



General practitioners' experiences during the Covid-19 epidemic in the Bouches-du-Rhône department: Anxiety, impact on practice and doctor-patient relationship

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English title

General practitioners' experiences during the Covid-19 epidemic in the Bouches-du-Rhône department: anxiety, impact on practice and doctor-patient relationship

French title

Vécu des médecins généralistes durant l'épidémie du Covid-19 dans le département des Bouches-du-Rhône : anxiété, impact sur la pratique et relation médecin patient

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Abstract

Objectives: The COVID-19 pandemic has strongly affected France and has put a strain on its health professionals. As documented by literature, health professionals are at higher risk than the general population regarding their mental welfare. The study's objective was to measure the anxiety levels and its determinants of general practitioners of a French department during the first COVID-19 pandemic containment.

Materials and Methods: A survey through a self-completion questionnaire was sent to 250 general practitioners of the Bouches-du-Rhône department. Their anxiety state was measured using the Spielberg validated questionnaire the STAI-Y. Their experience, work organizations, and doctor/patient relationship were measured by ad hoc items developed during a focus group of five general practitioners.

Results: Of the 60 general practitioners included in the survey, nearly 40% had high to very high levels of anxiety. The determinants of this anxiety were the female gender, the unsatisfactory working conditions, the constraints required to work reorganization (consultations and waiting room), and the worry of not being able to respond to the fears and questions of patients, thus a lower decision latitude in their work.

Conclusion: This survey documented the levels of general practitioners' anxiety, as well as the determinants of this anxiety. Physicians offered a unanimous opinion of their general feeling of "disorganization and loneliness". General practitioners have demonstrated great adaptability and flexibility despite the difficulties, which has caused them major anxiety. This pandemic's resultant experiences can help better understand the vulnerability of caregivers to mental anguish/stress in order to strengthen primary prevention strategies.

24 **Résumé**

25 **Objectifs :** La pandémie de COVID-19 a fortement touché la France et a mis à rude épreuve
26 les professionnels de santé. Étant déjà plus à risque que la population générale sur le plan de
27 la santé mentale, l'objectif de cette étude était de mesurer les niveaux d'anxiété et ses
28 déterminants des médecins généralistes d'un département français, pendant la première
29 période de confinement.

30 **Méthode :** Une enquête a été envoyée à 250 médecins généralistes du département des
31 Bouches-du-Rhône. Leur état d'anxiété a été mesuré par le questionnaire de Spielberg. Leur
32 vécu, l'organisation du travail et la relation médecin/patient ont été mesurés par des items ad-
33 hoc.

34 **Résultats :** Sur les 60 médecins généralistes inclus, près de 40% présentaient des niveaux
35 d'anxiété élevés à très élevés. Les déterminants de cette anxiété étaient le sexe féminin, les
36 conditions de travail insatisfaisantes, les contraintes de la réorganisation du travail
37 (consultations et salle d'attente), et le souci de ne pas pouvoir répondre aux craintes et
38 interrogations des patients donc une moindre latitude décisionnelle dans leur travail.

39 **Conclusion :** Les résultats ont documenté les niveaux d'anxiété des médecins généralistes,
40 ainsi que ses déterminants. Dans cette enquête, les médecins ont exprimé une opinion
41 unanime sur leur sentiment général de «désorganisation et solitude». Ils ont fait preuve d'une
42 grande adaptabilité et flexibilité malgré les difficultés, ce qui leur a causé une anxiété
43 importante. Le vécu de cette pandémie peut aider à mieux comprendre la vulnérabilité des
44 soignants à la souffrance psychologique afin de renforcer les stratégies de prévention
45 primaire.

46 **Keywords**

47 COVID-19 - General practitioners - Anxiety - Working conditions – Teleconsultation

48

49 **Mots clés**

50 COVID-19 – Médecins traitants – Anxiété – Condition de travail – Téléconsultation

51

52 **Word count:** 3251

INTRODUCTION

A new Severe Acute Respiratory Syndrome (SARS-CoV-2) caused by a coronavirus, emerged from China in December 2019 which is responsible for the COVID-19 pandemic since March 2020. France, as did other countries, implemented widespread containment measures to curb the development of the COVID-19 pandemic and to avoid overtaxing the healthcare system [1].

As seen in prior emerging epidemics [2] (H1N1, EBOLA), the sudden onset and potential deaths by an unknown virus put healthcare workers, in general, and doctors, in particular, under pressure. During the COVID-19 outbreak, a meta-analysis of 13 studies, consisting of 3,306,362 healthcare workers, showed that a significant proportion of these workers suffered from mood and sleep disorders which highlighted the need to find ways to mitigate mental health risks and adjust their responses during a pandemic [3].

In France, while some hospital health-care professionals were widely mobilized, the general practitioners (GPs) had little involvement in any screening and care of COVID-19 in line with the strategies favored by health authorities [4]. However, GPs had to change their practice routines in order to continue delivering primary care. The fear of being contaminated or of contaminating their patients and the tensions related to obtaining protection for their patients and for themselves, made the working conditions even more difficult [5]. Physicians were also facing an estimated 13 to 24% decline in their activity and revenues [6], and the societal and psychological effects generated by the confinement of their patients, with or without pre-existing mental disorders, impacted the doctor-patient relationship [7].

In a French study published in 2009, a burnout in 25% of GPs in the Provence-Alpes-Côte-d'Azur PACA region was reported [8] and was ascribed to long working hours, to a high mental workload, to managing the end of life patients, to unrealistic patient expectations, to work/family conflicts, to medical skills being called into question, and to legal disputes.

78 While the Bouches-du-Rhône department of PACA region was not the most affected
79 department in the French territories [9] by the COVID-19 in the first wave, we believed it
80 important to look at the emotions, anxieties and their determinant factors, as experienced by
81 those general practitioners in the Bouches-du-Rhône during the SARS-CoV-2 epidemic
82 confinement period, by reason of their documented mental health risks.

83 Thus our study's primary objective was to measure the anxiety levels of general practitioners
84 in the Bouches-du-Rhône department of France during the first COVID-19 pandemic
85 containment. Our secondary objectives were to study in a descriptive way, the experience of
86 general practitioners, their work organization, their relationship with their patients, and the
87 determinants influencing the physicians' anxiety levels.

MATERIALS AND METHODS

Study design

This study is designed as an observational, descriptive and cross-sectional study, based on a survey through a self-completion questionnaire, administered to General Practitioners (GPs) in the French department of the Provence-Alpes-Côte-d'Azur (PACA) region.

Population

The eligible population consisted of active general practitioners in the Bouches-du-Rhône department of the Provence-Alpes-Côte d'Azur (PACA) region in France. The inclusion criteria were General practitioners (GPs), practicing in the Bouches-du-Rhône department who returned the questionnaire, the return of the responses by participating physicians was the witness of this non-opposition. The criteria for non-inclusion were non-respondents to the questionnaire and GPs practicing outside the Bouches-du-Rhône department.

Evaluation criteria

Assessment of anxiety: The Spielberg questionnaire (STAI) [10] was used to assess the GP's anxiety (level) at the time of COVID-19 period containment. The STAI is a two-part, validated, self-administered questionnaire: Y-A form of the anxiety state, and Y-B form on the anxiety trait. Only the Y-A STAI form was used to assess the state of anxiety. The Y-A STAI consists of 20 questions. This questionnaire used a 4-point Likert scale, evaluating the intensity of the subjects' feelings: no, somewhat no, somewhat yes, and yes [11]. Each response was scored from 1 to 4, with 1 indicating the lowest level of anxiety and 4 the highest level. Total scores varied from 20 to 80. For ease of interpretation, the results were classified into five levels: Very high stress (≥ 66), High stress (56 to 65), Medium stress (46 to 55), Low stress (36 to 45), Very low stress (≤ 35).

Evaluation of the physician's organization, experience, and doctor-patient relationships during confinement: So as to develop our questionnaire's three reflective themes, we used a

focus group method and interviewed five general practitioners, male and female, with varying ages who practiced during this period. This focus group enabled an open discussion. There was a grid of questions with the emergence of issues around the three themes. We expounded a synthesis and analysis of the focus group's content. The final questionnaire (supplementary material) contained the 20 questions of Y-A STAI form and 18 supplemental questions focusing on three parts: experience, work organization, and doctor/patient relationship.

Data collection procedure

The questionnaire was transcribed in Google Forms and e-mailed between July 1st and August 20th, 2020 to 250 GPs of Bouches-du-Rhône department who met our inclusion criteria. A follow-up reminder was sent 15 days afterwards (to non-respondents). The GPs had to validate the 38 questions in order to complete the questionnaire and to avoid missing data. The questionnaire remained anonymous with no personal data requested. The duration of each GP's participation to complete the questionnaire was estimated to be approximately five minutes.

Statistical analysis

A descriptive analysis of the population was conducted on the entire sample. Qualitative variables appeared as percentages and quantitative variables as means with standard deviations. A univariate analysis design to study the nature of the relationships between the variables of interest and the level of anxiety was proposed. The determination of correlations with anxiety levels used a step-by-step multivariate analysis. A multivariate analysis was performed after including all variables below 0.20 in the univariate analysis, after which each non-significant variable, step by step, was removed until a significant result was obtained, i.e. $p < 0.05$. All physician responses were included, and the analysis covered all responses to the 38 questions provided by our sample of 60 physicians GPs.

RESULTS

Study population

Our eligible population came from a list of e-mail addresses of 400 general practitioners in the PACA region. Of the 250 questionnaires sent, we received 60 responses, thus having a participation rate of 24% (fig. 1).

Characteristics of the study population and description of anxiety amongst GPs

Descriptive characteristics: the gender, age, practice location, and practice activity are grouped together in Table 1. The distribution of men and women in the group is evenly distributed. More than three-quarters of the GPs were in urban group practices. The average STAI score among the 60 GPs surveyed was 51.45 (± 10.26), which corresponds to a medium stress level. It should be noted that three quarters of the GPs have, on the medium, high to very high anxiety scores. Nearly 40% have a high to very high score (Table 2).

Correlation between GP's' anxiety level and work organization and patient relationships

The univariate analysis results about the anxiety correlations to the GPs experience, work organization and doctor-patient relationship are shown in Table 3.

Working conditions related to the level of anxiety: There were 63.3% (n = 38) of GPs, who had an increase of their level of anxiety when they felt had unsatisfactory working conditions ($\beta = -7.5$ and p-value = 0.005). Three-quarters of GPs (n = 45) felt that they did not have enough equipment to protect themselves (masks, gloves, hydroalcoholic gel...) however, this penury was not correlated with anxiety. There were 90.0% (n = 54) of physicians who reorganized their schedules and 83.3% (n = 50) reorganized their waiting rooms, but this is not correlated with anxiety. There were 73.3% (n = 44) of the physicians who felt that this total reorganization was a constraint and was experienced as a source of stress increase their level of anxiety ($\beta = -8.5$ and p-value = 0.004). There were 41.7% (n = 25) of GPs quite worried about a loss of income but there was no correlation with anxiety.

Information on COVID-19: The GPs' methods of receiving COVID-19 information are listed by order of importance: 1- High-level health authorities, 2- Scientific press publications, 3- Public media, 4 Colleagues, 5 Patients and 6 Others. There were 68.3% (n = 41) of physicians who felt they were not sufficiently informed about the epidemic at the time of confinement and this correlated with higher anxiety levels ($\beta = -6.204$ and p-value = 0.028).

Teleconsultation: There were 86.7% of GPs (n = 52) who teleconsulted with their patients during the containment, but only 27.3 of GPs (n = 15) were interested in using this mode of consultation on a long-term basis. There is no correlation between teleconsultation and anxiety.

City-hospital link: Of those physicians surveyed, nearly 61.7% (n = 37) felt that the city-hospital link for the management of patients with COVID-19 was not optimal, and 86.7% of physicians (n = 52) reported management of other pathologic conditions was also not optimal. This did not generate any anxiety for the GPs.

Doctor-patient relationships: Fewer than one in four (n = 14) GPs felt unable to respond to their patients' fears and questions, and this correlated with a high level of anxiety ($\beta = -6.307$ and p-value = 0.043). Approximately 36.7% of the physicians (n = 22) felt their patients did not behave appropriately during the crisis, but there was no correlation with anxiety. More than 75% of the GPs (n = 46) felt that this crisis strengthened their doctor-patient relationships.

Determinants of the GPs' anxiety

The multivariate analysis results are shown in Table 4. There is a significantly higher correlation of anxiety experienced by female physicians ($\beta = -7.410$ and p-value = 0.002). Unsatisfactory working conditions ($\beta = 5.521$ and p-value = 0.027) and reorganization perceived as a constraint ($\beta = -5.670$ and p-value = 0.046) was reported as generating this

187 anxiety. The answers given by the majority of physicians in response to their patients' fears
188 and questions are experienced as a source of anxiety ($\beta = 5.447$ and p-value = 0.045).
189

DISCUSSION

The Lancet Psychiatry [12] recently called for articles to be submitted concerning studies on the pandemic's effect on the mental health of the general population and vulnerable groups such as health care professionals. Indeed, it is documented that health care professionals, in particular, GPs experience more anxiety and depressive disorders, use more psychotropic drugs, and have a higher suicide rate than the general population [8]. During this crisis, GPs managed 80% of COVID-19 patients [4], which could have impacted their mental health.

The results of this study showed that GPs, who responded to the survey, have a medium level of anxiety but that nearly 40% have a high to very high score during the pandemic crisis. In our work, the anxiety was more frequency in female GPs. This finding is consistent with other studies in the general population [13]. However, other characteristics such as age, exercise and the environment do not affect anxiety levels.

In addition, our results showed that the sudden and unexpected occurrence of the COVID-19 pandemic had a destabilizing effect on GPs as it impacted their organization and relationship with patients. GPs (68%) felt they had not been sufficiently informed at the time of containment, regardless of the sources of information as high-level health authorities, scientific press publications, colleagues. For those who were not able to respond to their patients' fears and questions, the level of anxiety was significantly higher. This lack of information made it difficult for general practitioners to answer patients' questions, particularly those issues raised by the omnipresent media. This may have increased the physicians' typically high mental workload [8,14].

Moreover, the doctor-patient relationship was paramount during this epidemic, because the general practitioner became engaged to patient issues that were sometimes more personal than medical questions that extended beyond health issues. Indeed the confinement-imposed separation from loved ones, loss of freedom, isolation or, on the contrary, the gathering of

215 families in small spaces, uncertainty about the disease for oneself or for others, and
216 uncertainty about a return to socio-economic normalcy.

217 All this impacted the psychological well-being of the general population which they then
218 conveyed and transferred to their physician [15].

219 It may have appeared contradictory in our results to note that the methods of changing the
220 individual's organization did not influence the level of anxiety as such and that, on the
221 contrary, all of these constraints and a negative overall perception of a sudden, unprepared
222 reorganization are significantly correlated with a higher level of anxiety. In fact, it is the sum
223 of the constraints that was perceived as an anxiogenic response.

224 The disruption of professional life and the discomfort of the new practice styles had a
225 significant impact on the anxiety level of the doctor, who was no longer in his/her usual
226 comfort zone in front of the patient. Generally, a work situation is characterized by a
227 combination of a psychological demand (workload): quantity of work, time constraints,
228 contradictory demands, frequent interruption with decision-making latitude: possibility of
229 making decisions, being creative, having the means of work. This dimension covers two
230 notions: 1 the possibility of choosing how to do the job and of participating in the wishes, 2
231 the use of skills and develop new one. The GPs job has a decision making latitude high with a
232 high workload thus an active work. The pandemic has greatly reduced decision-making
233 latitude [16].

234 General practitioners performed with insecurity which was aggravated by working conditions
235 that were considered to be unusual and less than optimal [14].

236 A recent COVID-19 epidemic study showed that hospital and private doctors experienced an
237 increased risk of anxiety, depression, exhaustion, addiction and post-traumatic stress disorder.

238 The contributing factors were organizational, such as the lack of personal protective

equipment, the reassignment of posts, the lack of communication, the lack of treatment materials and the disruption of the daily family and social life [5].

Another study conducted during the lockdown found that 60% of GPs felt they did not have enough equipment to protect themselves and their patients [17]. Our study found similar proportions amongst 75% of general practitioners. On the other hand, the lack of protective materials was not significantly correlated with a high level of anxiety as repeatedly denounced in the mainstream media [18]. Finally, the fear of being contaminated with SARS-Cov-2 was not addressed in the study questionnaire, it is likely that doctors did not feel particularly at risk despite the lack of masks.

Teleconsultation, widely adopted by the study's participating physicians, did not generate anxiety as such. However, few physicians wished to continue teleconsultations for the long term. Due to the vast majority of practices being computerized, doctors used teleconferencing without hesitation and without experiencing any technical difficulties. Even though teleconsultation seems a suitable option in response to unusual situations, it is not considered optimal for replacing a face-to-face consultation. Since the virus continues to persist, some patients remain reluctant to visit their doctor's office and teleconferencing continue to be used, despite it not being the preferred option for their medical consultation.

While 41% of general practitioners in our study were worried about a possible loss of income, their ability to access State financial assistance helped assuage their anxiety levels [19].

The strength of our study is the using online survey as a method of collecting data because of the low cost, speed of data collection, which was important during this period of a health crisis, reduction of errors during data entry, and greater freedom of the respondent [20]. However, this method presents some disadvantages as the difficulties linked to the control of the sampling and the inherent limitations (representativeness, i.e. non-probability survey, confidentiality, anonymity, self-selection bias (most connected) [20]. The present study,

included 60 of the 2,329 general practitioners (i.e. 2.6%) counted in the Bouches-du-Rhône department of France in 2018 by the Regional Unions of Health Professionals (*Unions Régionales des Professionnels de Santé - URPS*) [21]. However, our study's group is representative of physicians' age in the Bouches-du-Rhône: 88% being over 55 years old, and 75% in our group being over 40 years old. Similarly, our study had 76.7% of physicians in group practices, in city practice, which corresponds to the group practice population in the Bouches-du-Rhône [21]. Another bias is that the doctors who agreed to answer our questionnaire were possibly the most concerned. Nonetheless, the participation rate for the number of doctors questioned is quite high: 24%, and several of our significant results are consistent with the literature. In addition, the literature suggests that people who respond to an online survey tend to reveal themselves more in front of the computer and to be less biased in their response for reasons of social acceptability [20].

In this emerging virus pandemic with its extraordinary brutality and unprecedented nature, GPs may have experienced feelings of isolation, doubt, uncertainty and financial hardship. In fact, an acute traumatic event can cause psychopathological disorders. That is, a tendency to develop minimal somatic symptoms and/or a change in the observable social behavior of the subject. Psychic and or emotional disorders would be the result of the encounter of a person, having his threshold of vulnerability and his type of vulnerability, with factors of overexpression (stress), in the absence of anti-stress protective factors (or when these are insufficient). Four psychopathological domains are observable: depression, anxiety, behavior (objectively observable), and hypochondria. Anxiety is, therefore, a psychopathological disorder, but there are other factors, that can be assessed by another approach by a complementary qualitative study.

Quality health care needs to be practiced in a stable environment with clear missions and non-contradictory information from health care authorities. Usually this job satisfaction is

289 associated with large decisional latitude although the initial workload is heavy. Lacking these
290 guidelines, general practitioners had to show responsibility and sometimes creativity.

291 These observations emerged in the free comments section of our study, praised by 1 doctor in
292 3: "They have been neglected, and strongly criticize the Regional Health Agency of France
293 (*Agence regional de santé – ARS*) and more generally their management of the crisis". GPs
294 have long bemoaned the lack of communication between the local practitioners and hospitals.

295 The connection has proved even faultier in the management of this crisis suggesting this
296 problem needs to be improved upon in the future.

297 Recently there has been advancements in the city-hospital link with the creation of territorial
298 professional health communities since this COVID-19 crisis, promoting the doctor-patient
299 link with a patient-centered approach [22]. We believe the results of our study can help guide
300 health decisions in the event of a new wave of SARS-CoV-2 or future epidemics.

CONCLUSION

This study offers thought-provoking results concerning anxiety and its determinants among GPs in Bouches-du-Rhône department of France during the first wave of the COVID-19 epidemic.

At the end of our survey, physicians offered a unanimous opinion of their general feeling of "disorganization and loneliness". Society as a whole is beginning to learn the lessons of the crisis and to better anticipate these problems. GPs have demonstrated great adaptability and flexibility despite the considerable cumulative difficulties that have caused many of them major anxiety. This pandemic should help us to better understand the vulnerability of caregivers to mental anguish/stress in order to strengthen primary prevention strategies. The pandemic will make it possible to intensify training in the psychological issues of care, relationships, and the management of health crisis. This preliminary work suggests that a larger study, with a broader national sample, would allow a better overall assessment of the health and evaluation of the constraints of the psychosocial environment at work of GPs during the crisis of COVID-19.

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318

319 **Disclosure of interest**

320 The authors declare that they have no competing interest.

321

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388

389 **Table 1.** Characteristics of population GPs studied

Characteristics	Population studied (n=60)	%
Gender		
Female	30	50.0
Male	30	50.0
Age		
Under 30	4	6.7
Between 30 and 39	11	18.3
Between 40 et 49	15	25.0
Between 50 et 59	14	23.3
60 and over	16	26.7
Practice Type		
Single	14	23.3
With other physicians	46	76.7
Location		
Urban	50	83.3
Rural	10	16.7

390

391 **Table 2.** Anxiety of general practitioners: results of the STAI-Y

STAI-Y	Population studied (n=60)	% / mean (\pm SD)
Mean	60	51.45 (\pm 10.26)
Class		
Very low	4	6.7
Low	11	18.3
Medium	22	36.7
High	21	35.0
Very High	2	3.3

392 Legend: Data is expressed as a number (n), percentage (%) or standard deviation (\pm SD).

393 STAI-Y class: results are classified in 5 levels: very high stress (≥ 66), high stress (56 to 65),

394 medium stress (46 to 55), low stress (36 to 45), very low stress (≤ 35).

395

396 **Table 3.** Correlations between GPs' anxiety level and work organization, and patient relationships (univariate analysis)

Characteristics	N total	Variables	n	%	STAI-Y		p-value	Coefficient β
					Mean	SD		
Gender	60	Female	30	50.0	54.9	10.4	.009	-6.833
Age	60	Over 40 years old	45	75.0	51.5	10.1	.983	-.067
Practice type	60	Alone	14	23.3	49.4	10.2	.405	2.637
Practice location	60	Urban	50	83.3	51.1	10.2	.605	1.860
Working conditions	60	Unsatisfactory	38	63.3	54.2	8.6	.005	-7.529
Levels of protection	60	Insufficient materials	45	75.0	51.6	9.6	.892	-.422
Practice reorganization	60	Modified scheduling (yes)	54	90.0	51.5	10.1	.878	-.685
	60	Reduction of staff activities (yes)	14	23.3	50.9	6.2	.830	.680
	60	Reorganization the waiting room (yes)	50	83.3	51.1	9.6	.559	2.100
	60	Employment of additional personnel (yes)	9	15.0	53.3	7.2	.555	-2.216
	60	No modifications (yes)	3	5.0	57.3	13.3	.312	-6.193
Changes perceived as restrictive	60	Yes	44	73.3	53.7	8.2	.004	-8.455
Revenue loss	60	Worrisome	25	41.7	51.6	11.3	.905	-.326
Covid-19: Sources of information	60	Health authorities (yes)	47	78.3	50.5	10.5	.190	4.237
	60	Scientific press (yes)	37	61.7	51.2	11.1	.786	.751
	60	Public media (yes)	19	31.7	53.6	9.3	.266	-3.193
	60	Colleagues (yes)	34	56.7	51.1	11.8	.758	.835
	60	Patients (yes)	8	13.3	54.8	10.2	.333	-3.808
	60	Other (yes)	10	16.7	52.0	12.0	.855	-.660
Satisfaction of Information (at time of confinement)	60	No	41	68.3	53.4	11.1	.028	-6.204
Teleconsultations during crisis	60	Yes	52	86.7	50.8	10.1	.193	5.106
Ongoing teleconferencing	60	Yes	15	27.3	48.7	10.3	.209	3.027
City-Hospital link	60	Ease of hospital referrals for Covid-19 + patients (no)	37	61.7	52.8	10.4	.186	-3.620
	60	Ease in referring patients with another pathology (no)	52	86.7	51.8	10.1	.520	-2.538
Patient questions and fears	60	Unsatisfied with responses given	14	23.3	56.3	7.5	.043	-6.307
Patient comportment	60	No appropriate	22	36.7	53.6	9.4	.212	-3.452
Physician-patient relationship	60	Reinforced following the crisis (yes)	46	76.7	51.4	10.7	.960	.158

397 Legend: the data are expressed in number, mean, percentage (%) or standard deviation (\pm SD).

398 STAI-Y class: the results are classified into 5 levels: very high stress (≥ 66); high stress (56 to 65); moderate stress (46 to 55); low stress (36 to

399 45); very low stress (≤ 35).

400 β . beta: Anxiety scores comparisons are based on physicians' characteristics, their experiences, organization during confinement and physician-

401 patient relationship using simple logistic regression. The beta coefficient is the average difference in the score in anxiety between the two groups.

402 P-value if the difference is significant the p is $<$ or equal to 0.05.

Table 4. Determinants of the anxiety state of general practitioners (multivariate analysis)

Parameters	Coefficient β	SD	p-value
Gender	-7.410	2.291	0.002
Work conditions	5.521	2.430	0.027
Constraints	-5.670	2.776	0.046
Patient questions	5.447	2.661	0.045

Legend: the data are expressed in numbers, mean, percentage (%) or standard deviation (\pm SD).

β , beta: mean difference in anxiety between the two groups compared.

P-value if the difference is significant the p is \leq or equal to 0.05.

A multivariate analysis in multiple logistic regression is performed after having included all the variables less than 0.20 of the univariate analysis, then by removing each non-significant variable step by step, until obtaining a p value <0.05 .

411 **Figure 1.** Flow chart

412 Legend: PACA (Provence-Alpes-Côte-d'Azur)

Figure 1. Flow chart

