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# Impact of the Covid-19 Pandemic on the Doctor-Patient Relationship: A Qualitative Study in a Tertiary-Care Centre in Lebanon

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Contexte : La pandémie de Covid-19 a imposé de nombreuses contraintes à la pratique médicale et a exacerbé les vulnérabilités préexistantes du système de santé libanais, déjà en proie à l'instabilité due à des crises politique et économique concomitante. Cette situation a eu un impact complexe sur la relation médecin-patient (RMP), avec des répercussions à la fois négatives et positives. Méthodes : Nous avons mené des entretiens semi-structurés avec des médecins de diverses spécialités exerçant dans un centre de soins tertiaires au Liban. Notre étude visait à 1) explorer l'impact de la pandémie de Covid-19 sur la relation médecin-patient au Liban, et 2) fournir des recommandations pour améliorer la RMP, la politique des soins de santé et l'éducation. Résultats : L'analyse thématique des données a révélé que la pandémie a eu des effets variables sur la RMP. Alors que les médecins et les patients semblent avoir développé une perception plus favorable de la profession médicale, la communication entre eux semble avoir été entravée par l'utilisation d'équipements de protection individuelle et par les préoccupations des patients concernant les contacts étroits avec les médecins. Les médias ont joué un rôle essentiel dans l'éducation et la sensibilisation au cours de la pandémie, mais ils ont manqué d'organisation et de normes éthiques, ce qui a suscité la peur et la confusion au sein de la société. La télémédecine est apparue comme un moyen alternatif de communication et de soins à distance, mais elle s'est heurtée à plusieurs obstacles, notamment une infrastructure Internet inadéquate et des perturbations dans la vie personnelle des médecins. Conclusion : Notre étude qualitative a révélé l'impact multiforme de la pandémie de Covid-19 sur la perception du système de santé, les interactions médecin-patient et le rôle de la télémédecine au Liban, entre autres. Ces résultats soulignent l'importance d'une communication efficace pour améliorer la RMP, la nécessité de lutter contre la désinformation sur les médias sociaux et l'impératif d'améliorations systémiques pour renforcer la résilience du système de santé libanais.

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**ARTICLE** (ÉVALUÉ PAR LES PAIRS / PEER-REVIEWED)

# Impact of the Covid-19 Pandemic on the Doctor-Patient Relationship: A Qualitative Study in a Tertiary-Care Centre in Lebanon

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#### Résumé

**Contexte** : La pandémie de Covid-19 a imposé de nombreuses contraintes à la pratique médicale et a exacerbé les vulnérabilités préexistantes du système de santé libanais, déjà en proie à l'instabilité due à des crises politique et économique concomitante. Cette situation a eu un impact complexe sur la relation médecin-patient (RMP), avec des répercussions à la fois négatives et positives. Méthodes : Nous avons mené des entretiens semi-structurés avec des médecins de diverses spécialités exercant dans un centre de soins tertiaires au Liban. Notre étude visait à 1) explorer l'impact de la pandémie de Covid-19 sur la relation médecin-patient au Liban, et 2) fournir des recommandations pour améliorer la RMP, la politique des soins de santé et l'éducation. Résultats : L'analyse thématique des données a révélé que la pandémie a eu des effets variables sur la RMP. Alors que les médecins et les patients semblent to have developed a more favourable perception of the medical avoir développé une perception plus favorable de la profession médicale, la communication entre eux semble avoir été entravée par l'utilisation d'équipements de protection individuelle et par les préoccupations des patients concernant les contacts étroits avec les médecins. Les médias ont joué un rôle essentiel dans l'éducation et la sensibilisation au cours de la pandémie, mais ils ont manqué d'organisation et de normes éthiques, ce qui a suscité la peur et la confusion au sein de la société. La télémédecine est apparue comme un moyen alternatif de communication et de soins à distance, mais elle s'est heurtée à plusieurs obstacles, notamment une infrastructure Internet inadéquate et des perturbations dans la vie personnelle des médecins. Conclusion : Notre étude qualitative a révélé l'impact multiforme de la pandémie de Covid-19 sur la perception du système de santé, les interactions médecinpatient et le rôle de la télémédecine au Liban, entre autres. Ces social media, and the imperative for systemic improvements to résultats soulignent l'importance d'une communication efficace strengthen the resilience of Lebanon's healthcare system. pour améliorer la RMP, la nécessité de lutter contre la désinformation sur les médias sociaux et l'impératif d'améliorations systémiques pour renforcer la résilience du système de santé libanais.

#### Abstract

Background: The Covid-19 pandemic imposed numerous constraints on medical practice and exacerbated preexisting vulnerabilities in Lebanon's healthcare system, which was already grappling with instability due to concurrent political and economic crises. This situation had a complex impact on the doctor-patient relationship (DPR), with both negative and positive repercussions. Methods: We conducted semistructured interviews with physicians from various specialties practicing at a tertiary-care center in Lebanon. Our study aimed to 1) explore the impact of the Covid-19 pandemic on the DPR in Lebanon, and 2) provide recommendations for improving the DPR, healthcare policy, and education. Results: Thematic analysis of the data revealed that the pandemic had varying effects on the DPR. While both physicians and patients seemed profession, communication between them appeared to be challenged by the use of personal protective equipment and patients' concerns about close contact with physicians. The media played a vital role in educating and raising awareness during the pandemic but lacked organization and ethical standards, leading to anticipated fear and confusion among the society. Telemedicine emerged as an alternative means for communication and remote care but faced several obstacles including inadequate internet infrastructure and disruptions to physicians' personal lives. Conclusion: Our qualitative study unveiled the multifaceted impact of the Covid-19 pandemic on perceiving the healthcare system, doctor-patient interactions, and the role of telemedicine in Lebanon, among others. These findings underscore the importance of effective communication in enhancing the DPR, the need to address misinformation on

#### Mots-clés

relation médecin-patient, pandémie de Covid-19, Liban, éthique doctor-patient relationship, Covid-19 pandemic, Lebanon, médicale, étude qualitative

## **Keywords** medical ethics, qualitative study

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### INTRODUCTION

The doctor-patient relationship (DPR) has overwhelmingly become the cornerstone of medicine, tracing its roots back to Hippocrates and the ethical principles set forth in his oath, such as do no harm (1). It represents a unique interpersonal connection which lies at the heart of medical practice. Notably, the DPR not only aids in establishing accurate medical diagnosis but is also linked to better treatment outcomes (2,3). In the context of the DPR, the patient is seen as more than a collection of symptoms, transcending the mere analysis of medical data into a more holistic approach, which is essential for the provision of high-quality care (4). It has been demonstrated that the quality of the DPR, as evidenced by effective physicianpatient communication, plays a substantial role in shaping patients' overall well-being, encompassing heightened satisfaction, increased treatment adherence, and improved health outcomes (5-7).

The nature of the DPR has undergone many transitions over the years, influenced by socio-cultural and technological contexts (8). For instance, in Western contexts, this evolution has been marked by a shift from a paternalistic model, where physicians hold a more authoritative role in decision-making, to one that is patient-centred (9). The latter recognizes the complementarity between the healthcare professional's expertise and the subjective experiences of patients, thus putting more emphasis on shared-decision making (4). The patient-centred model is built on several essential values including respect, open communication, trust, loyalty and empathy (5).

In Lebanon, the DPR exhibits unique characteristics influenced by socio-cultural factors. Ayoub et al. (10) highlighted the high regard in which the medical profession is held in Lebanon, with patients recognizing physicians as compassionate and knowledgeable. However, in a country that places significant importance on the medical profession, the structure of the DPR is not always clearly defined. Riachy et al. (11) found that while 58% of Lebanese doctors believe patients should actively participate in the decision-making process, 40% still adhere to the traditional notion that physicians alone should make treatment decisions. Consequently, despite the global trend in healthcare toward a patient-centred model, the boundaries of the DPR in Lebanon remain somewhat indistinct.

Lebanon's healthcare system is characterized by a mix of public and private sectors. The public sector, managed by the Ministry of Public Health, provides services to citizens at subsidized rates or free of charge. However, due to resource constraints and inefficiencies, the public sector often faces challenges in delivering timely and high-quality care. As for the private sector – including private hospitals, clinics, and medical professionals operating independently or in private institutions – the services offered come at much higher costs (12). This duality contributes to variations in access, quality, and affordability of care, creating a complex situation where patients' access to care varies based on socioeconomic status. This further exacerbates existing inequalities and shapes the dynamics of the DPR by influencing power dynamics and perceptions of care delivery (13).

Over the years, the DPR was influenced by several factors, such as uneven distribution of high-quality medical resources, disparities between treatment outcomes and patients' expectations, and financial conflicts, among others, which remain ongoing challenges (14). These pre-existing factors took on new significance in the face of the Covid-19 pandemic, which, with its transformative impact on our daily lives, introduced new hurdles within the healthcare system, further altering the dynamics of the DPR (15). Several obstacles encountered during this pandemic led to the formation of a barrier between physicians and patients. Particularly notable were social distancing measures, the use of personal protective equipment (PPE) such as masks, gowns, and face shields that protect against viral transmissions, and the extensive use of telemedicine, which involves providing medical care remotely through video calls. This led in several instances to a fractured relationship between physicians and patients (16). In an already unstable state, the healthcare system in Lebanon was far from being ready to respond to the obstacles of this pandemic, which was made worse by concomitant political and economic crises.

Faced with this pandemic, which claimed the lives of many people and led to the collapse of health systems worldwide (17), the principle of "saving lives" became a challenge. Several of these measures compromised regular care, notably the use of face masks, restricted physical consultations and examinations, distancing adjustments, as well as an overburdened healthcare system with limited resources. The social and family environment also changed as many people no longer went to school, university, or work. While household chores and the demands of life were piling up, the house took on a new role and became a place of work (18).

Physicians faced many challenges. In addition to caring for their patients, they also played the role of educators and advisers as the whole population relied on their knowledge and reassurance to control their fear (19). However, many healthcare providers (HCP) had no sense of control as they had little or no knowledge about the disease, especially at the beginning of the pandemic. As medicine often deals with great uncertainty, physicians are not always able to offer all the answers or provide the results that patients desire. This was particularly the case with the Covid-19 pandemic where scientific knowledge was very limited concerning the virus, its mode of propagation, or best treatment options, among others. All of these challenges, along with a big influx of patients into overburdened healthcare systems, led physicians to experience feelings of exhaustion, stress, and depression, especially when they had to isolate themselves from family members (15).

Ghosh et al. (2020) highlighted the need for qualitative studies that theorize and analyze the effects of the Covid-19 pandemic and distancing measures on the DPR (20). This is necessary because available studies present limited or even contradictory results. For instance, while some studies showed that the pandemic positively affected this relationship by fostering trust and respect towards HCP (21), others contradicted these findings (22). Further, Samarasekara (23) noted the critical need to better support HCP in effectively addressing the obstacles caused by the pandemic. In this context, our study aimed to investigate the impact of the Covid-19 pandemic on the DPR, from the viewpoint of physicians. Our goal was to gain a deeper understanding of how this relationship and the interactions might have been influenced in response to the challenges posed by the pandemic and to offer few suggestions for enhancing DPR.

## METHODS

### **Research Design**

We used a qualitative description (QD) methodology, enabling us to present direct information about a specific topic, i.e., the impact of the Covid-19 pandemic on the DPR, and to offer a detailed explanation of how participants, in this case, physicians, experienced these events (24,25). Semi-structured interviews were conducted with physicians from different specialties and subspecialties, such as those practicing at the American University of Beirut Medical Center (AUBMC). We excluded physicians from surgical services, emergency medicine, and pediatrics because our primary focus was on specialties related to chronic disease settings, where a pre-established DPR exists, which allowed us to gain valuable insights into the impact of the Covid-19 pandemic on ongoing and established medical relationships. Moreover, the nature of the direct relationship in pediatrics often involves the parents more than the patient themselves, making this specialty less suitable for our study's specific focus.

### **Ethical considerations**

Approval for this study was obtained from the institutional review board (IRB) of the American University of Beirut Medical Center (AUBMC), Beirut, Lebanon, in April 2021. Verbal informed consent to participate and to record the interview was obtained and registered by audio for all study participants at the beginning of each interview and prior to data collection. All data was anonymized, and numerical codes were assigned to each interview, such as "Px", where "P" represents the participant and "x" is the numerical code assigned.

### Sampling, recruitment, and data collection

Participants were initially contacted via email using a targeted intentional sampling approach, particularly focusing on individuals from the services of neurology, psychiatry, family medicine, and all the departments of internal medicine, including cardiology, immunology, nephrology, pneumology, infectious diseases, gastroenterology, endocrinology, and oncology. This targeted approach ensured representation from a diverse range of medical specialties (26). Subsequently, a snowball sampling technique further broadened the participant pool, with existing participants recommending other potential participants who might be interested in our study (27). Data was collected between November 2021 and April 2022.

One-on-one semi-structured interviews were conducted at the participants' convenience, either in person, over the phone or online via Zoom. All interviews were conducted in English, audio recorded, transcribed, and anonymized. The interview guide (in the Appendix) covered several themes, including: physicians' perceptions of their medical profession during the Covid-19 pandemic, the pandemic's impact on the DPR, and proposed future measures to enhance this relationship.

### **Data analysis**

Data analysis was conducted using thematic analysis, following an iterative process involving simultaneous data collection and analysis. This approach allowed for the exploration of emerging themes while ensuring methodological consistency associated with qualitative research. To ensure uniform coding, transcripts for interviews were coded independently by two researchers (TAM and HH), using an inductive approach. Predefined themes based on our questionnaire guided the initial stages of coding. However, the analysis remained open to capturing new themes that emerged from the data. Coded transcripts were then compared between both researchers and discrepancies discussed until consensus was reached. Throughout the coding process, Nvivo software (version 12) was used to assist in organizing and managing coded data.

### RESULTS

### **Participant characteristics**

A total of 22 interviews were conducted, of which 12 participants were male (54.5%), and ranging in age from 41 to 65 years old. Detailed participant demographics are presented in Table 1. Interviews lasted between 17 and 36 minutes, and 16 of these (72%) were conducted online using the platform Zoom.

Characteristics	Participants (n=22)
Gender	
Male	12
Female	10
Age Range	41 to 65
Medical Specialty	
Cardiology	2
Rheumatology and Immunology	2
Nephrology	3
Pneumology	2
Infectious Diseases	2
Gastroenterology	2
Endocrinology	1
Oncology	3
Neurology	2
Psychiatry	1
Family medicine	2

### **Table 1: Participants demographics**

### **Key findings**

After conducting our data analysis, we developed the following five themes: 1) Physicians' perceptions a) on how the public perceives them and b) about the medical profession, 2) impact of the Covid-19 pandemic on the DPR, 3) the role of social media and misinformation on the DPR, 4) telemedicine as an alternative means for communication, and 5) physicians' future recommendations for promoting a healthy DPR.

### Physicians' perceptions on how the public perceives them

Participants noted that during the Covid-19 pandemic, the Lebanese society had a more favorable view of the healthcare system and HCP, especially physicians. This was largely attributed to an increased dependence on HCP during the crisis.

People relied on the assistance of doctors and became more and more dependent on them. (P3)

We [doctors] became a more or less figure of authority for our patients. They were asking us about everything, indiscriminately, whether it was related to their medical condition or not, and that strengthened our relationship a lot. (P21)

Participants expressed that society appreciated the dedication and crucial role played by physicians in providing necessary patient support and acknowledged their sacrifices. Physicians thus assumed a new role, not only as healers but also as protectors and advisors.

Following the Covid-19 pandemic, people appreciated what the doctors did and the sacrifices and the risks they incurred for themselves and their families. (P5)

While the public perception of physicians was largely positive, our results reveal a complex array of emotions among the public. For instance, doubts arose due to various factors, including a shortage of medical supplies, uncertainty surrounding Covid-19, and the increasing rates of infection, morbidity, and mortality. Physicians became linked with the virus and were sometimes viewed as potential spreaders. These factors gave rise to a dual sentiment within society: a yearning for physician assistance juxtaposed with a fear of potential exposure to the virus.

On the one hand, they wanted physicians to meet their needs and help them, but on the other hand, they were afraid of them because the visit to the hospital was associated with a risk of infection. (P1)

Patients appreciated doctors, they knew what we are doing, that we have a mission, that we were here to help despite the risks we take. But I'm sure that some people were skipping their appointments out of fear of going to hospitals and meeting with healthcare workers. There was some apprehension about the health system and this created tension between patients and their doctors, already overwhelmed and burned out. (P7)

### Physicians' perceptions about the medical profession

Our findings showed significant implications of the Covid-19 pandemic on doctors' perceptions of their own profession. Three key aspects emerged.

#### 1) Rekindled humanitarian emphasis

First, participants acknowledged that the pandemic rekindled their focus on the humanitarian dimension of the medical profession. The importance of the DPR, which had seemingly become less significant, regained prominence during the crisis.

At one point in time, and due to the enormous technological developments and the increase in patient load, we had the impression that the value of the doctor-patient relationship was slowly fading away. But the pandemic put more emphasis on the humane element of healthcare. (P2)

#### 2) Gratitude and respect

Second, the Covid-19 pandemic fostered a deeper sense of gratitude among doctors for their profession, reinforcing their respect for it.

I have seen a lot of dedication from my colleagues. Maybe after this pandemic I have more respect for my profession. (P12)

#### 3) Shared vulnerability

Third, several participants expressed how the pandemic heightened their awareness of their own vulnerability, a perspective they seldom shared with their patients. This newfound understanding of shared vulnerability between physicians and their patients appeared to enhance their connection, leading to a more humanistic and patient-centred approach. This was particularly notable in challenging scenarios, such as patient deaths and resource allocation.

I became more aware of my own vulnerability. Generally, doctors do not feel as vulnerable as their patients, but this pandemic shed light on this aspect. (P3)

My patients come to see me two to three times a year, so I really formed a strong bond with them. It is traumatic for us to know that our patients passed away. Medicine is not a sad specialty, but during Covid-19 it became very sad. (P5)

Before the pandemic, I used to keep my patients on machines until they died on their own. However, during the pandemic, due to shortage of resource, I had to choose to take a patient off a machine and give it to someone else who needed it more and that was really difficult for me. (P10)

### Impact of Covid-19 pandemic on physician-patient interaction

The physician-patient interaction underwent significant changes due to the pandemic, which physicians addressed on several levels, including adaptations related to personal protective equipment (PPE), physical distancing measures, and adjustments in physical examinations. These alterations significantly influenced communication between doctors and their patients. For instance, according to the interviewees, the use of PPE significantly limited non-verbal communication as well as the personal interactions between doctor and patient. As expressed by two physicians:

Facial expressions, handshakes, comfort with certain gestures such as tapping the shoulders and the positivity that you install in the patient through these signs of compassion were simply no longer there. (P5)

When your patients see you smiling or see you relaxed, it reflects directly on them, but that has been lost since the start of the pandemic. (P19)

The use of PPE not only affected the interpersonal dynamics between doctors and their patients but also the ease of communication. This situation proved particularly challenging for patients with specific needs, such as the elderly or those with hearing impairments "who generally rely on lip reading" (P4), children, "as it is difficult for them to read facial expressions" (P17), and patients infected with Covid-19 who encountered additional obstacles due to the limited visibility of doctors' faces.

Doctors had to come in dressed like astronauts, so patients could barely recognize us, see our eyes or listen to us. (P18)

Other measures imposed during the pandemic, such as the requirement for better room ventilation (but in the absence of mechanical ventilation), have also been seen as potentially compromising the confidentiality of conversations between physicians and patients. As noted by one physician:

This might have affected confidentiality in medicine, as we would often leave our doors open to allow proper room ventilation. (P20)

Further, our results indicate that, notwithstanding these challenges, the pandemic highlighted the significance of fundamental values that should or already exist in the interaction between physicians and their patients, such as empathy, trust and loyalty.

If the pandemic has helped in any way, it's because it highlighted how important human interaction is in the healthcare system, and made both doctors and patients more empathetic towards each other. (P1)

Moreover, our study demonstrated that patients, already accustomed to their doctors, remained loyal to them during the pandemic. Consequently, patients were increasingly dependent on their physicians, reinforcing trust and loyalty.

Because there was a lot of confusion, people needed to talk to someone they could trust. Physicians became advisors, and patients trusted us because they knew we would provide them with reliable information. (P14)

#### Role of social media throughout the pandemic: the misinformation challenge

The Covid-19 pandemic saw the widespread dissemination of information through social media channels, notably Twitter, Facebook, and Instagram. Our study revealed that social media played a dual role throughout the pandemic. On one hand, these platforms had a significant role as a vehicle for raising public awareness and assisting the society in making informed decisions. For instance, social media platforms facilitated the rapid dissemination of crucial public health information, such as infection control measures, and helped health organizations provide timely and accessible guidance to the public. On the other hand, social media contributed to the spread of misinformation related to the pandemic, such as the effectiveness of treatments, the virus's origins, and vaccine safety; content that lacked scientific rigor made it challenging for the public to discern between reliable information and unfounded claims. This then sowed the seeds of confusion and fear among the society and may have eroded trust in the information provided by physicians.

Social media really helped patients, especially those with comorbidities, to take it [Covid-19 pandemic] more seriously and to take the appropriate measures to stay safe. But there were lot of misconceptions about this virus that were spreading which affected the healthcare system negatively. (P15)

Everything and anything, everything and its opposite, has been posted online creating a lot of confusion and misinformation. (P11)

Social media platforms played a significant role in the dissemination of misinformation, with influential public figures who lacked scientific expertise contributing to its spread, thereby undermining patients' trust in the healthcare system.

Influential personalities, such as singers and artists, began to give their opinion online when they did not have the scientific knowledge to do so. (P4)

Some social media accounts were sharing false assumptions and rumors creating a sort of anticipated fear in the sense that you have nothing, but you start experiencing grief and illness before you even get infected with the virus. They anticipated our fear and triggered sadness which definitely created distrust in the healthcare system. (P10)

In addition to the spread of misinformation, another issue arose from debates among doctors that were occurring on social media platforms. Oftentimes physicians disagreed on certain matters, further compounding confusion among patients. Consequently, physicians acknowledged their responsibility to stay informed, educate their patients, and rectify false information, as these actions became essential in countering the growing challenges related to information accuracy and trust in the healthcare system.

Some responsible media channels have invited doctors to raise awareness about the coronavirus, and even there, misinformation has been frequently provided. (P15)

We [physicians] have a role to play in this because it is our duty to raise awareness and clarify all misinformation through responsible platforms. (P19)

#### Telemedicine as a sustainable post-pandemic technique

The role of telemedicine during the pandemic was frequently discussed by participants, highlighting it is as an alternative to in-person healthcare delivery. While they acknowledged the effectiveness of telemedicine in addressing various challenges through its efficient and convenient medical communication, participants consistently emphasized that telemedicine complements rather than replaces traditional medicine, which involves in-person healthcare consultations.

I think telemedicine is something new, it will definitely have its place in medicine, but doctors and patients tend to prefer face-to-face interactions. (P2)

According to participants, telemedicine offered several advantages, establishing itself as a valuable addition to healthcare services. It excelled in enabling effective communication during lockdowns and surmounted logistical challenges, ensuring healthcare remained accessible despite social distancing measures and travel restrictions. Additionally, patients found convenience in consulting their healthcare provider from the comfort of their homes, thus reducing time-consuming commutes. This convenience was particularly instrumental in facilitating follow-up care, especially for patients with chronic diseases, where regular monitoring is crucial.

Many of our patients infected with the Covid virus were in complete isolation and telemedicine allowed us to stay in contact with them. (P8)

Some patients are more comfortable at home, don't like to wait or be stuck in traffic, are handicapped, etc. So, there is a certain population outside the pandemic that has benefited a lot from telemedicine. (P17)

However, despite the numerous advantages of telemedicine, its use in Lebanon faced constraints attributed to a range of factors, including limited internet access, low patient technology literacy, economic considerations, and privacy concerns. Numerous individuals encountered significant challenges due to a weak internet connection, resulting in telemedicine interactions that more closely resembled phone calls rather than formal video consultations. Additionally, many patients demonstrated a lack of technological proficiency, requiring assistance from family members to effectively navigate telemedicine platforms. This situation can lead to several negative effects, such as jeopardizing patient autonomy. For instance, patients may find themselves dependent on external assistance to access medical care. Additionally, their conversations may not be conducted in private, as a family member might accompany the patient during the conversation to ensure that technical issues do not interfere. Economic constraints presented yet another significant challenge for patients in Lebanon. The economic crisis led to banking restrictions on electronic payments, compelling patients to resort to telephone consultations, which are not reimbursed. This blurred the distinction between traditional and telemedicine practices and raised questions about the fundamental nature of telemedicine. As one participant noted:

A lot of patients couldn't pay at all, and since telephone consultations are not reimbursed, people resorted to them, so it wasn't really telemedicine for us. (P8)

The strenuous demands on healthcare providers also became apparent during the extensive use of telemedicine. Many participants reported feeling overwhelmed as they were balancing work within and outside the hospital.

We got to a stage where we were exhausted because our personal lives were not respected and we were working inside and outside of the hospital. (P4)

I was in the hospital for more than twelve hours a day, then I came home to continue my work answering calls and messages from my patients; in the long term, it really tired us. (P18)

#### Physicians' future recommendations to enhance DPR

Effective communication and physician availability emerged as important factors for enhancing the DPR. For instance, physicians highlighted the significance of clear communication, which entails not only the accurate exchange of medical information but also the ability to do so in an easily comprehensive manner, even when faced with potential barriers introduced by PPE or telemedicine. They also emphasized the importance of incorporating medical curriculum training programs to equip physicians with proficient communication skills, enabling them to navigate various obstacles effectively.

Communication is key, and even when using PPE, you can still find other ways to communicate clearly such as maintaining good eye contact, having regular follow-ups, and using telemedicine. (P15)

The study also shed light on the vulnerabilities of the Lebanese healthcare system, which was ill-equipped to cope with a pandemic, particularly amidst a concurrent financial crisis. According to participants, the pandemic exposed shortcomings of the system in healthcare coverage and the availability of medical supplies. Participants expressed a sense of abandonment, with one physician stating:

If I am properly equipped with the necessary PPE, and I know that if something happens to me, my family would be taken care of, then I wouldn't care. But during the pandemic, no matter what happened to physicians, no one was responsible. (P10)

Thus, participants stressed the need for government interventions to improve the healthcare infrastructure, empower physicians with a more influential role in healthcare decision-making within the healthcare system, and ensure the well-being of healthcare professionals. This strategy entails establishing robust support systems such as financial aid programs, legal mechanisms to protect HCP, mental health and well-being services, as well as investments in healthcare facilities and equipment. These initiatives would be collaborative endeavours between the Lebanese Order of Physicians and the Ministry of Public Health, aimed at relieving potential strains on the healthcare system by enabling physicians to provide effective care for their patients without experiencing feelings of neglect.

### DISCUSSION

Interpersonal relationships have played a pivotal role in human development (28). This fundamental concept extends its influence into the field of medicine and healthcare, particularly within the DPR, which holds paramount importance for both patients and physicians. This relationship possesses unique attributes such as respect, open communication, trust, loyalty and empathy, that create profound connections among individuals who were previously strangers (5). With empirical evidence demonstrating the direct impact of the DPR on the accuracy of medical diagnoses and the improvement of treatment outcomes, the DPR has gained increasing prominence as a topic of considerable significance, especially in bioethics (6).

In December 2019, the emergence of a novel coronavirus in Wuhan triggered a global pandemic. Human-to-human transmission, confirmed by the World Health Organization in January 2020, led to stringent measures such as social distancing,

mask-wearing, and lockdowns. These actions reshaped social dynamics, fostering a perception of others as potential sources of infection and danger (29). The pandemic had a profound impact on healthcare systems worldwide, resulting in significant changes in the way healthcare is delivered and received (17). The findings of our study reveal a multifaceted perspective on the impact of the Covid-19 pandemic on the DPR in Lebanon.

During the Covid-19 pandemic, physicians reported that Lebanese society generally held a favourable view of HCP, particularly physicians, due to the increased reliance on them during this crisis. Physicians assumed a prominent role as both healers and protectors, strengthening their relationships with their patients. This result resonates with findings of a study by Hu et al. (14) that showed an increase in trust toward physicians within society post-pandemic. However, this positive sentiment was tempered by a complex array of emotions, with concerns arising due to medical supply shortages, Covid-19 uncertainties, and the association of physicians with potential virus transmission. Similarly, Nwoga et al. (22) found that nearly 70% of patients intentionally skipped medical appointments out of fear of contracting the Covid-19 virus. This fear of seeking care and reluctance to be in the same room as doctors deprived patients of regular follow-up, a critical aspect in managing chronic diseases. Further, the dual nature of public sentiment during the pandemic highlights the complexity of the DPR. Despite an increased need for medical care and guidance, patients often found themselves grappling with concerns about potential infections. This situation underscores the vital role that HCP play in maintaining trust and rapport, particularly during challenging circumstances like a global health crisis, as these elements are essential for effective medical care.

The struggle between fear and trust has ethical ramifications, making it challenging for HCP to find a balance between preserving public health, reassuring the public, and offering appropriate individual treatment. Therefore, physicians should maintain their patients' trust by addressing their fears and ensuring access to care within the allocated resources during a pandemic. Fahed et al. (30) conducted a recent study on the perspective of cancer patients during the Covid-19 pandemic which added insight to understanding of the challenges faced by patients during the pandemic. It highlights disruptions in healthcare services, changes in treatment protocols, and concerns about virus exposure, emphasizing the importance of empathy, communication, and patient-centred care in supporting patients with chronic diseases.

The Covid-19 pandemic has had profound implications for physicians' perceptions of their own profession. It reignited a focus on the humanitarian dimension of healthcare, reaffirming the significance of the DPR. Physicians reported an increased sense of gratitude and respect for their profession, recognizing the unwavering dedication and personal sacrifices made by their colleagues during the crises. Our finding is of special interest as a study by Bensing et al. (31) highlighted a direct relationship between physician job satisfaction and a more favourable DPR. The pandemic also brought to the forefront the concept of shared vulnerability between physicians and their patients, an aspect of the DPR rarely emphasized previously, as the patient is usually considered the vulnerable party (32). This situation has fostered a more humanistic and patient-centred approach, especially in challenging scenarios, such as coping with patient deaths and making difficult decisions regarding resource allocation.

While ensuring patient care and trust is a crucial element for a healthy DPR, it should be balanced by protecting and assisting HCPs. It is essential to acknowledge their needs and vulnerabilities, so they are well-equipped to provide the best care under challenging circumstances. HCPs are on the frontline of healthcare delivery during a pandemic, facing significant physical and emotional burdens as they often work in high-risk environments, are exposed to diseases, and may experience burnout, anxiety, and depression due to long hours and the emotional toll for caring for patients, including witnessing loss and suffering (33). Recognizing these challenges is vital to ensuring that HCPs have the necessary resources and support to protect their well-being, including adequate PPE, mental health services, vaccination, coverage, and policies that promote a healthy work-life balance (34). By addressing the needs and vulnerabilities of HCP, we not only safeguard their physical and mental health but also ensure that they can continue to deliver quality care and maintain the trust of their patients.

The pandemic significantly altered the DPR, affecting communication in various ways. The use of PPE restricted non-verbal communication and personal interactions, which are crucial components of effective healthcare communication. Our results align with those from other studies that found that the use of PPE by HCP can be traumatic for patients and lead to profound emotional disturbances (35,36). Patients, especially those with specific needs, encountered challenges due to these limitations, primarily related to the impact of face masks on speech production and listening skills for both doctors and patients (15). Prioritizing patient-centred approaches thus become vital, as it acknowledges the distinct challenges pandemics present to diverse patient groups. In contrast to our results, another study revealed that patient perceptions of physician empathy during the Covid-19 pandemic was negatively influenced by the use of PPE (22). These discrepancies highlight the complexity of patient experiences, emphasizing the necessity for ongoing research to comprehend the multifaceted nature of the DPR. This also further underscores the crucial role of communication strategies in delivering effective and empathetic care despite the obstacles introduced by health crises.

Social media platforms assumed a dual role during the pandemic, serving as a tool for raising awareness, while concurrently acting as a conduit for the dissemination of misinformation. Initially, healthcare institutions and public health organizations leveraged these platforms to propagate essential guidance, including directives on social distancing and vaccination protocols, aimed at augmenting public comprehensive of the severity of the viral outbreak (37). Nonetheless, the expeditious transmission of information does not necessarily guarantee its reliability. In fact, these channels facilitated the propagation of misconceptions and rumours, potentially endangering public health and undermining confidence in healthcare information provided by physicians. These misconceptions ranged from unverified remedies such as drinking bleach or consuming essential oils and

specific foods, to conspiracy theories about vaccines and the origin of the virus, among other misleading claims (38). In a recent systematic review examining the impact of fake news on social media during the Covid-19 pandemic, researchers found that misinformation can induce panic, fear and depression, among other negative effects (39). These results resonate with our findings, which highlighted the role of social media platforms in exacerbating fear and increasing anxiety in society. In that perspective, physicians have a responsibility to educate their patients and correct misinformation in order to build patients' trust in HCPs and healthcare systems (11).

Telemedicine emerged as a valuable complement to traditional in-person healthcare delivery during the Covid-19 pandemic. It ensured continued healthcare access by facilitating communication during lockdowns and logistical challenges, offering convenience and accessibility for patients, particularly those with chronic diseases. However, it is important to acknowledge that the implementation of telemedicine comes with its set of challenges, particularly in underdeveloped countries due to different factors, including limited internet access, low technology literacy, and economic considerations (20). Additionally, it raises significant ethical concerns regarding the violation of privacy and the maintenance of patient confidentiality. As telemedicine extensively employs an electronic format, it introduces potential risks to patient data privacy, making it vulnerable to hacking and unauthorized access, among other threats (40). These risks might affect the DPR by undermining patients' trust in both telemedicine and their HCP; and these challenges are more pronounced in regions with inadequate data protection protocols (41). Moreover, the incorporation of telemedicine into medical practice has prompted concerns related to professional conduct and the respect of physicians' private lives (17,42). These include the blurring of boundaries between professional and personal life and the potential for physician burnout, particularly when consultations extend beyond regular working hours, a concern raised by several of our participants. There is thus a need to establish clear guidelines to protect physicians' privacy and promote a healthy work-life balance in the digital realm of healthcare.

Finally, this study underscores the importance of clear and effective communication in medical consultations, despite obstacles introduced by PPE or telemedicine. In that perspective, medical curriculum training programs are needed to equip physicians with proficient communication skills. These programs have the potential not only to enhance patient satisfaction but also to improve the quality of the DPR (43). Additionally, it is imperative to consider new co-management reforms that promote collaborative decision-making among governments, hospitals, and physicians to further enhance the DPR. As highlighted by Pritchard et al. (44), granting physicians a more active role in shaping decisions within the healthcare system helps better address the multifaced challenges posed by health crises and to provide high-quality care.

### STRENGTHS, LIMITATIONS AND FUTURE DIRECTIONS

To our knowledge, this study represents the first qualitative exploration of the impact of the Covid-19 pandemic on the DPR from the unique perspective of physicians in the Middle East. It offers valuable insights from medical practitioners, thus enriching our understanding of the status of DPR during the pandemic. Nonetheless, our study has some limitations. The research was conducted during a period of economic and political turmoil in Lebanon, so our results may have been influenced by the broader socioeconomic and political contexts than by the pandemic alone. Additionally, a more comprehensive perspective could have been achieved by incorporating the viewpoints of patients. In future research, a multi-centre and multi-participant approach involving both physicians and patients at different institutions could provide a more thorough understanding of the DPR during health crisis.

### CONCLUSION

The Covid-19 pandemic has highlighted the complexity of the DPR, revealing the interconnectedness of public perception, physician perspectives, communication dynamics, social media, and telemedicine. These insights can guide future efforts to strengthen this relationship and improve healthcare delivery, particularly in the context of advancing healthcare challenges. In Lebanon, there remains a need for government interventions to improve healthcare infrastructure, empower physicians in healthcare decision-making, and safeguard physician well-being. It is essential for healthcare systems to learn, adapt, and evolve, considering the lessons learned during the pandemic to improve the overall patient experience and the well-being of HCP. Further studies including patients and a more diverse sample of Lebanese physicians and other HCP practicing in both the private and public sectors across different regions, can provide a more nuanced and comprehensive understanding of the DPR. Such studies could then inform the development of evidence-based interventions aimed at enhancing patient care and the Lebanese healthcare system's resilience to future crises.

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## APPENDIX

Questionnaire

- 1. How do you think that the Covid-19 pandemic has affected the way people perceive the healthcare system?
- 2. Has it affected your personal perception of your profession? If yes, how?
- 3. In the era of Covid-19, was it harder for you to make time to listen and talk to your patients? Why?
- 4. Knowing that non-verbal communication is essential in a doctor-patient relationship, in what ways do you think it was affected by the use of PPEs (in terms of voice tonality, loss of facial expressions due to face masks, no handshaking, etc.)
- 5. There are numerous ambiguities regarding the Covid-19 virus, treatments, vaccines, etc. Do you think that the way this was portrayed by the media has led patients to mistrust the healthcare system?
- 6. Several studies have shown that the emergence of Telemedicine has helped a lot during this pandemic. What are your thoughts on that new technique and are you using it?
- 7. What are the principal effects of the Covid-19 pandemic on the Doctor-Patient Relationship? Both positive and negative.
- 8. Can you list a couple of measures that you think would help promote a healthy Doctor-Patient Relationship in those difficult times?