of practice. (17) In other occasions, age has shown to be related with PQL. Leigh et al. (19) observed that the most satisfied doctors were 35 years old or younger and 75 or older. Although some studies have not demonstrated income or salary to be associated with the level of satisfaction or PQL, other authors have found a positive correlation between these two variables. (19). On the other hand, Landon et al., (21) in the United States, found significant fluctua-

tions in the level of dissatisfaction depending on the geographic location analyzed. Finally, specialists seem to be happier than general practitioners; in particular, the major source of satisfaction for cardiologists derives from social interaction with patients rather than the intellectual stimulation of the profession. (20)

It should be pointed out that Argentine cardiologists' workload is very high and over 50% of them work more than 48 hours a week. This information should be taken into account when comparing the monthly income.

This study on cardiologist PQL assessed through the analysis of three domains showed a negative association between worse work situation, lower self-fulfillment, worse expectation about the future and PQL. A poor PQL among physicians as well as the professional dissatisfaction it entails, might have implications in public health, as it complicates the future recruitment of new candidates in a problematic profession. Similarly, dissatisfaction might affect the quality of professional practice and patient care. (13)

## CONCLUSIONS

This first survey on PQL of cardiologists in Argentina describes how these specialists perceive their work situation, self-fulfillment, professional achievement and expectation about the future. This information reveals a clear panorama of dissatisfaction among Argentine cardiologists in the current organization of the health care system.

## Conflicts of interest

None declared.

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