GPs and Pharma Reps: Why Are We So Ambivalent? Crossing perspectives from sociology, psychology and general practice toward a qualitative study in France

Adriaan BARBAROUX (abarbaroux@unice.fr)
Université Côte d’Azur, RETINES, LAPCOS, DERMG

Isabelle Pourrat
Université Côte d’Azur, DERMG

Isabelle FERONI
Université Côte d’Azur, Inserm U379

Tiphanie Bouchez
Université Côte d’Azur, RETINES, DERMG

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Abstract

Background: Receiving a gift from pharma reps or meeting them is correlated with an amount of bigger, more expensive and sometimes less rational prescriptions. French General Practitioners (GPs) tend to express an unfavorable opinion towards the pharmaceutical industry; they however adopt rather favorable behavior with pharmaceutical representatives. Yet no study has sought to understand the reasons for this discrepancy. The aim of this study was exploratory: why do some general practitioners receive pharmaceutical representatives when they express an unfavorable opinion regarding the pharmaceutical industry?

Method: Qualitative descriptive study by semi-structured face to face interviews with French GPs of the south-east of France. A general inductive analysis was carried out. Data were analysed by researchers from different disciplines (psychology, sociology and general practice).

Results: Ten GPs were interviewed for an average time of 50 minutes. The analysis yield to three forces competing to keep meeting pharmaceutical representatives despite unfavorable opinions towards it: practical reasons such as a substitute for continuous training; social and cultural reasons such as propriety toward representatives; psychological mechanisms such as cognitive dissonance and hidden curriculum. Cognitive dissonance is a well-supported social-psychology theory explaining how it is possible to maintain a behavior despite an unfavorable opinion. Since meeting pharma reps is implemented during traineeship, it could be considered as a part of the hidden curriculum. The strengths of this work are the confrontation of medicine, social psychology and sociology with the original approach of the interpretative phenomenological approach.

Discussion: The GPs/representative relationship is complex, involving psychological mechanisms which are unknown to the medical profession. GPs use reps as a convenient continuous education tool furthermore in a private practice setting in which GPs feel they lack time. Lifting the veil of individual ambivalence raises questions which are more social and political than individual.

What Was Known?

Receiving pharmaceutical representatives leads to more numerous, more expensive and less rational prescriptions.

GPs seem to be well aware of the cons related to receiving pharmaceutical representatives, and they often criticize pharmaceutical industries; yet, most of them still receive pharmaceutical representatives.

What The Article Offers

The GP/pharmaceutical representative relationship is complex and involves psychological mechanisms that are unknown to the medical profession such as cognitive dissonance and the hidden curriculum.
Pharma representative visits act as continuous training or complete the latter in a liberal field which values time as very precious.

**Background**

In the USA, the biopharmaceutical sector generates nearly $1.2 trillion in economic output annually when direct, indirect, and induced effects are considered. (1) In France, one of the countries with the biggest promotional budget for pharmaceutical industry, (2) pharmaceutical industry represents 100,000 jobs, and with its 54-billion-euro annual turnover, it is the 4th biggest contributor towards French Trade Balance (0.15% of Gross Domestic Product). The role of pharmaceutical representatives (pharma reps) is regulated by the government but pharmaceutical industry takes an active part in general practitioners’ (GP) training and research (3) and according to French government database, 90% of French GPs were offered a gift from pharmaceutical companies between 2011 and 2016. (4)

Many studies show a correlation between receiving a gift from pharma reps or meeting them and an amount of bigger, more expensive and sometimes less rational prescriptions through indicators such as prescription of antibiotics, benzodiazepines and vasodilators. (4) Promotional budget could then be viewed as an investment allowing the increase in the amount of prescriptions. (2, 4, 5) A report from the Social Affairs General Inspection (*Inspection Générale des Affaires Sociales – IGAS*) studied the information of GPs about medications. The conclusion of this report is that, after the drug database *Vidal*, pharmaceutical representatives’ visits are the second source of information for practitioners, despite a negative opinion towards detailing visits. (2) For the IGAS, this situation is as much of a problem on the financial level (with costs that are indirectly born by the community via medication prices) as it is on the social, ethical and Public Health levels. In a 2019 American study, marketing of opioid products to physicians was associated with increased opioid prescribing and with elevated mortality from overdoses. (6) Therefore, while the role of industry in therapeutics and innovation is indisputable, must be encouraged and supported, the interest in the independence of prescribers is essential.

The 2003 qualitative study *“Understanding Why GPs see pharmaceutical Representatives”* included 107 British GPs. (7) GPs said they received pharmaceutical representatives for six major reasons: convenience and availability of medication information; representative legitimacy as a vector for information; politeness; gift presentation; social and intellectual exchange; organizational and cultural norms. Reasons GPs gave for seeing representatives were accounted for in ‘neutral’ and ‘legitimate’ terms and GPs largely believed in their immunity to commercial marketing activities.

These observations highlight a seemingly ambivalent position from GPs. They are well aware of the pharmaceutical representatives’ commercial role, and their opinion about it is rather negative, describing pharmaceutical representatives as advertising agents trying to influence their prescriptions in a less efficient way. (6) However, their behavior remains rather positive towards medical industries, as they still predominantly receive pharmaceutical representatives (80% of practitioners in France). (7, 8) No study exploring the determining factors of such a contradiction has been found in France.
Hence, this study aimed at understanding why some general practitioners do receive the visits of pharmaceutical representatives while they convey a rather negative opinion towards pharmaceutical industries.

**Method**

**General design:**

An exploratory qualitative study has been conducted via a series of face-to-face semi-structured interviews with general practitioners, due to the intimacy of the attitude explored. A phenomenological approach was used to analyze the interviews of GPs.

Those interviews were made at the medical practices by a male family medicine intern (AB) previously trained by members of the research team (IP, IF). The practitioners were asked to react to a series of clinical vignettes through some open questions (the interview guide is available as an online appendix). These clinical vignettes represented some current situations within a general practitioner’s work, as well as the information sources he would fall back on. The interview guide was developed from existing literature and from two preliminary interviews. Both preliminary interviews were based upon an interview guide made of open questions relating to the relationship with pharmaceutical representatives (“What do you expect from a pharmaceutical representative?” “Can you describe the way your last encounter with a representative went?”) Both interviewed practitioners were showing the signs of defense mechanisms related to the bias of social desirability. Thus, we did modify the guide structure by inserting the clinical vignettes into it. The once modified interview guide would bring the same reflections, but the investigator would not mention the detailing visit and would get the GPs to address it by themselves thanks to the vignettes. The three vignettes were presenting a short story describing a GP in a situation of doubt and the way they would react to it (for instance by calling a confrere, or by prescribing a new medication that was discovered during a congress). This context was chosen because it is during a situation of doubt that a practitioner is the most sensitive to the influence of pharmaceutical representatives. (3)

**Population and recruitment:**

The sampling was made in a reasoned way while respecting the maximal variation within qualitative research (9) for the following characteristics: age; gender; rurality; years of practice; patient list size; single or collective practice; subscription to a paying publication or being member of a peer group (see chart n°1). These characteristics have been chosen because they seemed to be related to the relationship between GPs and pharmaceutical representatives. (3)

GPs details were found in the phone book. They were being offered to take part in a thesis dealing with the information sources employed by general practitioners, without mentioning promotional detailing visits. The theoretical concept saturation (data saturation) has been deemed reached when the analysis of two interviews would no longer bring any new concept.

**Analysis:**
Each interview was recorded then its exact wording was transcribed verbatim. Field notes were made during the interviews and immediately after. The verbatim analysis for each interview was controlled by two different persons to minimize any risk of understanding bias.

The data was analyzed within a interpretative phenomenological approach aimed at modeling the phenomenon through in-depth analysis of singular experiences, of the meaning that participants gave to this experience and of underlying psychological mechanisms. (9–11) This method helps bring on hypotheses, and thus is conforming to the exploratory goal of the research question.

The result interpretation was achieved within a multi-field team composed of three GPs (AB, IP, TB), a sociologist (IF), and a social psychologist (IM). The thematic extraction has been subject to a triangulation to minimize the interpretation bias: all interviews have been analyzed by the principal investigator, and then by another researcher (GP, psychologist, or sociologist). The analyses were convergent (no disagreement between the surveyors) but also complementary (they helped identify new themes). The interviews were stopped upon reaching data saturation, without the need to add more participants. Data saturation was discussed and agreed by the research team.

**Result presentation:**

Transcripts were grouped in themes and then in theme categories, according to the general inductive method. (10) Due to confidentiality, some pieces of information such as the gender of interviewed persons were not presented and the quotations were not identified.

**Ethical considerations:**

A written consent was obtained from each participant. Ethics approval was not required. Ethical aspects did respect the French legislation for the data collected before January 2016. The authors declare they did not receive any funding for this study. This research article is coming from the thesis work of a male general medicine resident, in charge of collecting data. This main investigator got trained beforehand into qualitative research by studying reference material (9–15) and getting the assistance of researchers in social psychology, sociology and general practice. This workgroup was formed for this study. The investigator's motives and interests for the research subject have been questioned and analyzed beforehand within the research team.

**Results**

The material is composed of 10 interviews carried out during April and December 2014, with an average duration of 50 minutes (median to 46 minutes), for a total duration of 8 hours and 22 minutes, representing 118 pages of transcriptions.

The ten practitioners were recruited in Nice (coastal city with more than 300,000 inhabitants) and in three hinterland towns counting between 1300 and 7000 inhabitants. They were aged from 30 to 59-years-old, and almost all of them were charging the National Health approved rate. Two of them were women.
of them worked in an urban environment; the other four were working in rural or semi-rural areas. Only one practitioner didn’t receive detailing visits anymore but used to. Two received one pharmaceutical representative a day, and one did receive ten a week. Only one of them had a subscription to a pharmaceutical industry independent paying publication, four of them declared reading free publications, and three did take part into peer groups as a continuing education. These characteristics are summed up into Table 1.

| Urban setting | E1 | E2 | E3 | E4 | E5 | E6 | E7 | E8 | E9 | E10 |
|---------------|----|--|--|--|--|--|--|--|--|--|
| Age           |    | 30| 45| 56| 50| 55| 47| 54| 38| 54| 59 |
| Charging extra fee | No | No| No| Yes| No| No| No| No| No| No| No |
| Years since setting | 2 | 1 | 26| 34| 15| 12| 27| 11| 12| 10|
| Patients in base | 425| 600| 800| 800| 1442| 1200| 1400| 1500| 500| 400|
| Workload (hours p. week) | 43| 60| 55| 55| 65| 46| 65| 50| 50| 60|
| Setting as a team | Yes| No| No| No| Yes| Yes| Yes| Yes| No| No|
| Number of pharma reps p. week | 1| 5| 5| 3| 0| 1| 10| 0.5| 1| 0.5|
| Paid subscription journal | No| No| No| No| No| Yes| two| No| No| No|
| Free journal | No| No| Yes| Yes| No| Yes| No| No| Yes| No|
| Peer group | Yes| No| No| No| No| No| No| Yes| Yes| Yes|

Table 1: Interviewed GPs characteristics

In order to understand why some GPs meet pharmaceutical representatives while they convey a rather negative opinion toward pharmaceutical industries, transcripts were grouped in themes and then in theme categories, according to the general inductive method. Three explanation path arose which can be grouped according to the following layout: motivations; representations; values.

**Motivations:**
By *motivations*, we are implying the reasons that GPs gave so as to explain why they received the visits of a pharmaceutical representative.

The information intake was the motivation given the most often by practitioners to justify the reception of a pharmaceutical representatives despite their negative opinion about it. It was described as *practical*, *approachable*, and sometimes of a *good quality*. This practicality did justify the choice of detailing visits as an alternative to other information sources. "*What is important for the doctor is for it to be fast, concise, and straight to the point.*"

The practitioners who were interviewed described a counter-phobic effect which reassured them about their knowledge, and a "*starter*" effect of the visits as the first link to the information chain. Meeting a pharmaceutical representative would trigger some extensive research.

A social role was also attributed to pharmaceutical representatives, through the human relationship with the representative (felt like a *break*) and through the creation of a medical "*network*" during sponsored meetings.

Professional constraints were also mentioned: "*It is true that I cannot practice FMC [Formation Médicale Continue – Continuous Medical Education] as often as I would like, so I'll admit that I like how labs come [to my door].*

Representations:

By this word, we imply the perceptions and mental pictures that practitioners have of detailing visits and of their alternatives.

The representations related to the pharmaceutical representatives were lukewarm, going from "*It’s a lot of nonsense, they’re selling that as if they were selling socks*" to "*he’s well trained*, "*bulletproof*, "*well-oiled.*"

Pharmaceutical detailing visit was seen as full-on training. It could play the role of a "*ready-to-use training*, "*one symptom, one solution!*". In comparison, all other training sources made available to practitioners were described as "*time-consuming*" and maladjusted to their needs.

For some doctors, detailing visits were even felt as essential “*otherwise, who would inform you?*” A diversity in medications seemed to create and maintain a feeling of addiction to the pharmaceutical representatives: "*As soon as he had gone, I felt so useless!*"

Pharmaceutical industries’ persuasive force was described as belonging to a past era since the recent pharmaceutical representatives budget restrictions: “*There’s none anymore! There’s nothing left!*"

The practitioners we talked with described both the representative visit’s “commercial” aspect and the strategies which can be used to deal with it: combining the sources of information, limiting the number of pharmaceutical representatives, choosing reliable contacts. These strategies would bring them a feeling
of control: “When you increase your awareness to being judgmental, you’ll be well grounded to go to any training session.”

Values

By values, we mean what is considered to be true, well, good, and what is considered as a goal to reach, such as something to stand up for. The values that we identify here as being able to help maintaining an ambivalent behavior towards pharmaceutical representatives were independence, propriety and pragmatism.

Independence seemed to be a very strong value for the interviewed practitioners. It could contribute to receive detailing visits by marking a break with any kind of authority encouraging for a degree of independence towards pharmaceutical representatives: “I do what I want!”.

Propriety is the set of rules and good manners governing behavior in society. It was very often referred to as a reason to receive pharmaceutical representatives: “They have been waiting all day long,” “I always receive them, they have been waiting like anybody else!”

Pragmatism would lead some GPs to give more importance to pharmaceutical representative and their confreres’ own experience (relatives-based rationale) than to information coming from studies or recommendations. This empirical knowledge looked more accessible and more real: “What is important to me is my results with my patients on a clinical and biological level [...] After that, they can show me their studies, their gizmos, I don’t give a toss!” Within this context, the importance given to the mediocre quality of information delivered by pharmaceutical representatives was minimized since the GPs’ practical experience would be enough to verify the effectiveness and tolerance of new medications. Pharmaceutical representatives seemed to cultivate this empirical vision of medical expertise through encouraging talks such as “Try it, you’ll see!”.

Discussion

In order to understand why some GPs meet pharmaceutical representatives while they convey a rather negative opinion toward pharmaceutical industries, inductive analysis led to a transcript categorization into motivations, representations and values. These data suggest significant sociological and psychological mechanisms which can help explain the reasons of such ambivalence for GPs towards pharmaceutical industries. The first part of this discussion will describe the following mechanisms: a relatives-based rationale, self-efficacy, cognitive dissonance and the hidden curriculum.

Relatives-based rationale

GPs’ preference for tangible information is a known fact which seems legitimate but our results show that the relatives-based rationale can sometimes overtake scientific rigor. This argumentation contributes to the practitioners’ ambivalence towards pharmaceutical representatives, as it gives the GP an excessive confidence in their own practical experience. The representative then takes the part of a first link within
the chain of information despite their commercial aspect. Information will then be verified in the field. This acquisition pattern for new pieces of information seems very well received by GPs, despite of Evidence based Medicine, which is taught in medical schools.

**Self-efficacy**

Several GPs declared being relatively inactive in the search for information related to medications, as well as feeling unable to do without detailing visits. This phenomenon conveys the concept of self-efficacy as described by psychologist Albert Bandura in 1977. (17) Bandura defines self-efficacy as a feeling of ability or inability that any person gives themselves to achieve a task. Without this feeling of self-efficacy, individuals will tend to adopt a passive behavior, or even an abandonment one, while individuals who grant themselves an important self-efficacy will adopt a pro-active behavior. This well-known concept goes in the same direction as our observations and it could help explain how some GPs turn to detailing visits. The latter seems to act as a substitute for continuous medical education because of GPs’ inability to use a complex and time-consuming scientific literature. This phenomenon seems to be carried out by the diversity of pharmaceutical supply: “As for me, I’m absolutely unable to know the whole Vidal [a French drug database] by heart!”. It could get worse because of how French GPs are often isolated and overworked. (18)

**Cognitive dissonance**

The evolution of the interview guide because of defense mechanisms shows that the GPs-representatives relationship is somehow taboo. The word *taboo* is used here in its common sense which is to express any ban related to a fact or its evocation, without being limited to spirituality or religion. The taboo issue already occurred in research projects: when the Ipsos French Health Institute surveyed GPs about representative visits, the investigators also had to “disguise” the true motive of their study because too many GPs refused to answer. (16) By avoiding any mention about pharmaceutical representatives visits, the discrepancy between GPs’ effective behavior towards pharmaceutical representatives visits and their opinion about them is held back, thus avoiding unpleasant situations as well as reassessment. This “taboo” thus is a good contributor in explaining why so many GPs keep on receiving pharmaceutical representatives while they express an unfavorable opinion about them. American psychologist Leon Festinger describes cognitive dissonance as the unpleasant tension that an individual feels while facing two cognitions that are not compatible with each other (i.e. meeting pharmaceutical representatives and feeling a negative opinion towards pharmaceutical industry). (19) In the presence of such a tension, the individual will use unconscious means to restore balance: changing their behavior or changing their opinion. In a counter-intuitive manner, studies show that is easier to modify one’s opinion than it is to change one’s behavior (for instance, after a failed attempt to stop smoking, smokers will tend to overstate the social benefits of smoking or to minimize their will to stop). (19) During the interviews, several GPs first expressed a very firm opinion towards sales representatives: “we feel a bit like prey, [receiving a pharmaceutical representative] never is a trivial matter” or “don’t count on the labs for information”. It then becomes a much less strong speech as the interview goes on: “Actually, when you increase your
awareness to being judgmental, you’ll be well grounded to go to any training session.” An adjustment of the expressed opinion can be observed here, making it more coherent with the behavior towards receiving the visit of a pharmaceutical representative. This phenomenon can be observed within the framework of an interview but also within the framework of a whole career: “Beforehand, I wasn’t very keen on labs, I was very cautious with them […] Anyway, it changed, it changed a lot.” The taboo about detailing visits also evokes a feeling of cognitive dissonance: avoiding the topic helps to avoid the emergence of discordance between opinion and behavior. This theory is renowned and has been proved within general population but was very little studied among GPs in France. Thus, these data suggest that reduction mechanisms for cognitive dissonance might help GPs keep daily a favorable opinion towards detailing visits despite their reluctance to them. A study on cognitive dissonance in general practice might complete this work and bring perspectives for reducing the number of pharmaceutical representatives’ visits, notably via measures taking place during initial training.

Hidden curriculum

Interviewed GPs described the meeting of pharmaceutical representatives as “a habit acquired at the hospital” (i.e. during initial training). Therefore, meeting pharmaceutical representatives can be considered as a social learning, part of the hidden curriculum. Lempp and Seale defined the hidden curriculum as the set of influences that function at the level of organizational structure and culture including, for example, implicit rules to survive the institution such as customs, rituals, and taken for granted aspects. (20) Six learning processes of the hidden curriculum of medical education have been identified: loss of idealism, adoption of a “ritualized” professional identity, emotional neutralization, change of ethical integrity, acceptance of hierarchy, and the learning of less formal aspects of “good doctoring.” Together they achieve the enculturation of students as they develop into both practitioners and members of the medical profession. Therefore, meeting pharmaceutical representatives can be considered as a part of the hidden curriculum maintained by the forces describes above (practical reasons, substitute to training, cognitive dissonance etc.).

Comparison with previous data

An American qualitative study published in 2007 suggests that GPs might feel cognitive dissonance when meeting pharmaceutical representatives. (21) Authors described psychological processes of denial and rationalization used to reduce this state of cognitive dissonance: avoiding thinking about the conflicts of interests, denying the fact that the relations with pharmaceutical industries do have an impact on GPs’ behavior, denying their responsibility, itemizing techniques used to remain unbiased and saying that meeting pharmaceutical sales representatives brings a benefit to patients. While these results take place within a cultural and societal background which is very different from French one, the existence of another study revealing signs of cognitive dissonance does bring an external coherence to our own results.

In 2003, a British study explored the reasons why GPs would receive the visit of pharma reps, within a very different societal context. (7) Yet, similarities are startling. The British study revealed six major
reasons to receive a sales representative and all of them were spontaneously cited by the GPs we interviewed. Some of their transcriptions are surprisingly similar: “Just because I have a pen with the name of a drug on it doesn’t mean I’m going to prescribe it.” (England, 15 years ago) “It’s not the pen that writes the prescription, it’s me!” (France, today). Or: “If it wasn’t for the drug reps, we’d be left high and dry.” (England, 15 years ago) “If the reps won’t talk about it with us, who will?” (France, today). This study also revealed that pharmaceutical representatives fills a continuing medical education gap: “Vioxx, I did prescribe based on what I was being told by the rep. […] I did perceive that I had a particular need for a new alternative.” However, contradictorily to the results of this study, French GPs from our sample did not use “neutral and legitimate” words to speak about detailing visits. The majority of them seemed embarrassed to talk about it, suggesting a shift in perspective. The fact that “times have changed” has been raised in every interview of our sample: pharmaceutical representatives are not as many as they were before, and receiving their visit is considered as less legitimate. Several GPs in our sample have mentioned that pharmaceutical representatives and their bringing gifts are now less numerous. An ongoing study is designed to confirm or invalidate this tendency at national level.

**Strengths and Limitations**

The main limits to this work are the number of interviews and the absence of validation by the interviewed GPs for the transcription of their talks. Their feedback and a bigger number of interviews would have been an enriching addition to the analyzed material but the sensitive aspect of our research topic brought not to ask the participants for any feedback on our results. Due to the ambivalence of the doctors on this subject, the interviews required time to build trust and to enable in-depth understanding. It was therefore decided to give priority to the depth of the interviews rather than to the number of interviews. Despite the method limits (creation of the evaluation grid by the investigator and social desirability bias), this work is consistent with the exploratory goal. The investigation bias has been controlled by a group identification of the investigator’s preconceived beliefs and by training the investigator in semi-directive interview techniques. The interpretation bias has been limited by a double analysis of every interview and by the diversity of approaches from the cross-disciplinary team. The fact that we only interviewed doctors from the south east of France could be considered a limitation, but our results are consistent with the literature, bringing an external coherence to our results. Moreover, the concepts that emerged are universal and therefore likely transposable to other settings.

This work’s strength is that it is the very first exploratory study to try to understand the reasons why general practitioners are ambivalent towards pharmaceutical representatives in France. It also presents a methodological and epistemological interest via the confluence of sociology, psychology and medicine. Being aware of these results would be useful for physicians, teachers and medical students who want to adopt a consciously chosen professional posture toward pharma reps.

**Conclusion**
This work suggests three explanatory paths to understand why some GPs receive pharma reps while they have a negative opinion towards them. Firstly, practical points such as information about new medications, convenience, social bonding. The second explanatory path could be more social or cultural, within the code of inter-personal relations (politeness, courtesy, welcoming the other person) and personal or professional characteristics. These characteristics are the confidence in one's own experience and judgment capacities, personal or professional difficulties and a poorly active research for continuous training, which allow pharmaceutical sales representatives to position themselves as an information carrier. The third explanatory path is about psychological factors such as cognitive dissonance, which is a well-established social psychology theory, and which helps understand how individuals having a behavior that is not compatible with their opinion can keep a feeling of consistence.

These observations brought us to consider the hypothesis that meeting pharmaceutical representatives straight from initial training will shape the GPs-reps relationship, with a continuation held in place by the three explanatory paths described above. This hypothesis has an external validity since some universities in the USA banned detailing visits and studies confirms that this banishment's influence over prescriptions lasts well over several years after student went out the universities. (22) In 2017, Scheffer et Al. ranked French medical universities and teaching hospitals according to their management policy for interest conflicts. The authors states that French universities are behind a lot of countries, including the USA. (23,24) Indeed, the American Medical Student Association (AMSA) has been publishing a yearly ranking of American universities since 2007, with much better results.

In these conditions, in which the individual is often overrun by his own work conditions and in which complex psychological factors are taking place, the physician/representative relationship issues may be more of a societal and political level than an individual one.

**Declarations**

**Ethics approval and consent to participate**

The study was conducted in accordance with all French regulations. Participants signed an informed consent form for participation and publication. Approval from the French Ethical Research Committee (Comité de Protection des Personnes, CPP) was unnecessary because of the non-pharmaceutical biomedical nature of this research (article L. 1123–7. Code de Santé Publique).

**Consent for publication**

Participants have provided written consent for publication.

**Availability of data and material**

The relevant datasets are available from the corresponding author Adriaan BARBAROUX (abarbaroux@unice.fr) on reasonable request.
Competing interests

The authors declare that they have no competing interests.

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Authors’ contributions

AB, IP, IF, TB designed the study. AB collected the data. AB, IP, IF, TB analyzed and interpreted the data and were major contributors in writing the manuscript.

Author details

Adriaan BARBAROUX, MD. (1,2,3), Isabelle POURRAT, MD. (1), Isabelle FERONI, PhD. (4), Tiphanie BOUCHEZ, MD. (1,2)

(1) Université Cote d’Azur, RETINES, France.
(2) Université Cote d’Azur, DERMG, France.
(3) Université Cote d’Azur, LAPCOS, France.
(4) Inserm U 379, Marseille.

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Author Statement:

Adriaan BARBAROUX, MD. Is the lead author. He made the interviews, initiated the research and recruited the scientific team.

Isabelle POURRAT, MD. Designed the study and analyzed the data. She also helped writing the article.

Isabelle FERONI, PhD. Helped designing the study and analyzed the data. She also helped writing the article.
Tiphanie BOUCHEZ, MD. Helped designing the study and analyzed the data. She also helped writing the article.

Isabelle MILHABET, PhD. Does not qualify as author but helped analyzing the data and reviewed the article.

**Competing interests:**

All authors have completed the ICMJE uniform disclosure form at [www.icmje.org/coi_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf) and declare: no support from any organisation for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

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**Data sharing statement:**

Due to confidentiality reasons, we would prefer not to share our data since it is difficult for us to grant anonymisation of qualitative data (verbatim).

**Abbreviations**

GPs : General Practitioners  
USA : United States of America  
AMSA : American Medical Student Association

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