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When patients connect with physicians on facebook: physician perspectives on benefits, challenges, and strategies for managing interaction

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Abstract

Since medicine and social media have disparate cultures, Facebook is not usually associated with doctor-patient communication. However, with patients increasingly reaching out to physicians on Facebook and other social media sites, physicians seem to be exploring ways to use these platforms effectively. Based on in depth interviews with 31 physicians in India who are connected with their patients on Facebook and six other healthcare professionals in administrative positions, this study explores the benefits and challenges associated with such usage and the strategies used by physicians to manage such interaction. The findings show that physicians use the platform for communicating their personal brand and to spread health awareness, especially after adapting it to the socio-cultural context of their audience. While physicians remained wary of online trolling, unreasonable patient expectations and medico-legal issues, they attempted to cope with the challenges by following strategies such as never giving specific medical advice on Facebook, never initiating online contact with a patient and avoiding political and controversial posts on the platform. While physicians believed that the patients felt empowered being connected to them on Facebook, those with Facebook Profiles also ensured that they accepted "friend" requests only from patients they considered "intellectually mature" and "safe" to communicate with. Overall, the study indicated that physicians are grappling with tremendous change and clarity is yet to emerge in terms of new meanings and practices, especially in areas such as marketing of physicians' expertise online, protecting their privacy in an age of constant connectivity, determining the nature of communication with patients on social media platforms and acquiring social media know-how in the midst of time constraints. The study also highlighted the need for hospital management personnel to urgently address challenges faced by physicians in their online interaction with patients.

Keywords Healthcare management · Internet · Facebook · Doctor-patient communication · Patient-centered communication · Communication strategies · India

1 Introduction

Physicians have often expressed discomfort on public forums about patients sending them "friend" requests on Facebook [1–3]. Their narratives reflect the ethical dilemmas physicians face in determining their response to such requests as medicine and social media have divergent cultures [2, 4]. While medicine upholds the values of privacy, confidentiality and formal behavior, social media platforms are based on values of sharing and informality [4]. It is in this context that this study explores perspectives of physicians who are connected with patients on Facebook to varying degrees in a country such as India where the doctor-patient ratio is highly skewed.

While extant literature has focused on patients expressing a desire to connect with doctors on social media [5, 6], there exists a need for studies that analyze how healthcare professionals are using social media to interact with their patients. Addressing this research gap, this

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study seeks to explore physician perspectives on benefits and challenges of being connected to patients on Facebook, strategies used by them to meet those challenges and the associated implications for healthcare management professionals.

Elaborating on the "slow diffusion of online communication" in medical practice, Katz and Moyer [7] emphasize the lack of reimbursement for medical professionals for online consultations, their concern about work overload, medico-legal issues and doubts about the clinical relevance of messages sent online by patients. However, social media usage in healthcare is a dynamic and constantly evolving issue. Communication researchers, Alpert and Womble [8], conducted in depth interviews with 17 US physicians who use Twitter and found that "physicians overcome concerns of privacy and time constraints to learn and share new research, connect with colleagues, manage online personas, and develop relationships with patients on a new level that goes beyond the typical office visit" (pp. 824). The physicians in this study emphasized that being on Twitter helped improve trustworthiness and their rapport with patients [8]. Tellingly, while these physicians perceived Twitter as "unobtrusive and effortless," they did not find Facebook a suitable platform for connecting with patients since people usually post personal information on it ([8], pp. 827).

Thus, it's not surprising that few studies have explored Facebook usage by doctors. One such study that was conducted to assess Facebook use by residents and fellows at Rouen University hospital, France, in the year 2009 found that when doctors were asked to imagine a Facebook request from a patient, 85% said they would automatically reject such a request while 15% said they would decide on an individual basis [9]. Meanwhile, a national survey of US-based practicing and resident physicians and medical students on interaction with patients on online social networks in the year 2010 found that more than one-fourth of the respondents believed interacting with patients on online social networks could improve doctor-patient communication [10].

In the case of India, a literature review did not yield any academic studies on social media use by Indian doctors. However, newspaper reports stand testimony to a growing trend. For instance, a 2015 report titled "Social Media Becomes a New Platform for Medical Advice," claimed that social media platforms and mobile apps are helping doctors in India "to reach out to patients, guide them for treatments, provide counselling post-surgery and create close-knit support communities, as more Indians join social media platforms" [11]. Media reports also narrate how doctors hold "digital OPDs" on WhatsApp. Consultations on WhatsApp involve patients sending them medical records and doctors sending back prescriptions [12]. The following

section offers a brief overview of the healthcare sector in India.

2 The Indian context

The Indian Medical Association launched a campaign in the year 2017 to make doctor-patient communication in the country more patient-centered and participatory in nature. The campaign drew upon a survey which found that an overwhelming majority of patients in India want their doctor to "listen to them in great detail" and "explain everything about the illness, investigation, and drugs" [13]. However, ensuring a participatory model of doctor-patient communication is difficult to achieve in a country that faces an acute shortage of doctors and health workers even as the doctor-patient ratio in India is 1:1674 against the WHO recommended 1:1000 [14].

Although the healthcare sector is one of India's largest sectors both in terms of revenue and employment, the Indian government spends little on healthcare. In 2014, India's health expenditure was 1.41% of GDP compared to 8.28% in the United States and 7.58% in the United Kingdom [15]. The country's healthcare sector faces several challenges including a burgeoning population of more than 1.35 billion people in the year 2018 [16], poor healthcare infrastructure, a gaping rural-urban divide in terms of healthcare facilities [17] and inadequate health insurance coverage for its citizens [18]. Additionally, since private medical care is more expensive than treatment in a government-run public hospital, which is often understaffed and lacking in latest medical care, "the average Indian patient is stuck between the devil and the deep sea when it comes to healthcare" [19].

The current Indian government has repeatedly announced that it intends to use ICTs to deal with roadblocks in healthcare in India. Digital solutions to healthcare draw upon the fact that more Indians are connected online today. With more than 481 million Internet users in India in December 2017 [20] and an internet penetration rate of nearly 30% [21], social media companies such as Facebook and Twitter have managed to build large user bases in India. In fact, India has the largest number of Facebook users in the world at 250 million in the year 2018 [22]. Drawing upon this contextual background and taking the existing research gap into account, the following research questions were formulated for this study:

RQ1: What are the most beneficial aspects of patients connecting with physicians on Facebook?
RQ2: What are the most challenging aspects of patients connecting with physicians on Facebook?
RQ3: What strategies do physicians use to deal with challenging aspects of being connected with patients on Facebook?

RQ4: According to physicians, what are the benefits to patients when the latter connect with them on Facebook?

The following section offers an account of the research methods used in this study.

3 Methods

Adhering to an interpretive research methodology, the study is based on in depth interviews with a purposive sample of 31 doctors who are connected with patients on Facebook. Apart from interviews of the doctors, this study also includes interviews of four hospital administrators, two health informatics professionals in senior management positions and a member of the Delhi Medical Council, a statutory body responsible for regulating the practice of medicine in the New Delhi area.

The participants were selected from two cities in India – New Delhi, a large metropolis and India's capital, and Bhubaneswar, a smaller city in eastern India and the capital of the state of Odisha. While the New Delhi area, also known as the National Capital Region, comprises New Delhi and its adjoining areas and has a population of more than 46 million, Bhubaneswar has a population of more than 837,000 people based on the 2011 census. While 16 doctors were interviewed from Bhubaneswar, 15 doctors were interviewed from the New Delhi area. Conducting interviews in a large metropolis and a smaller city was expected to offer insights into the use of social media in doctor-patient communication in two different settings.

At the beginning of the project, the researcher used her own network to find the first set of physicians to interview and then used the snowball method to reach out to more doctors who were connected with their patients on Facebook. In this diverse sample, the physician with the most medical experience had practiced for 35 years while the physician with the least experience had 5 years of experience. The sample of doctors included specialists from the fields of gynecology, oncology, cardiology, pediatrics, endocrinology, psychiatry, gastroenterology neurology, neurosurgery, nephrology, orthopedics, neonatology, plastic and cosmetic surgery. The names of all the doctors have been kept anonymous in this article. While 29 doctors from the sample were associated with corporate hospitals, two were in private practice. The physicians interviewed for this study were associated with the following corporate hospital chains in India: Apollo Hospitals Enterprise Limited; Fortis Healthcare Limited; Care Hospitals; Max Superspeciality Hospital; Medanta Hospital; and, AMRI Hospitals (Advanced Medical Research Institute).

Out of the 31 physicians interviewed for this study, 20 had Facebook Profiles, 3 had Facebook Pages and 8 had both a Facebook Page and a Profile. Here it may be noted that while anyone can follow someone with a Facebook Page, a Facebook Profile is usually more private in nature and requires the account holder to accept a "friend" request for access. Except one, all physicians interviewed for this study from the smaller town of Bhubaneswar had Facebook Profiles. Facebook Pages were relatively more common amongst physicians practicing in the New Delhi area.

Except two female doctors who were both gynecologists, all the doctors interviewed for this study were male. Despite substantial efforts, the researcher could not identity a significant number of female doctors who are connected with patients on Facebook to interview for this study. This may be reflective of the overall gender ratio of Facebook users in India: Among Facebook users in India, only 24% are women [23]. Not being able to trace many female doctors who are connected with patients on Facebook may also be indicative of the social norms prevalent in Indian society. For instance, a gynecologist in Bhubaneswar commented: "Women doctors are also wives and mothers. They have to follow social norms. It is possible that is the reason not so many women doctors are on Facebook."

Semi-structured interviews were conducted with these participants between May 2017 and June 2018. While a few interviews were conducted face-to-face, most were conducted over the telephone due to the extremely busy schedules of the physician specialists. Participants gave verbal informed consent before each interview began. One doctor chose to answer all questions over email. The average duration of the telephonic and face-to-face interviews was about 30 min. A few doctors were interviewed more than once. The set of questions changed slightly based on whether the doctor had a Facebook Page or a Profile. Overall, the participants were asked about the benefits and challenges of being connected to their patients on Facebook, strategies they used to cope with those challenges, criteria used by them in deciding which "friend" request to accept in the case of Facebook Profiles and the overall nature of their posts on Facebook.

3.1 Analysis protocol

This study was conducted within a grounded theory framework [24–29]. The goal of the study was to explore and understand participants' perspectives and their meaning-making practices within their specific contexts [27]. As Charmaz emphasizes, "constructivist interviewing practices" render the interview a "site of exploration" and "emergent understandings" ([24], pp. 91).

The study followed an iterative process that involved simultaneous data collection and analysis. Initial coding was conducted after a few interviews and the researcher went back to the field for conducting more interviews thereafter drawing upon the emergent directions of research. The constant comparative method, an analytical method of grounded theory,

was used to analyze the data collected whereby each incident is compared with other incidents with the goal of categorizing them [27, 29]. Initial coding involved studying "fragments of data – words, lines, segments, and incidents – closely for their analytic import" ([24], pp. 109).

After initial coding of all the transcribed interviews, the author engaged in focused coding which involves taking decisions "about which initial codes make the most analytic sense to categorize your data incisively and completely" ([24], p. 138). In grounded theory, data analysis begins "with basic description and moves to conceptual ordering and then to theorizing ([30], p. 549). The following section includes the findings of this study.

4 Results

4.1 What are the most beneficial aspects of patients connecting with physicians on Facebook?

4.1.1 Using Facebook as a branding tool: Communicating their personal brand to patients and peers but divided on "advertising" one's expertise

Having a presence on social media platforms helped doctors build a personal brand online and become more visible to their patients and peers. For instance, a bariatric surgeon from the New Delhi area who had more than 10,000 followers on his Facebook Page and 20 years work experience emphasized that being connected with patients on Facebook was about "marketing, branding and long-term relationship building." He explained:

> It's a lot of hard work. It's taken me almost 7 years to get here but it really helps. Being connected with patients on Facebook is not about immediate financial gain. The other day a patient came to me for surgery. He said he had been following my Facebook Page for the last three years and had finally decided to get operated.

A well-known psychiatrist from the New Delhi area who has both a Facebook Page and a Facebook Profile explained the advantages of the medium: "Social media are a robust and vibrant media to reach out to people at the lowest possible cost. It requires the least possible time investment from the doctor and gives him the maximum possible reach."

To build their brands on Facebook, several doctors said they posted information about their work: surgeries conducted, conferences attended; public speaking gigs, etc. However, physicians interviewed for this study differed on whether a doctor should post information on Facebook about his or her professional achievements, especially information on new and innovative surgical procedures. More

specifically, doctors practicing in the smaller city of Bhubaneswar were divided on the ethics of posting information about a doctor's expertise that might appear like an "advertisement" to a Facebook user.

For instance, a young neurosurgeon in Bhubaneswar with about five years experience said: "I have done some rare neurosurgery cases but I don't put them up on Facebook or any website. I don't want to show off what I do." A senior cardiologist in Bhubaneswar with more than 24 years experience expressed similar views: "Individual doctors should not advertise surgeries because you do surgery as a team," he pointed out. "No single person is responsible for the success of a surgery." He believed that while doctors can post information on health issues on Facebook, they should not advertise their daily activities.

However, an orthopedics and joint replacement surgeon from the same city argued: "When there is so much competition amongst doctors working in corporate hospitals, you have to make yourself available to patients – online and offline. You have to reach out to them."

The physicians working with corporate hospitals also emphasized that their hospital management personnel encourage them to have a strong online presence for better social media marketing. At the same time, they claimed that hospital managements do not want them to get too close to patients on a social media platform such as Facebook.

A senior hospital administration personnel from Bhubaneswar explained the dilemma: "If doctors and patients interact too much on Facebook then the patient will get attached to that individual doctor. We want the patient to get attached to the hospital, not the individual doctor." A senior clinical data analytics professional working with a corporate hospital in the New Delhi area elaborated that while it is easier for a stand-alone individual practitioner to market themselves on social media, it becomes more complicated when he/she is part of larger organization: "In such a situation, questions emerge about how to integrate a doctor's individual outreach with the organization's outreach."

4.1.2 Using FB to spread health awareness: Posting relevant health information and adapting it to India's socio-cultural context

Almost all the physicians interviewed for this study said they posted relevant health information on their Facebook profiles or Facebook pages including public awareness messages and inspirational messages that can help patients introduce lifestyle modifications. Also, doctors who specialize in fields such as cosmetic surgery that are relatively new in certain states of India said social media was a boon for them. Apart from new areas, health professionals also used Facebook to spread information about topics that suffer from social stigma in Indian society such as mental health. For instance, a

psychiatrist with 18 years experience at a corporate hospital in the New Delhi area said: "A mental health doctor cannot just be a clinician. I am also responsible for spreading awareness about mental health issues. In fact, spreading awareness is an important part of my job."

Further, a dean at a corporate hospital in the New Delhi area pointed out that many doctors also post health awareness videos on YouTube but posting on Facebook helps target an already-interested audience. While posting information on health issues on Facebook, doctors also keep socio-cultural values of the audience in mind. For instance, a psychiatrist in the New Delhi area with 10 years experience pointed out that when he posts content in English, he writes on a multitude of issues including sexuality, gender, etc., but when he posts content in Hindi (an Indian language), he restricts it to more general topics such as how students and their parents can handle examination stress, etc. "People who read content in Hindi generally have different comfort levels than those who read content written in English," he explained.

4.2 What are the most challenging aspects of patients connecting with physicians on Facebook?

4.2.1 Doctors wary of online trolling, patient expectations, medico-legal issues and time constraints

One of the doctors interviewed for this study, a gynecologist in Bhubaneswar with 27 years experience, narrated what she categorized as a "traumatic experience" with a patient on Facebook. She claimed that a patient posted "wrong information" about her after a surgery:

It went on for about two-three weeks. That particular period was like a nightmare for me. I don't know if someone provoked the patient to write such things. I feel she was provoked by people who are professionally jealous of me.

She claimed that although a year has passed since the incident, she has become extremely cautious about accepting Facebook "friend" requests from patients. Referring to similar incidents, a senior member of the hospital administration team at a corporate hospital in Bhubaneswar said that while social media has helped doctors reach out to people, it has also made them more vulnerable.

A neurosurgeon in the New Delhi area who has 9 years experience and 1955 Facebook friends in April 2018 elaborated on other challenges associated with social media interaction among doctors and patients such as patients expecting immediate replies and not realizing the medico-legal issues associated with such online interaction. Another doctor, a surgical gastroenterologist in Bhubaneswar with 2626

"friends" on his Facebook profile, explained that it's a slippery slope when it comes to communicating with a patient on Facebook:

The patient may start out talking about regular things online. But he or she might suddenly mention a medical ailment during the conversation like the fact that he is having pain in the abdomen. In such cases, if the doctor advises something online, he is in for trouble. The doctor should immediately ask the patient to come for a clinical examination.

In this context, a member of the Delhi Medical Council, which is a regulatory body that monitors medical practice in the New Delhi area, emphasized that although India does not yet have special rules on social media interaction between doctors and patients, a doctor cannot give medical advice on any social media forum based on existing guidelines. "The doctor will be held responsible if something goes wrong after he prescribes medicine on a social media platform without clinical examination," he said.
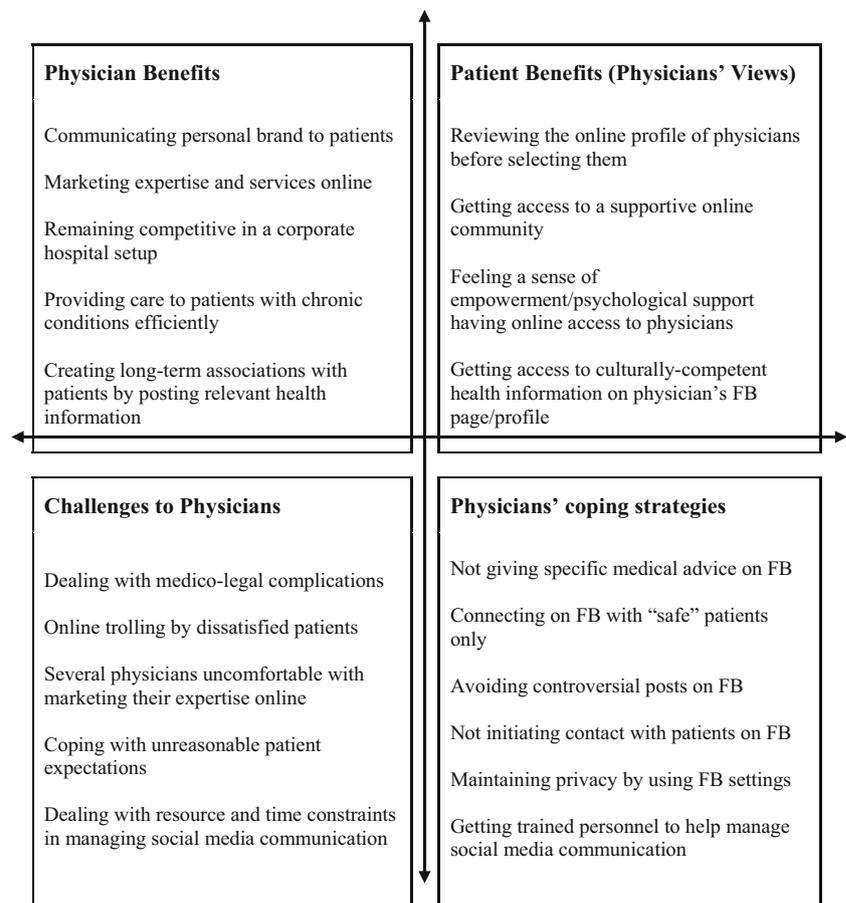
Finally, all physicians interviewed for this study mentioned time constraints as one of the primary challenges they faced in terms of social media usage for professional purposes. While doctors with Facebook Profiles generally tended to post information themselves, those with Facebook Pages sought help from a member of their medical team who had strong social media skills. Only one physician in this sample said he hired the services of a small social media firm. Figure 1 gives an account of the benefits, challenges and coping strategies used by physicians when patients connect with them on Facebook.

4.3 What strategies do physicians use to deal with challenging aspects of being connected with patients on Facebook?

4.3.1 Never giving specific medical advice on Facebook

To avoid medico-legal trouble, all the doctors interviewed for this study maintained that they never gave specific medical advice on Facebook. They also pointed out that patients usually limit their requests on Facebook to generic health advice or information about the physicians' hospital schedules, etc. The doctors also emphasized that when patients asked for specific medical advice on Facebook, they simply requested them to consult at the hospital. For instance, the head of an orthopedic, sports injury and joint replacement unit in Bhubaneswar clarified that Facebook was primarily a platform for providing initial information to patients. "After getting information from Facebook and other online forums, they meet us face to face for consultation and clinical examination," he added.

Fig. 1 Benefits, challenges and coping strategies used by physicians when patients connect with them on facebook

Physician Benefits	**Patient Benefits (Physicians' Views)**
Communicating personal brand to patients	Reviewing the online profile of physicians before selecting them
Marketing expertise and services online	Getting access to a supportive online community
Remaining competitive in a corporate hospital setup	Feeling a sense of empowerment/psychological support having online access to physicians
Providing care to patients with chronic conditions efficiently	Getting access to culturally-competent health information on physician's FB page/profile
Creating long-term associations with patients by posting relevant health information	
Challenges to Physicians	**Physicians' coping strategies**
Dealing with medico-legal complications	Not giving specific medical advice on FB
Online trolling by dissatisfied patients	Connecting on FB with "safe" patients only
Several physicians uncomfortable with marketing their expertise online	Avoiding controversial posts on FB
Coping with unreasonable patient expectations	Not initiating contact with patients on FB
Dealing with resource and time constraints in managing social media communication	Maintaining privacy by using FB settings
	Getting trained personnel to help manage social media communication

Importantly, the physicians interviewed for this study also maintained that they do not engage in one-on-one discussions with patients frequently on Facebook, which was more common on mobile chat app, WhatsApp. Instead, they post generic health information and answer short questions from patients primarily regarding routine matters on Facebook. Physicians also mentioned addressing several queries from patients with a common post on Facebook.

4.3.2 Connecting only with those patients who they consider "intellectually mature" and "pleasant to interact"

While a few doctors, especially in the New Delhi area, had professional Facebook Pages and anybody could follow them, many doctors interviewed for this study had personal Facebook Profiles where they were careful about giving patients access to their private lives. Doctors with Facebook Profiles said they often consider "the level of maturity and education of a person" before they accept a friend request. For instance, a Bhubaneswar-based gastroenterologist with 16 years experience said, "I allow patients who are 'safe' to communicate with. The wave length should match."

A renal transplant physician working with a corporate hospital in Bhubaneswar said he only accepts friend requests from patients he has known for a long time and whose "intellectual level" matches his. Thus, patients who successfully connect with doctors on Facebook, especially on their Facebook Profiles, end up being people who have the cultural and social capital to interact with them online. When asked whether such criteria introduce a class bias in online interaction between doctors and patients, a health informatics professional in the New Delhi area with 30 years experience and a former office holder of the Indian Medical Association, said: "When doctors connect with patients on Facebook, they do not think about such issues of class bias. We do not discriminate against anyone. If it happens, it's a secondary after-effect."

4.3.3 Not initiating contact with a patient on Facebook

All the physicians interviewed for this study said that they have never initiated online contact with patients on any

social media forum. A psychiatrist in the New Delhi area with 10 years experience highlighted the tension between traditional tenets guiding the medical profession and the nature of interaction on social media. Several doctors also mentioned that they were wary of romantic overtures from patients on Facebook. An orthopedics doctor in Bhubaneswar who has 980 Facebook friends said: "When a patient from the opposite sex…or let's say someone who is very attractive tries to connect with me on Facebook, I don't accept their request as it might become controversial."

4.3.4 Avoiding political and other controversial posts on Facebook

To ensure that they do not offend their patients, most physicians interviewed for this study said they avoided posting on controversial matters on Facebook. For instance, the endocrinologist working in the New Delhi area said he avoids making any statements on politicians. "I treat people across the political spectrum," he said. "Doctors may have political leanings but it cannot become a part of their professional life." A psychiatrist in the New Delhi area who has both a Facebook Page and Facebook Profile and posts extensively on mental health summed up his behavior on social media with the following words: "I need to be a dignified brand ambassador. I need to behave online in the same dignified way I behave offline."

4.3.5 Maintaining privacy by using Facebook settings but divided on posting personal photos

While all the doctors interviewed for this study highlighted the importance of maintaining privacy online, they were divided over the practice of posting personal photos on Facebook. Out of the 8 doctors who had both a Facebook Page and a Facebook Profile, 7 posted personal photos in the latter alone while one of them did not post personal photos on either. One may recollect that while any Facebook user can "follow" posts on a Facebook Page, he or she would need to send a "friend" request in order to join a person's network on his Facebook Profile. Out of the 20 physicians who had Facebook Profiles alone, 18 posted personal photos on them. Also, this trend of posting personal photos was more visible amongst doctors practicing in the smaller city of Bhubaneswar than in the New Delhi area where Facebook Pages were more common. One may recall that except one, none of the physicians interviewed from Bhubaneswar had Facebook Pages. Finally, only one physician in the entire sample posted personal photos on his Facebook Page.

Meanwhile, a Bhubaneswar-based cardiologist with 14 years experience explained:

> In a metropolis such as New Delhi, doctors have a professional approach to social media usage. They are more focused on attracting new patients, enhancing their professional image, being known as a doctor. In smaller places, people connect with doctors more at a personal level. The predominant focus is on being connected. In a metropolis, the relationship is more professional.

Thus, the practice of separating professional outreach from a more personalized portrayal on Facebook was not visible amongst most physicians interviewed from Bhubaneswar. As social media usage between physicians and patients increases, doctors need to maintain boundaries between their professional and personal lives, emphasized a senior clinical data analytics professional at a corporate hospital in the New Delhi area. "I have seen instances of conflict because of merging of identities," he said.

4.4 According to physicians, what are the benefits to patients when the latter connect with them on Facebook?

4.4.1 Doctors believe patients feel more empowered and comfortable being connected with them on Facebook

All the doctors interviewed for this study believed that patients felt empowered connecting with them on Facebook as it gave them ready access to them. Overall, the respondents believed social media platforms and mobile chat apps including Facebook and WhatsApp have made doctors more approachable.

According to an orthopedic and joint replacement surgeon in Bhubaneswar, it's a source of comfort for patients to be on Facebook with their doctor. It helps the patients see the doctor's "human side" and demystifies the image of a doctor as cold and distant. A Bhubaneswar-based gastroenterologist with work experience of 16 years elaborated:

> Patients wanting to connect on Facebook with their doctor has a lot to do with psychology. The patient feels assured that the doctor knows me personally. He knows whatever problem I have. He will address it. They feel secure.

Several doctors also mentioned that patients sometimes refer to their doctor's Facebook post while meeting them face to face for medical consultation, which helps break ice and establish rapport. In fact, several doctors mentioned that some patients felt more comfortable bringing up health matters on social media platforms such as Facebook and mobile apps

such as WhatsApp than during face to face encounters at the hospital. For instance, a gynecologist in Bhubaneswar with work experience of more than 12 years said: "Some patients hesitate to talk in detail face to face or on the phone. However, they sometimes feel more comfortable asking a question on WhatsApp or on Facebook."

Several doctors interviewed for this study also believed that connecting on social media will help build trust amongst doctors and patients, especially in the Indian context where there have been several incidents of violence against doctors in the midst of a discourse of overall distrust in the medical system [31].

4.4.2 Patients in specific fields of medicine and those with chronic conditions stand to gain more from doctor-patient interaction on Facebook

Doctors believed that patients of gynecology, pediatrics, oncology, community medicine, etc., stand to gain most by connecting with them on Facebook. For instance, a gynecologist and infertility specialist in the New Delhi area with 46,468 "followers" on her Facebook Page in April 2018, pointed out that since infertility is considered a stigma in Indian society, her patients are usually women who have gone through very difficult social and personal experiences. In such a context, her Facebook Page provides a forum for them to connect:

> Infertility is a very difficult experience, especially in Indian society. Lot of people who succeed in getting a child through IVF want to motivate others. Those who have failed want to share their experiences in order to prepare others for possible failure.…You can see similar human connect in chemotherapy patients.

On a related note, an oncologist in the New Delhi area with over 26 years experience and 8335 followers on his Facebook Page pointed out that when a patient finds out he has cancer, he is not only overwhelmed by a sudden medical crisis in his personal life but also faces a host of non-medical issues including financial and social issues. "I cannot disconnect from their realities. So I let them connect with me on social media," he said.

The respondents in this study also claimed that people living with chronic diseases stand to benefit the most from connecting with their physicians on Facebook. For instance, a pediatric gastroenterologist in the New Delhi area, said: "Through the use of social media or direct messaging, management of chronic conditions can be improved. It is always left to the judgment of the treating doctor on the frequency of physical appointments in order to ensure optimum care."

5 Discussion: Making sense of physician perspectives and practices

5.1 Analysis of findings

The study showed that while physicians acknowledged the benefits of being connected with patients on Facebook including being able to communicate their personal brand to patients and using their Facebook posts to spread health awareness amongst patients, they also mentioned challenges they were facing such as online trolling, unreasonable patient expectations and associated medico-legal issues, and the strategies they were using to cope with such challenges. The physicians also emphasized that the patients benefitted from being connected with them on Facebook as the latter gained psychological assurance by having access to them online and the opportunity to participate in supportive online communities. Previous research has also shown that reading experiences of other patients online might serve as "narratives and exemplars" that some patients may emulate and use as a source of social support ([32], pp. 247; [33]).

In keeping with the interpretive theoretical framework used in this study, an attempt is made in this section to locate the physicians' perspectives in "larger social structures and discourses" ([24], p. 241) with the belief that "knowledge and theories are situated and located in particular positions, perspectives, and experiences" ([24], p. 231). Within the evolving space of social media branding and marketing in healthcare, physicians seem to be responding to pressure from two different quarters: First, pressure from corporate hospitals to earn more revenue in a highly competitive environment that prioritizes relationship building with the consumer to ensure loyalty for the brand; secondly, pressure from patients for more connectivity, support and real-time information.

A constructivist grounded theory approach explores "assumptions on which participants construct their meanings and actions" ([24], p. 241). Figure 2 gives an account of the assumptions behind physician branding and marketing of services on Facebook.

While almost all the physicians interviewed for this study believed online branding was important for professional visibility and success, they remained divided on whether it was appropriate to market their expertise on a platform such as Facebook as medical science is a unique field and cannot be compared to other sectors that deploy consumer-driven marketing strategies.

However, physician branding and associated marketing of services on social media platforms can be contextualized within a neoliberal framework where health is considered the individual responsibility of the patient who proactively seeks health information. While the positive connotations of consumerism in healthcare include patient-centeredness and collaborative decision-making, a more critical approach would

Fig. 2 Assumptions behind physician branding and marketing of services on facebook
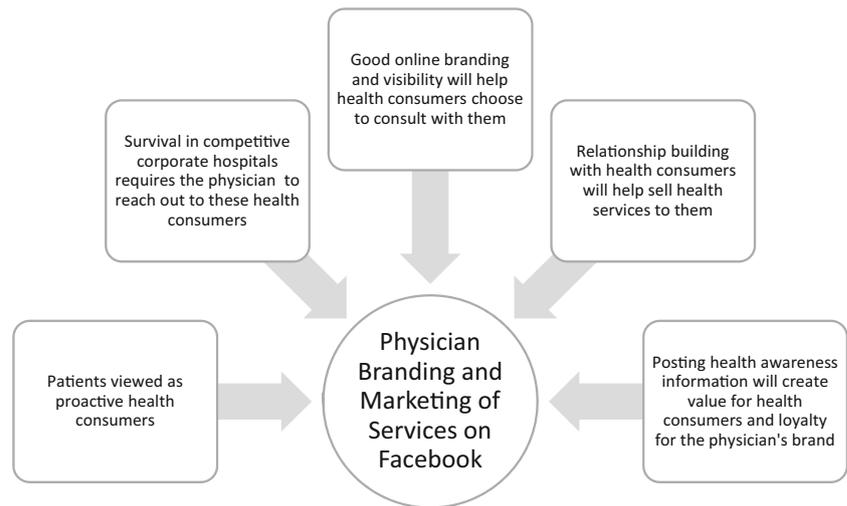
draw attention to how a market-driven healthcare system privileges delivery of information and technological advances in healthcare without paying equal emphasis to lack of universal access to healthcare ([35], p. 32). Further, health communication within such a framework promotes lifestyle changes at the individual level while simultaneously neglecting structural inequalities [35].

Moreover, as the findings of this study show, technology, which is assumed to be an "equalizer," does not always deliver on such expectations. In this study, those doctors who had Facebook profiles accepted "friend requests" from well-educated patients that appeared "safe" to communicate online. This shows that someone with mere access to technology may not have the socio-cultural capital to communicate with his/ her physician on a social media forum such as Facebook. Thus, the common neoliberal practice of investing in technology to address health inequalities may not yield results unless deep-seated structural inequalities in society are removed [35].

While Facebook offered the option of interpersonal communication with patients, many physicians interviewed for this study ended up using it as a one-way broadcast platform due to the multiple challenges mentioned earlier. Of course, the information posted by physicians became an alternative to what a patient could find by doing a Google search on a health issue. Nevertheless, posting of health information on physicians' Facebook accounts opened up the possibility of the blurring of boundaries between commercial information and health awareness information and commercial interests being mistakenly perceived as public interest information [35].

Apart from highlighting the complex role of technology, the study also showed that socio-cultural and demographic factors influenced the way physicians negotiated privacy online. Privacy was enacted differently in the two cities from where the physicians were selected for interviews. While many physicians practicing in the vast, metropolitan city of New Delhi were particular about dividing their professional

and personal lives and hence used Facebook Pages for online branding and marketing, physicians practicing in the small city of Bhubaneswar located in eastern India used their personal Facebook Profiles for the same. Physicians also remained divided about posting personal photographs on Facebook accounts where they were connected with patients.

Overall, the study indicated that physicians are grappling with tremendous change in the midst of social media disruptions in healthcare and clarity is yet to emerge in terms of new meanings and practices, especially in areas such as online physician branding, the appropriateness of marketing of physicians' expertise online, protecting physicians' privacy in an age of constant connectivity, determining the nature of communication with patients on social media platforms and acquiring social media know-how in the midst of time and resource constraints. Figure 3 gives an account of the way physicians are grappling with these changes and the meanings and practices that are in flux.

5.2 Practical implications

The findings of the study carry implications for hospital administrators and healthcare managers.

This study suggests that challenges faced by physicians in their online interaction with patients need to be addressed urgently. Due to time constraints and lack of experience in social media usage for professional purposes, many physicians interviewed for this study emphasized the need for trained personnel to help them interact online with patients and avoid burnout caused by constant connectivity. Having the assistance of trained personnel may also help physicians use Facebook not just as a health information dissemination platform but to engage with patients and even ensure treatment compliance in specific cases. Imparting skills in coping with online trolling will also help physicians reach out to more patients than merely connecting with those they consider
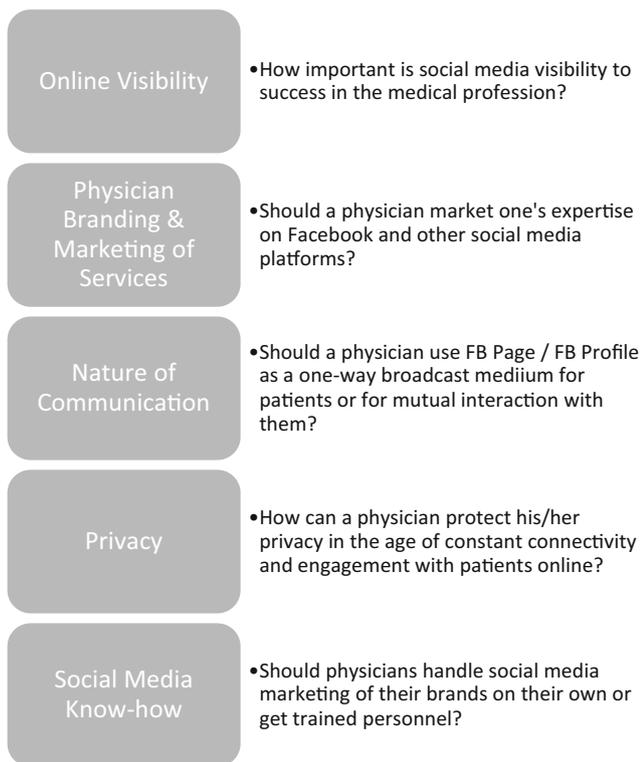
Online Visibility	• How important is social media visibility to success in the medical profession?
Physician Branding & Marketing of Services	• Should a physician market one's expertise on Facebook and other social media platforms?
Nature of Communication	• Should a physician use FB Page / FB Profile as a one-way broadcast mediium for patients or for mutual interaction with them?
Privacy	• How can a physician protect his/her privacy in the age of constant connectivity and engagement with patients online?
Social Media Know-how	• Should physicians handle social media marketing of their brands on their own or get trained personnel?

Fig. 3 Physicians grapple with change: meanings and practices in flux

"intellectually mature" and "safe." Since social media platforms have made doctors feel more vulnerable, training in online reputation management can help them become more confident. Moreover, encouraging physicians to use Facebook Pages rather than private Facebook Profiles to reach out to patients will reduce entry barriers for the latter. Additionally, videoconferencing facilities provided on social media platforms can aid management of specific medical situations such as psychiatric emergencies for patients living in remote locations [34].

Further, hospitals need to develop detailed social media policies that ensure protection of privacy of all stakeholders and health-related data. Knowledge about data security and possible breaches will help physicians take informed decisions in online interactions with patients. Expectations management of patients is also critical here. Patients may be advised not to ask for specific medical advice online. At the policy level, governments in association with medical regulatory bodies need to develop guidelines on doctor-patient interaction both on social media platforms and mobile chat apps that facilitate effective communication while preventing unethical usage. Such measures may prevent presentation of

commercial information on social media platforms as public interest messages [35].

5.3 Limitations and future research

Despite the diversity of the sample in terms of medical specializations of the physicians interviewed for this study and their years of experience, etc., one of the limitations of the study is that it based on a relatively small sample. However, it may also be pointed out that use of the in depth interview method with a relatively small sample facilitated the collection of rich data and realization of the objectives of this study. The goal of this study was not to achieve universal generalization of findings across populations but to show *how* physicians in a specific context make meaning in the midst of social media disruptions and then locate such insights in the larger socio-cultural discourse. Secondly, since this study draws upon a purposive sample of doctors who connect with patients on Facebook, it is likely to bring out the advantages more than the disadvantages. Finally, this study draws upon interviews of physicians alone and does not include interviews of patients and their caregivers. Interviews of patients and caregivers will present a more complete picture and help triangulate data as well.

Future research should explore whether interactions between doctors and patients on social media subsequently leads to collaborative decision making in medical situations. Unlike in a consultation room where physicians often have complete control, do social media forums actually become spaces where power is shared? Does following a doctor's health-related posts on a social media platform actually make a patient feel more in control of their situation? Do social media interactions between doctors and patients lead to better patient compliance? As social media usage between doctors and patients becomes more common and mobile communication technologies further facilitate such interactions [36], it will become evident whether such spaces improve doctor-patient communication or if they merely reinforce existing disparities.

Compliance with ethical standards

Conflict of interest The author declares that she has no conflict of interest.

Informed consent All individual participants in this study gave their informed consent.

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