

## How the Practice of Online Medical Consultation Platforms in China Influences Physician Role Transformation?

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### ABSTRACT

With the digital transformation of healthcare and the rapid development of commercial internet-based hospitals, both physicians and patients have been significantly impacted. From the perspective of role theory and agency theory, this paper employs qualitative research methods, conducting semi-structured interviews with 10 physicians and performing coding analysis. The results indicate that in the context of telemedicine, the role of physicians has shifted from that of an “Authoritative instructor” to a “Service-oriented executor.” Moreover, the online medical consultation scenario makes the principal-agent relationship between patients and physicians much more significant. It highlights physicians' motivation trade-off and behaviors as agents.

*Keywords:* Role transformation, role theory, agency theory, online medical consultation.

### INTRODUCTION

*“On online medical consultation platforms, there are indeed many patients who are just looking for an outlet to vent their emotions. The status of physicians has been devalued, and at the same time, the reward we received is just too low!”*

—An interviewed physician

With the rapid development of digital technology, the emergence of telemedicine is increasingly reshaping the traditional healthcare service delivery model. This is because in many countries, especially developing ones, the distribution of healthcare infrastructure is uneven (Yu *et al.*, 2019), and society is facing a shortage of medical professionals (Liu *et al.*, 2017). In China, in particular, the intensifying population aging has led to a continuous increase in healthcare demand, with a significant rise in the demand for telemedicine among the home-based elderly population (Chen & Liu, 2021). In summary, telemedicine is used to address the scarcity and uneven distribution of healthcare resources. Against this backdrop, catalyzed by the pandemic, medical resources have been rapidly shifting from offline to online. Services such as phone consultations and online follow-ups, which break spatial and geographical limitations and enhance the accessibility of healthcare services, have been widely adopted (Ramdas & Swaminathan, 2021). Various commercial internet-based hospitals (which are actually online medical consultation platforms, such as Haodf and Baidu Health, etc.) are also booming. According to "The 55th Statistical Report on China's Internet Development", as of December 2024, China had 418 million users of Internet healthcare, an increment of 3.72 million from December 2023, taking up 37.7% of all netizens (China Internet Network Information Center, 2025). Under this trend, in order to improve their market share in the digital healthcare consumer market, commercial internet-based hospitals are constantly enhancing the personalization and diversity of consumer services, as well as the priority of consumer rights. By adopting a patient (consumer)-centered service model, they have broken the traditional physician-dominated healthcare model and formed a new type of service model that involves patient participation and even shifts towards patient dominance. Therefore, the trend of promoting telemedicine not only changes the allocation of medical resources but also profoundly affects the professional practice and roles of physicians.

In traditional medical scenarios, physicians, as possessors of professional knowledge, are regarded as representatives of authoritative behavior (Heizmann, 2011). Under the context of telemedicine, the working environment, job content, and relationship with patients of physicians have all undergone significant changes (Monaghesh & Hajizadeh, 2020). Firstly, patients' acquisition of knowledge through the internet has to some extent broken the information asymmetry between physicians and patients (Iakovleva *et al.*, 2021). Combined with patients' consumption behavior in commercial internet-based hospitals, this has led to patients self-identifying as consumers who take the initiative in placing consultation orders. Secondly, physicians' work has become more reliant on online platforms, which has imposed higher demands on them, such as the need to quickly familiarize themselves with telemedicine platforms, guide individuals with low digital literacy in using these platforms, and promptly respond to patients (Scott Kruse *et al.*, 2018). However, in previous studies, there has been a lack of understanding of whether

changes in patients' role positioning and physicians' job content, under the framework of role theory, have led to shifts in physicians' role positioning, and the subsequent impacts on both physicians and patients. Against this backdrop, this paper combines role theory and agency theory, and through semi-structured interviews with 10 physicians from different working backgrounds, identifies the key factors of physicians' role change in the context of telemedicine, and explains the strengthening of the principal-agent relationship between physicians and patients and the physicians' behaviors as agents caused thereby. Ultimately, this paper innovatively applies role theory to the study of physician-patient relationships, extends the application of agency theory in the medical context to the telemedicine scenario, and provides theoretical references and practical insights for the design and management of online medical consultation platforms.

## LITERATURE REVIEW

### Role Theory

In the medical field, existing research has primarily focused on the impact of digital transformation and the development of artificial intelligence technologies on physicians. These impacts include changes in workflows (such as using AI to handle repetitive tasks like medication management) (Al Khatib & Ndiaye, 2025), restructuring of work models (AI-assisted diagnosis and treatment) (Meier *et al.*, 2025) and the additional responsibility for digitally literate physicians to guide colleagues and patients in using digital technologies (Kaihlanen *et al.*, 2023). However, these aspects have not yet been integrated into a comprehensive theoretical framework. This study proposes that these impacts can all be conceptualized as role change. Othman(2021) used role theory to explain how university teachers' roles shifted in online teaching, from merely transmitting knowledge to also helping students with technical issues and alleviating the psychological stress caused by remote learning. Similarly, Mirbabaie & Marx(2024) employed role theory to interpret how digital transformation influences the workflows and work models of knowledge workers, leading to role change, and emphasized the important role of social expectations in this process.

Role theory emphasizes that in social interactions, people define their roles based on the context and others' expectations, and adjust their behavior and manner of expression accordingly(Taylor *et al.*, 2020). The individual may face different types of role expectations and conflicts, which he feels as role strain when he wishes to carry out specific role obligations(Carte & Williams, 2017).

During the pandemic, over 75% of primary care visits shifted to online formats. In this virtual environment, physicians were not only required to provide services such as video consultations, but medical assistants were also expected to take on additional responsibilities, including technical support (e.g., guiding patients in using electronic health records and video tools), quality improvement (e.g., developing virtual workflow optimization strategies), and patient flow coordination (e.g., adjusting physicians' schedules in real-time to accommodate technical delays) (Rokicki-Parashar *et al.*, 2021). As a result, the continuous innovation of digital healthcare technologies has led to an ongoing restructuring of physicians' work, further altering expectations placed upon them. For example, the widespread adoption of digital health services (such as teleconsultations and online appointment systems) has increased the expectations of physicians. In addition to traditional clinical and medical skills, they are now expected to master digital tools (e.g., electronic health record systems), develop remote communication skills (e.g., using body language effectively during video consultations, building virtual physician-patient connections), and enhance their ability to assess patients' suitability for digital services (e.g., evaluating older adults' digital literacy) (Kaihlanen *et al.*, 2023).

Moreover, the widespread adoption of digital technologies helps to break down the traditional information asymmetry between physicians and patients. Patients can now access information about medical conditions through search engines, professional databases, and other resources, becoming "informed patients" and fostering the awakening of user awareness. This shift encourages a transformation in the role of users—particularly patients—in the healthcare field (Iakovleva *et al.*, 2021). As a result, patients are no longer "passive recipients" of physicians' instructions; instead, they expect physicians to address their concerns and explain medical decisions in plain, understandable language (Iakovleva *et al.*, 2021).

### Agency Theory

Agency theory analyzes the relationship between a principal and an agent. The principal expects the agent to perform specific tasks, while the agent pursues certain personal interests. This leads to inconsistencies in interests and information asymmetry between the principal and the agent (Bosse & Phillips, 2014; Jensen & Meckling, 1976; Linder & Foss, 2013). Agency theory is one of the most prominent theoretical perspectives in business and management research, focusing on how to design effective mechanisms in agency relationships to coordinate the goals of both parties and maximize utility (Linder & Foss, 2013). In the medical field, health economists also frequently use agency theory to predict physicians' reactions to various policy proposals (Oxholm *et al.*, 2022). This is because in the physician-patient relationship, patients (principals) expect physicians (agents) to provide high-quality medical services. However, in addition to meeting patient interests, physicians also pursue their own interests, such as income and job satisfaction. Moreover, compared with physicians, patients usually lack medical knowledge and cannot fully understand their own conditions and treatment plans, resulting in information asymmetry. Therefore, the characteristics of the physician-patient relationship make agency theory very suitable for explaining physicians' behaviors.

A core component of agency theory is the physician's utility function, which describes the different motivations of physicians as agents in providing healthcare services to patients, including pecuniary motivation (i.e., net income) and non-pecuniary

motivations (including patient benefits, intrinsic motivation, and social benefits)(Oxholm *et al.*, 2022). These motivations have been found to explain physicians' behaviors. The specific interpretations of the motivations are as follows:

① Patient Benefits: The non-pecuniary utility that physicians derive from meeting patients' needs, reflecting physicians' altruism (Arrow, 2001; Douven *et al.*, 2019). This motivation focuses on the well-being of individual patients.

② Intrinsic Motivation: The utility that physicians obtain from the medical activities themselves, independent of the returns and benefits to themselves, patients, and society (Ryan & Deci, 2000a). This motivation stems from physicians' intrinsic interest in and satisfaction from medical work.

③ Societal Benefits: The utility that physicians derive from improving public welfare, reducing the negative externalities of care, or increasing the positive externalities of care. This motivation focuses on the overall social benefits and the well-being of the general population, rather than the interests of individual patients.

④ Net Income: The economic income that physicians receive from providing medical services. In agency theory, this is a bounded self-interest motivation, rather than the assumption of "pure self-interest" (Bosse & Phillips, 2014). This is because in the pursuit of self-interest, individuals are influenced by norms of fairness and reciprocity. People assess distribution outcomes and decision-making processes based on fairness norms, rather than unilaterally pursuing the maximization of self-interest.

When a physician provides online consultation services to a patient, as an agent, he has both the motivation to meet the principal's needs and interests and the motivation to pursue his own interests (including intrinsic utility and economic income). These motivations may be consistent, but they are also likely to be inconsistent. Therefore, physicians are forced to weigh conflicting motivations and make the final decision. This is why agency theory is very suitable for explaining physicians' behaviors. At the same time, different motivations may have different levels of influence on physicians' behaviors. For example, a physician with high intrinsic motivation may be more motivated by job interest and skill improvement (Ryan & Deci, 2000b), while a physician who focuses more on economic income may be more motivated by income. It is worth noting that the degree of motivation of different motives can be affected by the external environment and interventions (L. B. Pedersen *et al.*, 2018). For example, when external interventions (such as commands or mandatory regulations) are perceived as controlling by individuals, they often undermine intrinsic motivation, leading to a decrease in individuals' enthusiasm. This phenomenon is known as the "crowding-out effect" of intrinsic motivation (Jacobsen *et al.*, 2014). However, in certain circumstances, if external interventions are perceived as tools that support personal growth or enhance quality, they may give rise to a "crowding-in effect," thereby strengthening individuals' intrinsic motivation and proactivity (L. Pedersen *et al.*, 2018). Therefore, the new scenario of online medical consultation platforms, where platforms exert external interventions on physicians, is highly likely to influence physicians' motivations. It should be noted that among the four motivations of physicians mentioned above, patient benefits, intrinsic motivation, and social benefits are the motivation dimensions that Oxholm *et al.* further subdivided when focusing on the behaviors of physicians. In fact, these three motivations all fall under intrinsic motivation, as they emphasize the psychological satisfaction and self-actualization derived from the behavior itself. In contrast, net income belongs to extrinsic motivation, as they are driven by external rewards rather than personal interests, satisfaction, or self-actualization.

To sum up, the role change of physicians in the telemedicine scenario is the result of the complex interaction of various factors. Role theory helps explain the influence of factors such as patient expectations and platform expectations on physicians' self-role positioning, and reveals the mechanism of physicians' role change. Agency theory, on the other hand, provides a perspective for understanding how physicians' behaviors change after their roles have changed. By integrating the two theories organically, a more comprehensive theoretical framework for the role change of physicians on online medical consultation platforms can be constructed.

## METHODOLOGY

### Research Methods and Subjects

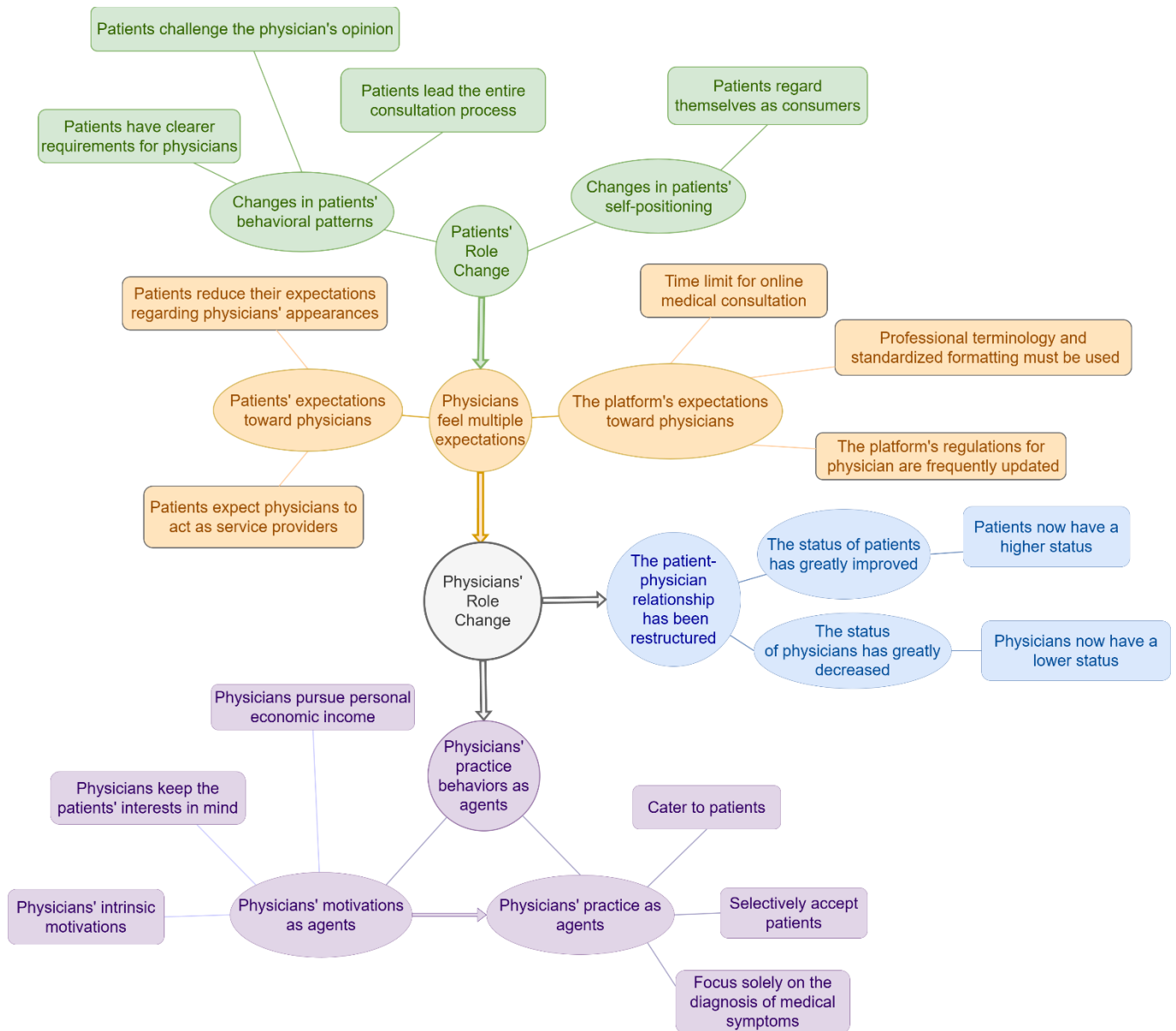
To conduct an in-depth analysis of the mechanisms underlying physicians' role change in the telemedicine context, this study employed qualitative research methods to collect primary data through semi-structured interviews. A total of 10 physicians were interviewed, with a balanced gender ratio, varying years of professional experience ranging from 4 to 16 years, and diverse specialties including cardiology, pediatrics, and traditional Chinese medicine. The telemedicine platforms they used also covered the vast majority of mainstream platforms. Therefore, this study ensured the heterogeneity and richness of the sample data. Specific information about the interviewees is presented in Table 1. The interviews were conducted by the interviewer based on an interview outline, focusing on core aspects such as physicians' interaction experiences with patients during online consultations, occupational stress, and changes in identity recognition. The interviewer adjusted questions in real-time according to the interviewees' responses to thoroughly explore the underlying mechanisms of "how physicians' role changes" and "their behaviors after the role change." The interviews were conducted via telephone and Tencent Meeting, with each session lasting approximately 40 minutes. All interviews were conducted with the informed consent of the participants and were recorded in full. Subsequently, all recordings were transcribed and reviewed by the researchers to form the textual materials for analysis.

Table 1: The basic information of the interviewees.

Interviewee	Gender	Age	Education	Years of Working	Hospital Departments	Commonly Used Telemedicine Platforms
Physician 1	male	35	Undergraduate	10	Pneumology Department	haodf
Physician 2	male	26	associate degree	4	Internal Medicine Department	Baidu Health



consequences of “Physicians' role change”. Therefore, in the final selective coding, this study regarded “Physicians' role change” as the core category, considering the intrinsic connections of the five categories as a whole. The final code hierarchy and intrinsic connections are shown in Figure 2.



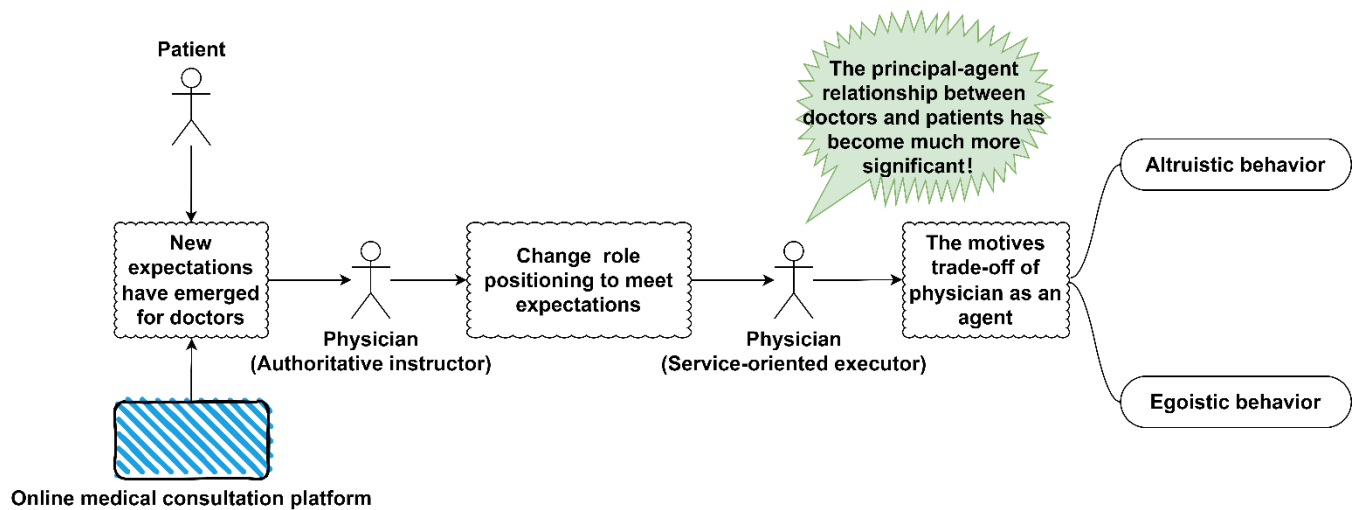
*Notes:* Codes of same colors indicate that they belong to the same category. Rounded rectangles represent initial concepts, ellipses represent subcategories, and circles represent the main categories.

*Source:* This study.

Figure 2: Codes' hierarchy and intrinsic connections.

## RESULTS

Through the coding analysis of the interview texts, combined with the role theory and the agent theory, this study provides a perspective that can understand the mechanism of physicians' role transformation in the telemedicine scenario and the subsequent changes in physicians' behaviors (Figure 3). This study leads to the following three conclusions.



Source: This study.

Figure 3: Physicians' role change and behaviors as agents.

### Physicians' Role Change

Individual role positioning is influenced by role expectations. On online medical consultation platforms, physicians face different role expectations from both the platforms and patients, driving role change. Patients' expectations of physicians have changed significantly in the context of telemedicine. Most respondents noted that, due to consumer behavior on telemedicine platforms, patients tend to view themselves as consumers and expect physicians to serve them as service providers. The higher fees and time constraints of online medical consultations lead to increased patient expectations for timely and accurate responses, as well as good service attitudes from physicians. Several physicians mentioned in the interviews:

*"Overall, online patients tend to see themselves as dominant consumers."* (Physician 7)

*"Online patients feel that since they have paid, they are the "God" and physicians must serve them. If the reply is not timely or if a single exclamation mark is used, they feel disrespected and will give me a bad review (which affects my remuneration)."* (Physician 10)

In summary, patients' role has shifted from being "passive recipient" who follows the authoritative guidance of physicians in offline consultations to "process controller" who can dominate the entire process from the initiation to the completion of the order and even whether physicians can smoothly receive remuneration.

In addition, physicians' behaviors are often proceduralized by platform regulations. Telemedicine platforms, through time-limited consultations and standardized diagnostic processes, expect physicians' logic of behavior and modes of expression to meet the requirements of service providers. For example:

*"The platform updates frequently and often introduces new rules and regulations. When communicating with patients, physicians are required to use medical terminology."* (Physician 7)

*"Online consultations have time limits. If a patient still has questions after the consultation has ended, they may place another order for you. If you accept the patient, your first sentence must follow the platform's prescribed format, such as 'Hello, I am...', even if you already know some information about the patient, such as their allergy history. You still have to send the information following the platform's prescribed format again to ask."* (Physician 6)

In terms of consultation outcomes, patients and online medical consultation platforms have multiple expectations for physicians. On the one hand, patients expect physicians to gain a comprehensive understanding of them to enhance diagnostic accuracy. On the other hand, due to the platform's restrictions on order time and the number of conversations, the platform expects physicians to make a diagnosis in a shorter time. For instance:

*"For Baidu Health, sometimes it only allows 20 rounds of conversation. If you want to obtain everything you need, there is often insufficient time."* (Physician 10)

*"In online medical consultations, the fees are higher, and time is tighter. There may not be enough time for us to establish our identity."* (Physician 2)

*"The online consultations I have encountered are time-limited. Therefore, I basically deal with common cases and are primarily focused on the symptoms."* (Physician 6)

In offline medical consultations, patients tend to trust older physicians more. However, on online medical consultation platforms, patients care less about physicians' age and appearance. They focus more on physicians' professional knowledge. This improves the communication experience between young physicians and patients. It also helps physicians concentrate on patients' symptoms for diagnosis, reducing the energy spent on managing their appearance. In fact, physicians usually have clear dress codes in offline consultations to maintain the image of a "professional authority." But on online medical consultation platforms,

physicians often provide services during their off-work hours. At such times, their management of appearance is more casual. Just as was mentioned in the interview:

*“In offline settings, patients tend to trust older physicians more, whereas trust in younger physicians like us is relatively lower. Online communication tends to be more effective.”* (Physician 6)

*“I believe that communication in online consultations is better. Communication can be carried out through typing, without the need for extensive preparation regarding attire, expressions, and mental state. The focus is solely on providing medical care. I think this approach is better and more convenient.”* (Physician 9)

In traditional consultations, patients expect physicians to be medical experts and guides. On online medical consultation platforms, patients and platforms have new expectations for physicians. They expect physicians to be performers who can operate digital medical systems, comply with platform rules, guide and serve patients, and ensure diagnostic accuracy and speed. Moreover, patients and platforms have reduced expectations regarding physicians' professional appearance, leading physicians to pay less attention to it. Role theory posits that attire, as a significant marker of social roles, can influence people's self-perception and positioning (Hester & Hehman, 2023). For instance, individuals may find it easier to enter a work mode and display behaviors consistent with their work role when they put on work uniforms. Thus, during the use of online medical consultation platforms, physicians' neglect of their professional appearance may further weaken their self-identification as professional authorities. These expectations are driving physicians to gradually shift their self-role positioning from the traditional "Authoritative instructor" to the "Service-oriented executor". In addition, some of these expectations for physicians are consistent, while others are not, ultimately creating role strain. For example, the patient's expectation of being respected by the physician and the platform's expectation of the physician's expression aligning with platform requirements are relatively consistent. In contrast, the expectations for physicians to ensure diagnostic accuracy and speed are somewhat conflicting and difficult to balance.

### **The Patient-physician Relationship Has Been Restructured**

In traditional offline medical consultation settings, physicians typically take the lead in asking questions, with patients responding accordingly. In contrast, in online environments, patients can utilize search engines to conduct information-seeking behaviors, which partially breaks down the information asymmetry between patients and physicians. This phenomenon is quite common on telemedicine platforms. Patients often proactively input a large amount of information during conversations and control the pace of interaction. For instance:

*“In online consultations, I need to extract useful information from the large amount of data sent by patients. It's like doing reading comprehension, which invisibly increases the workload.”* (Physician 2)

*“Online patients tend to provide a great deal of information voluntarily. However, some of it is redundant and requires time to identify the useful parts.”* (Physician 5)

Online medical consultation platforms tend to favor patients in medical disputes, even when physicians have valid reasons. Moreover, patient evaluations of physicians can impact the physicians' pay.

*“Especially in dealing with negative reviews, unless the patient insults you, you can't successfully appeal. The reasons given by the physician for why they shouldn't get a negative review are ignored by the platforms. Patients now have a much higher status compared to offline settings.”* (Physician 10)

The above factors enable patients to have more control over the entire consultation process. For example:

*“I need time to type my responses. However, some patients end the conversation immediately after I send the first message and give me a negative review. This shows that their status in online consultations is different from that in offline settings, and our status in online consultations is also distinct from that in offline scenarios.”* (Physician 7)

In summary, on online medical consultation platforms, patients' role changes from “passive recipients” to “process controllers” who can dominate the entire process of an order, from its initiation to completion, and even to whether physicians can smoothly receive payment. Compared with traditional offline medical consultations, physicians' dominant position has significantly declined. Physicians feel that their position on online medical consultation platforms is now lower than that of patients, which has led to a restructuring of the power dynamics in the patient-physician relationship.

### **Physicians' Practice Behaviors as Agents**

In offline medical consultations, physicians act as "Authoritative instructors". During this process, physicians and patients have relatively aligned interests for several reasons. Firstly, physicians can satisfy their intrinsic motivation, such as enhancing job skills and improving job satisfaction, when providing high-quality services to patients. Secondly, extrinsic motivation plays an insignificant role here. In China, medical reforms prevent physicians from gaining additional income from treating patients. Physicians' income cannot be linked to the income from medications, health materials, examinations, or tests. Moreover, the number of patients a physician can see daily in a hospital is relatively fixed and cannot be increased to raise their income. However, on online medical consultation platforms, physicians face a large number of patients nationwide. They are not restricted by work location or time and can increase their salary and performance by seeing more patients. Thus, physicians can benefit themselves while benefiting patients. Given this, even though some literature suggests a principal-agent relationship between physicians and patients in offline consultations, when physicians' extrinsic motivation is significantly weakened, the interests of physicians and patients are relatively aligned. For the above reasons, even though the principal-agent relationship

between physicians and patients in offline consultations is pointed out by some literature, in China's offline medical consultation setting, physicians' and patients' interests are relatively consistent when physicians' extrinsic motivation is significantly weakened. Then, the trade-off between egoism and altruism becomes less obvious, so the principal-agent relationship between them is not so significant. In contrast, the principal-agent relationship is very evident in online medical consultations. Physicians become agents who can seek benefits for both the principal and themselves, which may bring potential risks, such as over-focusing on economic benefits while neglecting patients' benefits. Therefore, this study posits that in China, when moving from offline to online consultations, not only do the roles of physicians and patients change, but the principal-agent relationship between them is also significantly intensified, which, in turn, motivates physicians' practice behaviors as agents.

On online medical consultation platforms, physicians encounter role strain due to multiple expectations. They need to allocate limited resources among these expectations. Fulfilling one may affect another, so physicians have to weigh different expectations when taking actions. At the same time, physicians, as agents, have dual motives of seeking both patients' and their own interests, which are not entirely consistent. This leads physicians to balance these two interests when taking actions. By comprehensively weighing expectations and interests, physicians gradually develop a set of coping strategies as agents.

Firstly, physicians, as agents, may emphasize economic motives due to unfair treatment, leading to shorter consultation time. Some physicians, for instance, note that platform commissions are too high and their efforts are not fairly rewarded. For example: *"Currently, consultation fees are too low. The effort-reward ratio is unbalanced, which generates negative emotions."* (Physician 8)

Under these circumstances, physicians' economic income motivation intensifies its influence on their behavior. As agents, physicians are more inclined to pursue personal interests at the expense of patient interests to some extent. One physician admitted:

*"I came here for a utilitarian purpose (to provide online consultation services)."* (Physician 1)

In this situation, physicians may increase consultation speed and reduce order duration to gain more income. They then focus on patients' symptoms, treating patients as impersonal virtual entities—simple sets of symptoms. For instance:

*"I usually only focus on the symptoms and do not take into account information such as the patient's family background and psychological state. Because when I have an online consultation, I'm just facing a virtual person, that is to say, I treat the patient as a virtual state and then have simple and straightforward Q&A (questions and answers) sessions."* (Physician 6)

Secondly, physicians may selectively accept "easy-to-communicate" patients as agents to reduce the risk of personal interest loss, rather than considering the principal's interests. This can harm the interests of rejected patients. In offline settings, physicians usually treat and guide all patients. For example:

*"For some patients, they will send you a thousand-word article... There are many problems... It's very easy to be complained about. (When encountering such situations), I usually reject the consultation or refund."* (Physician 9)

Finally, to ensure patients' satisfaction with their service, physicians, as agents, may deliberately cater to patients' expectations rather than prioritizing professionalism as they would in offline consultations. When there is a conflict between patient satisfaction and professionalism, physicians may continue asking questions after diagnosing the condition to consider patients' feelings. In contrast, in offline settings, physicians typically inform patients directly once a diagnosis is made, without worrying about patients perceiving insufficient guidance or value for their consultation fees.

*"Sometimes, when a patient begins to describe their symptoms, I have a rough idea of the condition. However, immediately providing a diagnosis might make patients feel their money is not well-spent, and I might even receive negative review. To enhance patient satisfaction, I sometimes continue asking questions."* (Physician 9)

## CONCLUSION

To address the scarcity and uneven distribution of healthcare resources, digital medicine is undergoing accelerated transformation. The rise of telemedicine is gradually restructuring the traditional patient-physician relationship. In online settings, consuming and information-seeking behaviors have turned patients from "passive recipients" into "process controllers". Due to patients' new expectations and platform requirements, physicians alter their self-role positioning to meet these expectations, shifting from "Authoritative instructors" to "Service-oriented executors". Some rules and functions of online medical consultation platforms reflect the patient-centered principle but also reveal issues like physicians' lower status, restricted autonomy, a more significant principal-agent relationship between patients and physicians, and a stronger economic income incentive for physicians, it further stimulates physicians' practical behavior as agents, who, when facing misaligned interests between patients and themselves, may tend to prioritize their own interests at the expense of patients' interest. These issues may affect physicians' job satisfaction and experience and the quality of service patients receive, thus potentially undermining patient-centered care practice and contradicting patients' and platforms' expectations. Consequently, future research should explore whether online medical consultation platform design and operation can effectively promote patient-centered care practice and their specific impact on physicians' job satisfaction and experience.

### Theoretical Implications

This study innovatively applies role theory to the patient-physician relationship research. It abstracts the changes in physicians' behaviors and work contents in online medical consultation platforms into a higher-order construct of role changes. into the higher-order concept of role change. This perspective is conducive to an in-depth understanding of the changes in expectations faced by physicians and their self-role positioning that changes to adapt to these expectations within the framework of role theory. Building on this, the study integrates agency theory to clarify physicians' behaviors and coping strategies after their role shift to "Service-oriented executors". This enriches the literature on physician behavior studied through agency theory and extends the research context to the new telemedicine scene. By merging role and agency theories, the study can clearly explain the mechanism of patient-physician relationship restructuring in online consultations and its subsequent impacts within a comprehensive theoretical framework.

### Practical Implications

In online medical consultation platforms, physicians' roles have changed from "Authoritative instructors" to "Service-oriented executors," making them agents who can seek both clients' and their own interests. Some physicians compress consultation time to boost economic income, potentially neglecting patients' psychological and background factors. Agency theory suggests that proper incentive mechanisms are needed to align agents' actions with principals' interests. This study proposes that online medical consultation platforms should first raise physicians' remuneration to match their contributions, reducing the economic income motivation driving their behavior. Moreover, given that at present most online consultation platforms charge a fee per consultation, which means that the economic income physicians get from a single online consultation order is relatively fixed, the study suggests that both the duration and number of physicians' online consultation orders should serve as the basis for paying physicians. This is to prevent physicians from excessively pursuing the economic benefits brought by a large number of orders. Brosig-Koch *et al.* (2015) indicate that believe that when physicians are compensated based on the services they provide (fee-for-service), which equates to the duration of each online medical consultation order, it can lead to overtreatment. Conversely, when physicians are paid according to the number of patients they manage (capitation), which is akin to being paid by the number of online medical consultation orders, it can result in undertreatment. Combining both models encourages physicians to improve service quality per consultation, aligning their interests with patients' and balancing egoism with altruism, motivating physicians to provide more patient-centered care. Thus, combining these two payment methods can encourage physicians to enhance the service time per order. This brings them economic income and improves patient care quality. Consequently, physicians' and patients' interests become more aligned. This approach better balances physicians' altruistic and egoistic motives as agents. Through these two measures, it can not only reduce the incentive degree of economic income motivation to physicians' behavior, but also make physicians' motivation to meet patients' interests and pursue their own interests more consistent, so as to encourage physicians to provide medical services that are more in line with patients' interests.

In addition, online medical consultation platforms need to balance the status gap between patients and physicians. They should not center solely on patients and should not place patients' rights far above those of physicians. By constantly increasing the behavioral norms for physicians and overly favoring patients in the event of physician-patient disputes, these interventions that forcibly weakens the status and rights of physicians may produce a "motivational crowding-out effect", leading physicians, as agents, to weaken their pursuit of intrinsic motivation, including the patient benefits, intrinsic motivation and social benefits mentioned by Oxholm *et al.* Then it will reduce the incentive degree of these three motivations for physicians' behaviors and relatively increasing the incentive degree of economic income motivation for physicians' behaviors. This result runs counter to the original intention of "patient-centered care practice". Therefore, this study proposes that online medical consultation platforms can grant physicians more autonomy while ensuring their behavioral norms. For instance, online medical consultation platforms no longer limit the number of Q&A rounds and no longer force physicians to communicate with patients according to templates.

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