



The Impact of the COVID-19 Pandemic on the Evolution of the Patient-general Practitioner Relationship

Mihai Mehedințu

The Bucharest University of Economic Studies, Romania

ABSTRACT

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*Correspondence:

mihai.mehedintu88@yahoo.com

The present paper aims to highlight the impact of the COVID-19 pandemic on the way the Patient-general Practitioner (GP) relationship evolved throughout the pandemic period. Patients' communication with the GP has acquired special importance throughout the pandemic, considering the significant number of patients infected with SARS-CoV-2 and also taking into account the health authorities' recommendations for the population to immediately contact their GP at the first potential symptoms of SARS-COV-2 infection. The research aims to show the changes in patients' communication with their GP, taking into account both the epidemiological context generated by the pandemic and the increased interaction between the two parties, due to the raised patients' need to reach the GP more often than before. For a thorough analysis of this matter, quantitative research was conducted using the survey method and the questionnaire as a tool. The research was performed on a sample of over 200 patients from the largest polyclinics in Bucharest, Romania, between December 2021 and February 2022. The main findings of the study showed that with the outbreak of the pandemic, the communication between patients and their GP, both online and offline, increased significantly, also the patients' confidence in the GPs' advice grew, as well as patients' adherence to the treatment indicated by the physician. The study indicated that analyzing the evolution of the patient-GP relationship during and after the COVID-19 pandemic is an important asset that allows polyclinics to identify the factors that have the most influence on improving communication between the GP and their patients. In this way, in order to improve the quality of medical services and the patients' journey, polyclinics can monitor over time the actions that have the most impact on improving the patient-GP relationship.

With the characterization of COVID-19 as a global pandemic, the whole health system faced an immense challenge (World Health Organization, 2020), which led to the implementation of tremendous public health measures to prevent the further spread of the virus (Wang et al., 2020). The COVID-19 pandemic tested the strength of health systems worldwide (Plagg et al., 2021). In such circumstances, the public's perspective toward physicians and other healthcare professionals can alter rapidly, depending on how well they manage the situation and how they handle their relationship with patients (Zhou et al., 2021). In the new context, after the emergence of the novel coronavirus (SARS-CoV-2) diseases, the physician-patient relationship has undergone major changes, GPs gaining an even more integral role than in the past, respectively meeting the needs of COVID-19 patients. This is also because the Romanian authorities have established that until confirmation of infectious disease, individuals who show signs and symptoms specific to the case definition are isolated at home or at another chosen location and have an obligation to contact and inform their GP about the situation in which they are (Romanian Ministry of Health, 2020). Also, according to the aforementioned Order, the GP is obligated to register and monitor the isolated individuals' health and send the monitoring files to the Public Health Directorate. In this regard, the work of GPs has become essential and crucial in combating the COVID-19 pandemic, GPs being viewed as healthcare “gatekeepers” (Yin et al., 2021), and the doctor-physician relationship becomes vital in the management of patients with long-term COVID-19 effects (Atherton et al., 2021).

The responsibility of GPs increased during the COVID-19 pandemic due to the expectations of patients, who require their GP to believe their symptoms and to show compassion and understanding (Kingstone et al., 2020). GPs are motivated by altruism to work during such periods as pandemics despite the increased personal risk, and they are enthusiastic about further training and knowledge (Patel et al., 2008). In this regard, GPs were responsible for actively communicating with patients with persistent symptoms following SARS-CoV-2 infection, offering empathy and, most importantly, to help patients in dealing with comorbidities. To adapt to the new reality, changes in practice management and consultation procedures were quickly embraced, taking into account the use of alternative methods of communication between the patients and their GPs, such as using a mobile phone for triage and consultations, both for COVID-19 patients and also for non-COVID-19 related problems (Verhoeven, 2020).

Also, the Romanian authorities decided by Order that the activity of informing, scheduling vaccinations, monitoring patients, and reporting adverse reactions should be performed by GPs. So, the burden on GPs became even more prominent. Thus, GPs became essential in combating and preventing infection with the SARS-CoV-2 virus, together with infectious disease specialists (Romanian Ministry of Health, 2021). Furthermore, GPs had a crucial role in the fight against the COVID-19 pandemic as the first point of contact for potentially infected patients and also managing short, and long-term follow-up care (Van Poel et al., 2022).

Furthermore, according to a Government Decision, the GPs, together with the attending physician and the call center operator, have an obligation to schedule the priority population groups in the national vaccination platform, according to each stage, as established in the COVID-19 Vaccination Strategy in Romania (Government Decision, 2020). Therefore, the COVID-19 pandemic was a tremendous opportunity to develop the GP-patient relationship, benefiting both physicians and patients (Hu et al., 2021).

In addition, the burnout syndrome is established among healthcare professionals involved in treating COVID-19 patients (Mehedințu, 2021); therefore, GPs rapidly revise working procedures and manage evolving guidelines amid uncertainty and personal risk (Jefferson et al., 2022). However, all these factors came with a cost for the GPs. Studies show that with the onset of the pandemic, GPs suffered from anxiety, but they have proved to have excellent adaptability and flexibility despite the difficulties that occurred (Luzet et al., 2021).

Research Objectives

The main objectives of this research are to determine the effects of the COVID-19 pandemic on the GP-patient relationship in terms of communication, interaction and trust, taking into account the restrictions and the measures imposed by the authorities, as well as the strategies to limit the spread of infection with SARS-CoV-2 virus.

The objectives of this research focused on the critical aspects related to the investigated problem, consisting of how the pandemic affected the frequency of patient visits to the GP's office or reaching their GP through different methods of communication, identifying how patients' trust in their GP's medical advice and indications has evolved during the pandemic and how satisfied patients are with the care they receive, how the fear of becoming infected with the SARS-CoV-2 virus influenced patients in terms of physical presence in the GP's office and finding out the importance of identifying alternative methods of communication between patients and GPs, in the context generated by the COVID-19 pandemic.

The analysis starts from the hypothesis that GP-patient communication underwent a strong development during the COVID-19 pandemic due to the increased need for patients to reach their GP more frequently than before. Also, another hypothesis is that patients' trust in the GP's advice, as well as patients' adherence to treatment, increased considerably during the pandemic.

Method

The research method selected for this study is quantitative research, using the survey method and the questionnaire as a tool. The research was carried out in Bucharest and neighboring counties over three months, between December 2021 and February 2022, and responses to 200 questionnaires were collected and analyzed, with a response rate of 99.44%. The questionnaires were administered both online, using a surveys platform, and also in a face-to-face matter, being thereafter submitted on the online platform.

The survey includes 18 questions, divided as follows: seven dichotomous questions (that have only two possible answers), three closed questions relying on a 5-point Likert scale, two scoring questions (also called matrix questions), which are composed of 5 subquestions, each which was assigned a numerical score to a series of choices - respectively from minimum (1) to maximum (5), one question with multiple choices with three variants and one question with multiple choices with five variants, to which were added the socio-demographics questions. Taking into account the wide range of the targets addressed and the high percentage of responses, the research is considered to be a proper approach, in this sense, there is not necessarily a need for a reliability and validity framework at this time. However, the study is in a pilot phase, and the recalibration of the research for future steps of the investigation is taken into account.

From a socio-demographic point of view, the aim was to collect data from as many individuals as possible representing the general population of Bucharest and its neighboring counties. Accordingly, the respondents are divided into age groups as follows: 27% between 45-54 years old, 25.5% between 25-34 years old, 24.5% between 35-44 years old, 18% 55 years old or more, and only 5% between 18-24 years old.

Regarding the gender of the respondents, 57.5% are women, and 42.5% are men, while 87.5% are urban-based and only 12.5% are rural-based. Regarding education, 58% of the respondents have higher education (graduated college), 30% have postgraduate studies, and 12% graduated from high school.

Results

The data was gathered from the questionnaires using an online survey site and assembled into a spreadsheet, compiled into raw totals and percentages, and exported into graphics to be better viewed and understood accurately.

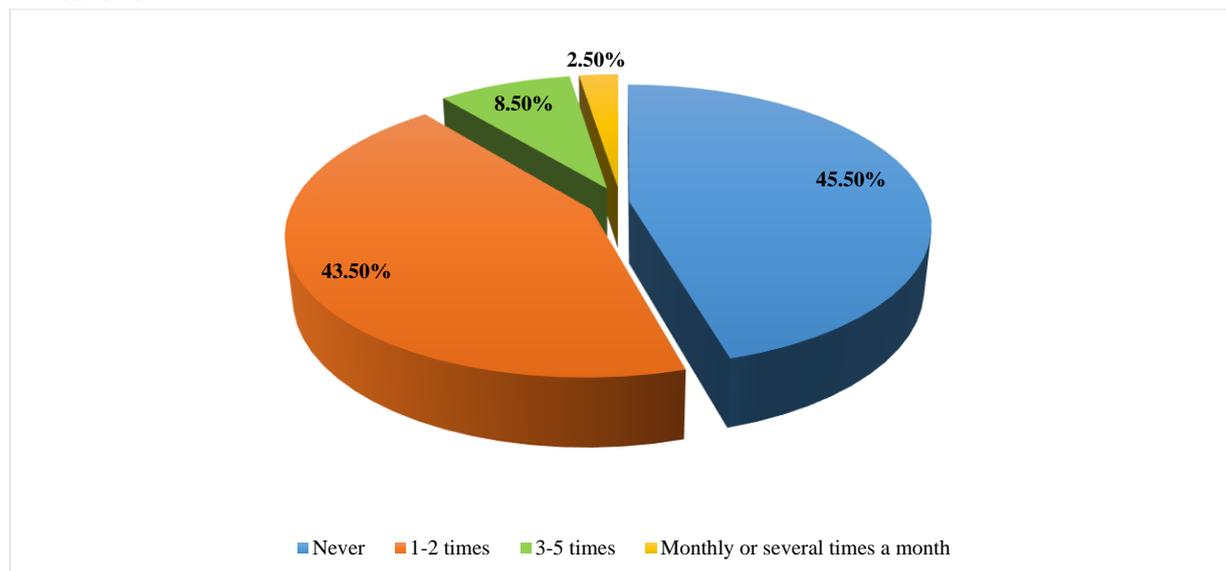
The study shows that 77% of respondents reached their GP during the COVID-19 pandemic, but there was no increase in the frequency with which they contacted their GP compared to the period before the pandemic. Such a high percentage, compared to the fact that the frequency of patient visits to the physician's office has remained unchanged, shows that the communication between the GP and the patients proved efficient and effective, with physicians constantly providing medical advice and recommendation to patients.

Only 24.1% of respondents reached their GP more often than before the COVID-19 pandemic. This suggests a tendency for patients to reach the GP if they consider it necessary in terms of medical concerns related to COVID and non-COVID-related issues.

Regarding the consultations with physical presence at the GP's office during the pandemic period, 45.5% of the respondents stated that they had 1-2 consultations at the GP's office, and 43.5% of them did not make any visit to the GP's office, 8.5% had 3-5 physical consultations, and the rest, respectively only 2.5% of the respondents, visited their GP monthly or several times a month, as stated in [Figure 1](#).

Figure 1

The Frequency with which Consultations Were Performed in Physical Format, at the GP's Office, during the COVID-19 Pandemic



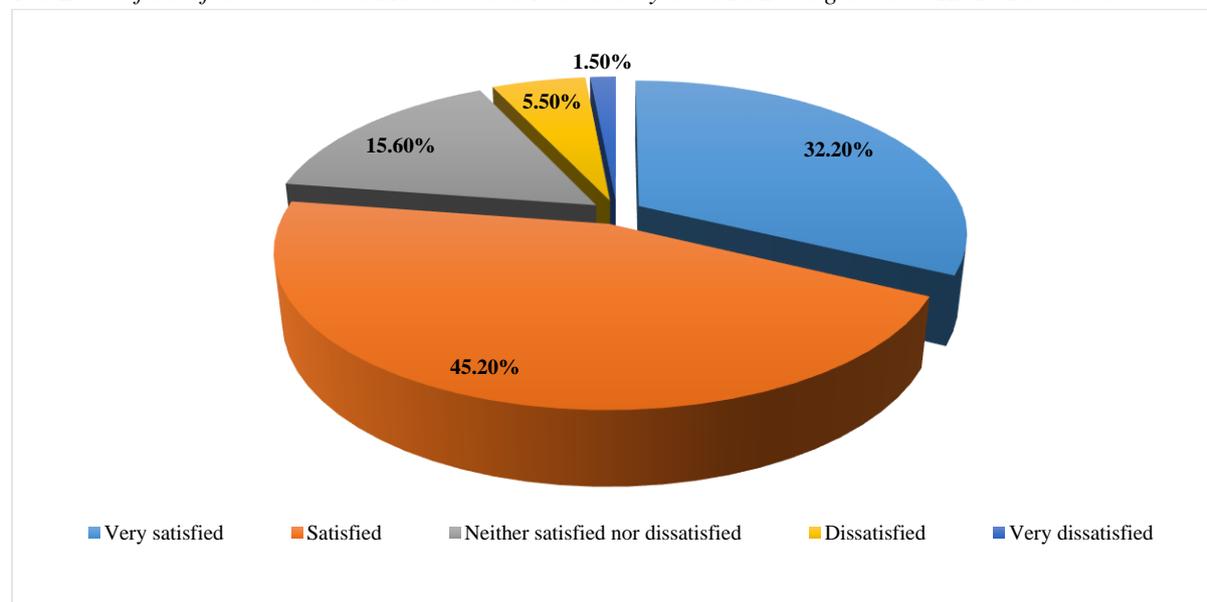
The results indicated that, in general, patients suffering from chronic diseases had to continue physical consultations at the GP's office, without changes compared to the period before the COVID-19 pandemic, while the vast majority of respondents had performed physical examinations at the GP's office during the pandemic only if this was undoubtedly required. The COVID-19 pandemic has led to changes in practice management and the GP-patient relationship, which can be observed in the use of alternative methods of communication.

Regarding the frequency with which patients reached their GP during the COVID-19 pandemic using alternative communication methods (such as mobile phones, email, social applications, etc.), the study showed that 62.6% of respondents reached their GP occasionally, respectively 1-2 times during the pandemic, 29.3% of the respondents contacted their GP from time to time, respectively 3-5 times, and only 8.1% contacted the physician often, respectively at least once a month. These results revealed the speed with which a major switch was made towards telephone triage and consultations for medical issues related to COVID-19 and non-COVID-19-related issues. We can also conclude that the vast majority of patients frequently reached or kept in touch with their GP during the COVID-19 pandemic and had no difficulty finding alternative ways to reach the physician for advice on the phone or using other alternative methods of communication.

Patient satisfaction with medical care is considered to be the reaction of a health care recipient to the essential aspects of the context, the approach and the result of his service experience (Pascoe, 1983). The level of patient satisfaction can be measured in different ways, but the use of the questionnaire as a tool is one of the most widely used and convenient ways of patient satisfaction investigation. In this study, self-rated patient satisfaction was determined from a single question that requested patients to rate their satisfaction with the medical assistance provided by their GP during the COVID-19 pandemic. An overwhelming majority had a very good or good experience, respectively a total of 77.4% (namely 45.2% were quite satisfied and 32.2% were very satisfied), as seen in Figure 2. These results showed that, overall, the respondents appreciated the efforts made by the GPs and did not feel left out or untreated.

Figure 2

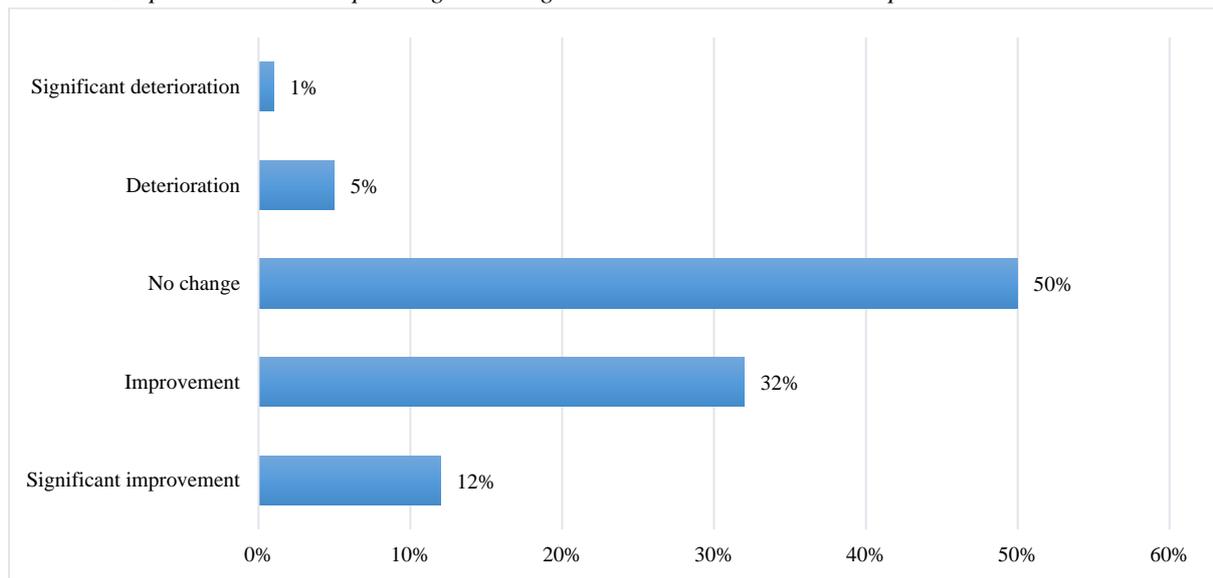
The Level of Satisfaction with the Medical Care Provided by the GPs During the COVID-19 Pandemic



Regarding how the GP-patient relationship changed during the COVID-19 pandemic compared to the previous period, half of the respondents (50%) believe that their relationship with the GP has not changed, while 44% indicated a significant improvement or an improvement, while only 6% of respondents believe that the relationship with their GP has deteriorated or has deteriorated significantly, as presented in Figure 3. Such a high percentage of respondents who consider that the relationship with their GP has improved indicates that the respondents appreciated the sometimes superhuman efforts that the GPs made during the pandemic so that all their patients would receive quality medical care as if it were normal conditions.

Figure 3

How the GP-patient Relationship Changed During the COVID-19 Pandemic Compared to Previous Years



The questionnaire also included a question by which respondents had to assess whether they consider that the level of respect for the work performed by the GPs during the pandemic period had increased or decreased. At this question, 70.4% of the respondents stated that their level of respect for the work performed by the GP has increased, and 29.6% said that the level of respect has not increased during the COVID-19 pandemic. Such an overwhelming majority suggests that respondents are knowledgeable of the importance of the GPs work in treating COVID-19 patients and also in managing patients with long COVID-19, especially as GPs were very exposed during this period to the risk of infection, having to consult COVID-19 positive patients daily and also a number of patients who showed symptoms of infection but were not yet confirmed positive. Thus, the work of the GPs was of particular significance in limiting the spread of SARS-CoV-2 virus infection.

Regarding the results obtained after analyzing the answers of the respondents to the question that referred to the possible prevention of patients going to the GP's office for medical consultation for fear of contacting the virus, 48.5% of respondents stated that the fear of infection with SARS-CoV-2 virus did not prevent them from going for physical consultations at the GP's office, 32% of the respondents stated that they were afraid of infection only to a small extent, 14.5% were afraid of infection to some extent, and only 5% of respondents were afraid to go to the GP's office to a large or very large extent.

Respondents were further asked if, during the COVID-19 pandemic, they had a medical emergency and could not resolve it because they worried about going to the GP's office because of the fear of becoming infected with the virus. The results of this question validated the answers to the previous question because an overwhelming majority of 84.5% of respondents responded negatively, and 15.5% responded positively. The outcome is that the respondents were aware of the risks they are exposed to if they are not diagnosed correctly by a physician, especially if they are not treated from the first symptoms of the virus, proving that they took the risks of COVID-19 seriously. They did not hesitate to visit the GP's office for medical examinations, despite the risks involved in entering a crowded medical unit and waiting in line with other possible COVID-19 patients.

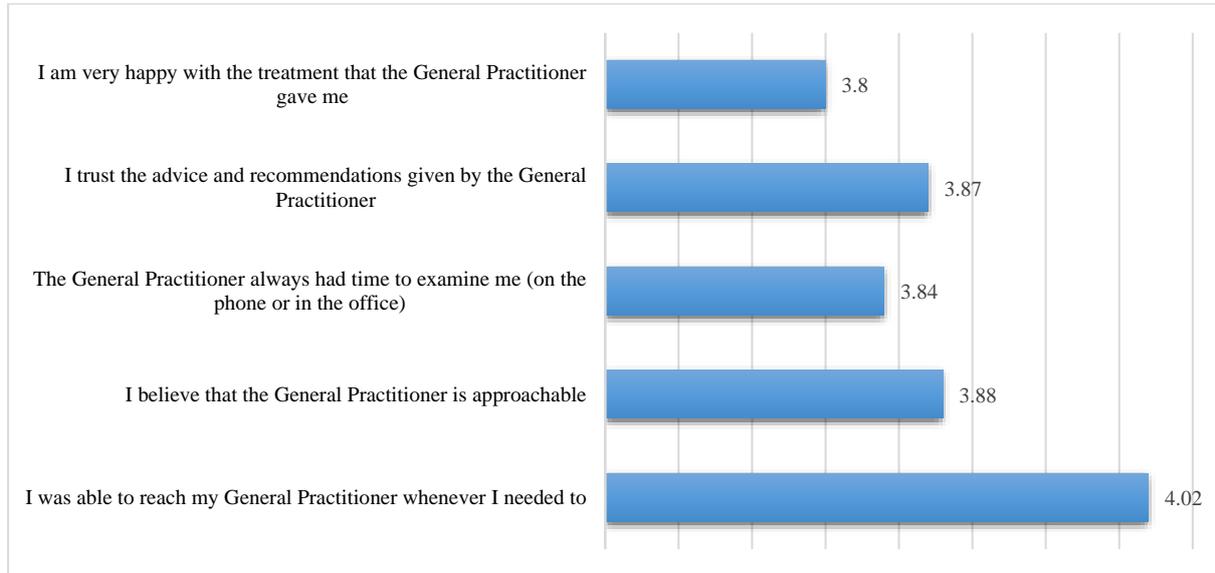
Regarding finding an alternative solution to communicate with their GP without the need to go to the doctor's office physically, 83.9% of respondents stated that they found alternative solutions (such as reaching the GP by phone, email, or social applications), and 85.6% stated that using an alternative communication solution did not negatively influence the outcome of the medical consultation; the result was the same as if they had been present in the GP's office.

As seen in [Figure 4](#) and [5](#), questions 16 and 17 in the questionnaire aimed to evaluate some key aspects related to the GP-patient relationship, comparing the pre-pandemic period and the pandemic period, respectively the ease with which patients were able to reach and consult the GP in order to receive medical indications at any time, assessing the level of approachability of the GP, the availability of the GP to offer medical examinations, both related to the consultations carried out in physical format at the doctor's office, as well as those using other alternative means of communication (telephone), assessing the level of confidence in the medical recommendations provided by the GP, as well as assessing the level of satisfaction of the respondents regarding the treatment that the GP offered.

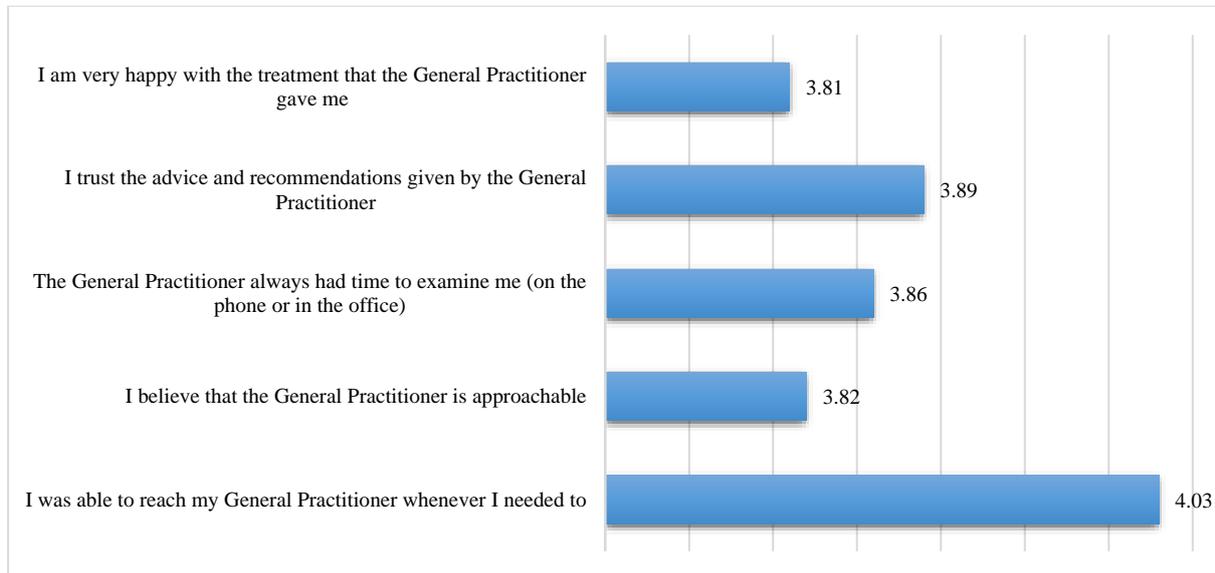
The scope of using scoring questions helped ask questions to respondents while tallying the responses to the survey scoring scale range, in this case, from 1 (negative) to 5 (positive). Following the analysis of the answers received from the respondents to all the 5 investigated aspects, no major differences were identified in terms of the score obtained. The best score was obtained on the question related to the success of reaching the GP every time it was needed, this question had a score almost identical before and after the pandemic, respectively 4.02 vs. 4.03 and the most significant difference was obtained on the question assessing the level of approachability of the GP, with a small decrease from the score of 3.88 before the pandemic to the score of 3.82 during the pandemic. The fact that the recorded scores were very similar before and after the pandemic to all aspects investigated indicates that the COVID-19 pandemic did not produce negative effects on the GP-patient relationship in terms of all the five issues investigated in these questions, and the GPs managed to carry out their activity in conditions close to normal and to provide medical examinations without creating major difficulties for the patients.

Figure 4

The Average Score Obtained by the Five Factors Investigated, Concerning the Period Before the COVID-19 Pandemic (Scores from 1 to 5)

**Figure 5**

The Average Score Obtained by the Five Factors Investigated, Concerning the Period During the COVID-19 Pandemic (Scores from 1 to 5)



Conclusion and Discussion

The study indicates that maintaining a GP-patient relationship based on mutual respect during the COVID-19 pandemic has been essential to medical consultations and treatments. Key factors such as reaching the GP with ease in order to receive medical treatment when needed, the level of approachability of the physician, and the availability of the GP to offer medical examinations, both related to the consultations carried out in physical format at the doctor's office, as well as those using other alternative means of communication, the level of confidence in the medical recommendations provided by the GP, and the level of patients' satisfaction regarding the treatment that the GP offered have a strong impact on the doctor-patient

relationship as well as the trust that patients have in the doctor's advice and guidance. Also, GPs played a key role in the pandemic, with SARS-CoV-2 testing in their offices being a solution for easy patient access to rapid diagnosis, examination, and monitoring. Furthermore, testing at the GP's office reduced the overload of ambulance services and public health departments, where waiting lists were long.

Even if the frequency of physical consultations performed by patients at the family doctor's office has not increased compared to the period before the COVID-19 pandemic, which is not at all surprising given the authorities' actions to prevent the spread of the virus, the GP-patient relationship has undergone significant transformations due to the use of alternative methods of communication (such as mobile phones, email or the use of social applications). But according to the results of the study, this did not interfere with the correct treatment of patients, with an overwhelming majority indicating that in the event of a medical emergency, they had found an alternative solution to communicate with their GP without having to go to the physician's office. The study also reveals that specific key points regarding the GP-patient relationship have improved considerably during the COVID-19 pandemic, such as increased confidence in the GP's medical recommendations and guidance or increased level of respect that the respondents have for the GP's work.

Also, the research results are in congruence with the findings of other studies that investigated the same problem during the pandemic period (Zhou et al., 2021, Hu et al., 2021 & Aguirre et al., 2021).

In terms of managerial implications, the outcomes of the study indicate that investigating the evolution of the patient-GP relationship, comparing the pandemic period with the pre-pandemic period, is an important asset that allows healthcare units, polyclinics, and authorities to identify the factors that have the most influence on improving communication between the GP and their patients, and to be able to be prepared for future pandemics or other health crises or unpredictable situations that may arise in the future. In this way, in order to improve the quality of medical services and the patients' journey, healthcare units and polyclinics can monitor over time the actions that have the most impact on improving the patient-GP relationship. Government healthcare authorities, policymakers, and the administrators of medical units and polyclinics need to ensure that their response to primary care assistance is monitored and assessed and does not negatively affect patient treatment.

Declarations

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Ethics Approval

Not applicable.

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Appendix A

The questionnaire applied to the respondents

The questionnaire applied to the respondents was completed in the Romanian language and for the purpose of this study was translated into English. The questionnaires were administered both online, using a surveys platform, and also in a face-to-face matter and were subsequently submitted to the online platform by the author.

Question no. 1. What is your age?

- 18 - 24 years old
- 25 - 34 years old
- 35 - 44 years old
- 45 - 54 years old
- 55 years old or more

Question no. 2. What is your gender?

- Male
- Female

Question no. 3. Which of this best describes the general area where you live?

- I live in an urban area
- I live in a rural area

Question no. 4. What is the highest level of education you have completed?

- Primary school
- Gymnasium
- High school
- Higher education
- Postgraduate studies

Question no. 5. Did you reach your General Practitioner during the COVID-19 pandemic?

- Yes
- No

Question no. 6. During the COVID-19 pandemic, did you reach your General Practitioner more often than before?

- Yes
- No, with the same frequency as before

Question no. 7. How many times have you contacted your General Practitioner during the COVID-19 pandemic, using any method of communication (phone, email, social applications, etc.)?

- Occasionally (1 - 2 times)
- From time to time (3 - 5 times)
- Often (at least once a month)

Question no. 8. How many times have you been to a physical consultation at the General Practitioner's office during the COVID-19 pandemic?

- Never
- 1 - 2 times
- 3 - 5 times
- Monthly
- Several times a month

Question no. 9. How satisfied are you with the medical care provided by your General Practitioner during the COVID-19 pandemic?

- Very satisfied
- Satisfied
- Neither satisfied nor dissatisfied
- Dissatisfied
- Very dissatisfied

Question no. 10. How do you think the General Practitioner - patient relationship changed during the COVID-19 pandemic compared to previous years?

- Significant improvement
- Improvement
- No change
- Deterioration
- Significant deterioration

Question no. 11. Has your confidence in your General Practitioner's medical advice increased compared to before the COVID-19 pandemic?

- Yes
- No

Question no. 12. Did the fear of getting infected with SARS-CoV-2 virus prevented you from going to the General Practitioner's office?

- To a very large extent
- To a large extent
- To some extent
- To little extent
- To no extent

Question no. 13. Did you ever have a medical emergency that couldn't be resolved because you were afraid to go to the General Practitioner's office because of the fear of getting infected?

- Yes
- No

Question no. 14. If you have had a medical emergency, have you found an alternative way to communicate with your General Practitioner without having to go to the office?

- Yes
- No

Question no. 15. If you opted for an alternative solution to contact your General Practitioner, did you consider that the result of the consultation suffered and that it was not the same as at the physician's office?

- Yes
- No

Question no. 16. Please fill in the information below concerning the period before the COVID-19 pandemic (1 - Strongly Disagree; 2 - Disagree; 3 - Neither Agree nor Disagree; 4 - Agree; 5 - Strongly Agree).

Question	1	2	3	4	5
I was able to reach my General Practitioner whenever I needed to					
I believe that the General Practitioner is approachable					
The General Practitioner always had time to examine me (on the phone or in the office)					
I trust the advice and recommendations given by the General Practitioner					
I am very happy with the treatment that the General Practitioner gave me					

Question no. 17. Please fill in the information below concerning the period during the COVID-19 pandemic (1 - Strongly Disagree; 2 - Disagree; 3 -Neither Agree nor Disagree; 4 - Agree; 5 - Strongly Agree).

Question	1	2	3	4	5
I was able to reach my General Practitioner whenever I needed to					
I believe that the General Practitioner is approachable					
The General Practitioner always had time to examine me (on the phone or in the office)					
I trust the advice and recommendations given by the General Practitioner					
I am very happy with the treatment that the General Practitioner gave me					

Question no. 18. Did your level of respect for your General Practitioner's work increase during the COVID-19 pandemic?

- Yes
- No