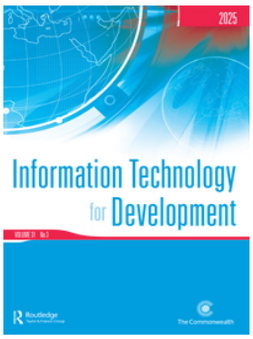

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Ayushi Tandon & George Kandathil

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Women patients' experiences with electronic medical records: a 'Jeevan Yapan' perspective

Ayushi Tandon [a] and George Kandathil[b]

[a]Trinity Business School, Trinity College Dublin, Dublin, Ireland; [b]Indian Institute of Management, Ahmedabad, India

ABSTRACT

Information technology for the digitalization of health records (i.e. EMR) has been researched extensively for the past three decades. Our review revealed that patients play an important role in EMR use but their experiences are rarely problematized. We conducted an eight-month long ethnography involving 52 patient interviews and 31 direct observations of ambulatory consultation sessions within OB/GYN departments across four healthcare organizations. We find that women patients' experiences with EMRs cannot be solely explained by biomedical concepts; they are intertwined with their everyday mundane experiences of living besides managing health needs. Findings reveal that current EMR design-in-use removes patients from the context of their everyday lives and communities, resulting in adverse digitalization. We labelled these everyday experiences using indigenous term 'Jeevan Yapan', which encapsulates lived realities, mundane activities, and mechanisms employed by individuals in navigating their daily lives. We conclude by calling on digital health researchers and practitioners to be sensitive to the 'Jeevan Yapan' of patients and create situated mechanisms of accountability to patient community while working in non-western contexts. We also provide design principles aligning with the ethos of Jeevan Yapan relevant to the design-in-use paradigm.

KEYWORDS

Digital health design; electronic medical records; patient experience; indigenous

1. Introduction

In recent times, there has been a significant shift toward digitizing healthcare in low- and middle-income countries of global south like India, Bangladesh, and Indonesia. Although digital health interventions undeniably brought benefits, they are also criticized for hindering healthcare professionals and forcing them to take alternative and often informal paths, known as workarounds (Van den Hooff & & Hafkamp, 2018; Van Offenbeek et al., 2024). An example of these workarounds is the avoidance of documenting stigmatized conditions, like breast cancer or abortion, in electronic medical records (EMR). EMRs are a core component of digital health systems. They encompass various electronic systems used to document, access, and manage patient health data, including patient records, clinical information, and laboratory results (Jensen & Aanestad, 2007). Previous studies reveal that some doctors resort to recording prescriptions in paper notes instead of electronic systems to

CONTACT Ayushi Tandon ayushitandon@iima.ac.in Trinity Business School, Trinity College, Dublin 2, D02 F6N2, Ireland
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avoid potential social and psychological harms to patients (Suh, 2014; Vaast, 2007). Conversely, many doctors while writing clinical notes even documented stigmatized details into the electronic systems, for instance, stereotyping patients by race and ethnicity or describing patients as 'difficult' or 'obese' (Barcelona et al., 2024). Thus, understanding patients' experiences with what is documented or not documented about them in EMR is important.

Our review of previous work, as summarized later, suggests that most studies on EMR have examined variations in documentation by collecting opinions of healthcare workers on specific features in EMR. Studies on EMR often reduced use and non-use to objective measures, such as alignment with national policies and organizational goals, patients' satisfaction, reduction in clinical errors, etc. (Currie & Guah, 2007; Currie & Seddon, 2022; Igira, 2008; Leidner & Kayworth, 2006; Miltgen & Peyrat-Guillard, 2014; Reay & Hinings, 2005). Although, we find some studies that point out EMRs usage has implications for patients, but majority researchers have narrowly attributed the outcome of EMR initiatives for patients as facilitation and enhancement of quality care, without giving the patients any voice in the design and use of technologies (Bernardi & Wu, 2022; Klecun, 2016). This approach toward patients reinforces the privilege of biomedical knowledge within medical practice[1] (Berg, 1992; Bernardi & Wu, 2022), overlooking the expectations and experiences of patients in health IT research.

Nevertheless, the concerns regarding the limited realization of benefits from Information Technology for Development (ITD) initiatives for patients are not new (Bailur, 2006; Miscione, 2007). Scholars have advocated approaches involving the patients in problem framing during the design phases and incorporating their feedback during the utilization phase (Heeks, 2022; Smith & Lie, 2023). However, these approaches often separate the design and development of IT from the site of its use, thereby reinforcing the dichotomy between design and usage sites (Dourish, 1999; Dourish, 2004; Holeman & Kane, 2020). This separation is known to contribute toward the neglect of certain crucial aspects at the actual site of use (Aanestad, 2003; Dourish, 2004; Suchman, 2002). Holeman and Kane (2020) partially recognized the problem of separation between design and use sites, and advocated for an iterative design practice through a *design-in-use* mindset to prevent disconnect between design and work practice. However, their suggestions are typically limited to the work practices of direct users of technology, neglecting other actors (such as patients in our case) present at the site of use, who may not necessarily interact directly with the technological features (Sergeeva et al., 2017). Our literature review revealed that even though the design and use of EMRs have significant implications for patients, patient perspectives are often neglected in the design and implementation of these systems. Furthermore, our review demonstrated a strong link between patient gender and healthcare experiences. Recognizing this gap in understanding, our study explores the experiences of women patients with EMR systems during doctor-patient consultations. Specifically, we conducted a qualitative study to investigate *how women patients' perceptions of their health needs during ambulatory consultations influence their experiences with EMR use in the healthcare system*.

The data used in this article is part of a larger project where the first author immersed herself in an eight-month-long field ethnography that comprised in-depth field interviews with 52 patients and direct observation of 31 ambulatory consultation sessions within the Obstetrics and Gynecology (OB/GYN) departments across four distinct healthcare organizations in India. In this article, we use relevant data to answer our specific research question: How do women patients' perceptions of their health needs during ambulatory consultations influence their experiences with EMR use in the healthcare system? We employed a constructivist grounded theory approach for data analysis. The concept of '*Jeevan Yapan'* emerged during our initial data analysis and was employed as a sensitizing concept (Walsham, 1993). In this study, *Jeevan Yapan* encompasses the mundane activities, practices, and local knowledge that constitute women's everyday lives. This, when applied as a sensitizing concept for data analysis, facilitated a nuanced understanding of patients' experiences (Zaidi, 2022). Thus, we were able to examine the structures that shaped women's understanding of digitalization of medical records in relation to their health needs.

We first present our findings that emerged inductively and suggest that the homogenization of patients' experiences with the digitalization of health records is informed by components of EMR, such as biomedical taxonomy, medical time frame, structured components of medical documentation, etc. We further find that some patients' experiences with EMRs could not be defined solely by biomedical taxonomy and are intertwined with their *Jeevan Yapan*. We categorize the various facets of their *Jeevan Yapan*, i.e. everyday mundane experiences of women that are found relevant in the context of the digitalization of health records and related experiences of women. We find that patients are inevitably members of communities with diverse social structures that limit their choices, attribute roles, and confine their activities because of stigma, specifically around the use of EMR and the digitalization of their health records.

We discuss that our findings revealed not only adverse incorporation (stemming from the biomedical structuring of meanings) but also adverse omission (resulting from the inability to conform to the biomedical format prescribed in EMR). Our findings contribute by highlighting that the challenge to both adverse digital omission and adverse digital incorporation, i.e. inclusion in a digital system that enables a more-advantaged group to extract disproportionate value (Heeks, 2022, p. 1), are similar. It demands an approach that prioritizes marginalized voices and mechanisms for accountability in design. We further discuss that the design-in-use paradigm in ITD practice should be paying attention to mundane living, local knowledge, and practices around the use of IT designed for development. Then, we outline a set of design principles, drawn from the insights of this study, that are pertinent for aligning the design justice framework with the ethos of *Jeevan Yapan* within the design-in-use paradigm (Costanza-Chock, 2020).

2. Background

2.1. EMR use and non-use research

Digitalization initiatives in health encompass the use of EMR systems, where patient data is recorded in digital format for communication and collaboration between doctors to provide care to patients. This makes EMR the fundamental component of Health IT (Bhargava & Mishra, 2014). EMR consists of patient data compiled by single or multiple physicians, nurses, and other health care professionals, etc., as part of the investigation and treatment trajectory of the patient (Bansler et al., 2016). The data in EMR is integrated from sources like clinical notes, discharge sheets, medical images, laboratory reports, charts, prescription details, etc., and provides multiple functionalities including clinical reminders, tracking illness trajectory, problem listing, decision support, medical listing, medication alert, medication reconciliation, and many other functions (Dobrzykowski & Tarafdar, 2017). Some EMRs include an additional module, or component, for registering patients' demographic information also. Globally, many public and private organizations were already adopting EMR before COVID-19 (Greenhalgh et al., 2009). Since 2019, ambulatory electronic medical record systems have attracted investments in both public and private healthcare institutions (predicted compounded annual growth rate of approximately 5.7% in 2019–2025). However, doctors continue to face difficulties while using EMR (Kruse & Beane, 2018; Smith & Lie, 2023). ITD researchers also point out that progress made in health ITs, which involve the use of EMR and the digitalization of patient data to improve the quality and accessibility of healthcare services, has not been consistent across low- and middle-income countries in the global south (Cinnamon, 2020; Heeks, 2022). Since we are witnessing a push toward digital health data for public benefits transfer in low- and middle-income countries of the global south, it becomes important to understand how the usage (and its variations) of EMRs emerge in highly contextualized settings. The relevance of this inquiry also stems from the fact that the digitalization of healthcare (including EMR) frequently relies on information technologies (ITs) originating from the West, and these technologies may not seamlessly align with the diverse perspectives on health in the global south (Khene & Masiero, 2022; Masiero, 2023; McGrath, 2005; Wowak et al., 2024).

Information Systems and management researchers have been working to understand the ways in which EMR could be adopted by healthcare organizations, and much of this work is in urban, high-income, and developed countries (Lapointe & Rivard, 2005; Michel-Verkerke & Hoogeboom, 2013; Roberts et al., 2016). Studies primarily examined the benefits of the successful or meaningful use of EMR, where success is measured by employing metrics and established scales, such as intention to use, a decline in documentation errors, and cost reduction in healthcare delivery (Agarwal et al., 2010; Greenhalgh et al., 2009; Ransbotham et al., 2021). Recently, researchers have started showing interest in social and societal value of EMR and similar health IT (Babb & Chamakiotis, 2025; Chamakiotis et al., 2021). Most previous studies on use of EMRs employed a positivist understanding of culture by relating it to either geography or organizations' context at either macro or micro level (Chiasson & Davidson, 2004; Lapointe & Rivard, 2005). Notably, the organizational context is largely treated separately from the social context, with societal aspects, especially the patient's perspective, falling outside the scope of most studies. Only a limited number of studies directly engage with the situated context of patients. This highlights a notable gap in the existing body of research, emphasizing the need for further exploration and an in-depth examination of the patient's perspective with respect to design and use of EMR.

2.2. Patients in EMR research

We find that despite the integration of patient-owned and maintained health records into hospital EMRs by various information technology providers, health IT researchers treat patients as outsiders to EMR use. Investigations into the role of patients largely focus on understanding how they utilize self-monitoring technologies to record pertinent health data, thereby aiding clinical diagnoses by medical professionals (George & Kohnke, 2018; San Nicolas-Rocca et al., 2014; Park et al., 2013). These researchers have investigated the adoption and use of EMR features by patients with the specific goal of facilitating the exchange of medical data between patients and healthcare workers. Overall, our review revealed that EMR use is examined as facilitating the communication of clinical information about patients, where patients are considered the 'subject of work' without significant agency (Østerlund, 2008; Ganju et al., 2020).

Further, we find that Information Systems researchers have largely overlooked the viewpoints and experiences of women patients within healthcare, with some exceptions (such as Parthiban et al., 2022; Puri & Sahay, 2007; Venkatesh et al., 2020). Most prior studies by IS scholars within the context of the developmental role of digital health have emphasized the potential of digital systems to uniformly enhance the quality and accessibility of sexual and reproductive healthcare services for women, particularly those residing in low-income regions. Notably, sociology of health scholars have documented that women and teenage girls (along with mothers) are more likely to consult a doctor when they believe that their menstrual health may affect marriage or childbearing (Santhya et al., 2010). There is a stigma attached to sharing information about infertility treatments for documentation because of privacy concerns. Similarly, discussions on menstruation are often filled with hesitation and discomfort (Garg et al., 2012). Researchers find that stigma surrounding premarital sex contributes toward women's hesitation to share symptoms and discomfort in genital areas (Chowdhury et al., 2020; Sivakami & Rai, 2019). Specifically, researchers (Aswal & Raut, 2025; Kader, 2019) have criticized the differential treatment received by unmarried women living in urban India from doctors, who often questioned their lifestyle choices and sexuality. Our review revealed that IS researchers fail to capture these nuances as they exclude plural and pragmatic understandings of women about health. Consequently, these findings collectively challenge previous studies in the IS area for discounting women's health-related meanings in research on the design and use of health ITs, highlighting a complex intersectionality that calls for a situated and contextual understanding of women's experiences of encounters with doctors using EMR. Our study aims to partially address this gap by investigating how women patients' perceptions of their health needs influence their experiences with EMR use during ambulatory consultation.

3. Methodology

3.1 Data collection

The data utilized in this study originates from ethnographic fieldwork spanning eight months. The study required considering those sites where OB/GYN[2] consultants were provided with an EMR system to document outpatient consultation notes. This became part of the site selection criteria. Data collection was conducted within the OB/GYN ambulatory care department at four healthcare organizations in India which represented diverse settings: two in a metro city (100+ beds), one in a tier one city (super specialty clinic), and one private charity-funded hospital in a rural district. During the data collection phase, all three urban hospitals had implemented operational Electronic Medical Record (EMR) systems, tailored to their specific workflows, and had been utilizing them for a minimum of two years. In contrast, the fourth hospital in a rural locale had adopted basic EMR software three years prior, with a consistent commitment to annual maintenance and subsequent upgrades. Across these hospitals, doctors were obligated to consult EMR screens for various purposes. For the reader's convenience, a summary of EMR functionalities and features across the four hospitals is provided in Appendix A.

In this article, we used two types of data from 74 patients: field notes and patient interviews. This dual-method approach enabled a comprehensive exploration of both the observed clinical interactions and the patients' subjective perspectives. The interviews involved engaging in dialogue with patients to understand their perspectives and elicit meanings. We interviewed 52 patients across the four research sites using convenience sampling. Patients were recruited during their visits to the sites throughout the duration of fieldwork, after obtaining informed consent for the interviews. These interviews were structured around open-ended questions, such as participants' experiences during consultations, their prevailing health conditions, the utilization of computers within the hospital setting, and their interaction with either electronic medical records (EMR) or printed medical records. We refrained from soliciting age or any other personally identifiable information from the participants in our study, who were exclusively women. Instead, interviews were conducted in a conversational manner to foster a more relaxed and open exchange. As the interviews took place within the hospital premises, some interviewees displayed candidness and were open to dialogue in front of their caregivers. However, it should be noted that certain participants exhibited hesitancy in sharing their experiences in the presence of their spouses or partners. In a few cases, spouses or partners spoke on their behalf. Furthermore, some participants became emotional during the interviews, recounting their health-related experiences. We have included a positionality statement of the authors at the end of this section and provided a more elaborate description of the first author's interaction with participants in Appendix B.

To capture the contextual details and overall dynamics of ambulatory consultation events (Roberts & Sarangi, 2005), the first author observed and took concise field notes on the interactions between doctors and patients, following the approach outlined by Spradley (1979). A total of 31 consultation sessions were observed at four distinct research sites. Comprehensive notes were meticulously compiled, primarily in the form of audio recordings, complemented by digital annotations and occasional handwritten additions. The length of these daily field notes varied, ranging from two to five single-spaced pages, contingent upon the duration and content of the observed consultation sessions. Not all doctors were comfortable with the researcher observing all their consultations. Therefore, prior to each observation, individual permissions were obtained from both patients and doctors. Table 1 presents the meta-summary of participants whose data is used in this paper.

Before moving to data analysis, we wish to state that this research was conducted by two upper-class, financially independent authors: a cis-female and a cis-male. Data collection of this study was conducted by the first author with a commitment to feminist research principles (Acker et al., 1983), but her experiences differed significantly from those of many participants, particularly regarding marriage, motherhood, and socioeconomic realities. We acknowledge that she was an outsider collecting data within a different social context. However, the expectation from certain participants that

Table 1. Summary of data collected across sites in (We have used Psedo-names along with patient numeric identifiers).

Participants' numeric identifiers	Consulting hospital (Doctor's Pseudo name)	Interview	Observation of consultation session
Patient_1, Patient_5, Patient_18, Patient_23	Hospital 1 (Dr. Neeta)	✓	✓
Patient_4b (two friends), Patient_9, Patient_10, Patient_22	Hospital 1 (Dr. Lilee)	✓	✓
Patient_2, Patient_4a, Patient_6, Patient_19, Patient_20, Patient_21	Hospital 1 (Dr. Fariya)	✓	✓
Patient_3, Patient_7, Patient_11, Patient_12, Patient_13, Patient_14, Patient_17	Hospital 1 (Dr. Savitri)	✓	✓
Patient_1- Patient_3, Patient_6- toPatient_8	Hospital 2 (Dr. Reena Bhist)	✓	
Patient_4, Patient_5	Hospital 2 (Dr. Ashok Bhist)	✓	
Patient_1 to Patient_21	Hospital 3 (Dr. Vimala)	✓	✓
Patient_22 to Patient_25	Hospital 3 (Dr. Vindhya)	✓	✓
-	Hospital 3 (Dr. Sahitya)	✓	✓
Patient_1 to Patient_18	Hospital 4 (Dr. Rita and Dr. Sarita)		

a woman would be more empathetic toward other women, particularly during emotional moments, contributed to her gaining a degree of 'insider' perspective. She also shared relevant personal experiences, such as own PCOS diagnosis to foster more reciprocal and humanized interactions. Her identity as a PhD student from a prestigious institution likely influenced the data collection process. Furthermore, before starting with formal data analysis, the second author listened to the first author's narration of her field experiences. This enabled him to develop a limited 'insider' perspective of the data (not of the field).

3.2 Data analysis

The interviews and field notes were recorded and transcribed by the first author, including the English translation of the interviews conducted in Hindi. These transcripts were later uploaded into the Atlas.ti software (Muhr, 1999) to facilitate data organization and analysis. We have used pseudonyms for both doctors and patients. Alongside, we have given numeric identifiers to patients in a standard format (Patient number, site number). Charmaz's constructionist grounded theory (2006) was applied to analyze the data. This approach acknowledges that transcripts and field notes are not just passive reflections of research participants' views and values but rather a reflection of the local process that constructs them. By considering the interview transcripts alongside field notes, it is possible to understand the meanings that emerge (Spradley, 1979). We carefully read each interview transcript along with field notes and inductively categorized the patients' experiences with digitalization and the use of EMR. We started our analysis with open coding of the interviews' transcripts and field notes. We created open codes and conducted selective coding to compare different segments of quotes in order to identify similarities and differences, organizing the data into common code categories. The segments of interviews and excerpts that exhibited notable differences were subjected to separate analysis, as both authors discussed their categorizations and groupings. Additionally, two physicians with both clinical and research expertise in India were involved in the study to review the contextualization of the findings within the language of medical practice (Roberts & Sarangi, 2005). We present these findings in section 4.1.

We observed that women's understanding of the digitalization and health needs is shaped not only by biomedical structures but also by social structures. These social structures influence the mundane activities, practices, and local knowledge that constitute women's everyday lives. In this study, we refer to these everyday mundane experiences using indigenous term- *Jeevan Yapan* and employ it as a sensitizing concept for deductive data analysis (Zaidi, 2022). We again went through our data with a more defined purpose of understanding digitalization of health records in relation to *Jeevan Yapan* of patients (Blumer, 1954, p. 39). It extends beyond mere health and illness, encapsulating the lived realities of their bodies as members of their immediate society and

communities. We chose this phrase in Hindi to highlight the conceptual departure from scholars of sociology of health, such as Mol (2002), Berg (1999), Lupton (2016), and others[3] who share common interests in comprehending the intricate and evolving dynamics of health, illness, and healthcare within diverse social and cultural milieus. We posit that the understanding of health originates among mundane practices and local knowledge that are part of everyday life, together dubbed as '*Jeevan Yapan*.'

We identified patients' experiences with use of the EMR identifying instances where participants discussed mundane everyday living besides sharing about documentation of illness or medical condition[4] in the EMR. These represent nonclinical requests regarding documentation from consulting doctors, information shared with doctors, family support, caregiving roles and responsibilities, profession, diet, exercise, and nutrition. We looked out for instance in data that enable us to elicit and examine the various facets of *Jeevan Yapan of* women in relation to use of EMR. Overall, we applied deductive coding using *Jeevan Yapan as* a sensitizing concept, i.e. for the purpose of sensitizing both authors to possible leads and directions in the data analysis (Zaidi, 2022, p. 4). We present these findings in section 4.2 (See Table in Appendix C for examples of quotes mapped to code categories). Finally, in section 4.3, we elaborate on patients' experiences, labeled as adverse digitalization, that emerge as implications of the interaction between biomedical structuring (or its absence) in EMR and patients' *Jeevan Yapan*.

4. Findings

We begin by elucidating our analysis, focusing on the inductive code categories defining how patients interpreted their health needs and the digitalization of their health records.

4.1. Uniform EMR use: structured by biomedical logic

We find that the artifact of the medical record emerged as a pertinent tool in shaping women's experiences of consultations, as described by most participants during interviews. The details within the EMR, both in terms of its format and the specific information entered in designated fields, facilitated their understanding and enabled them to structure their experiences by providing a shared language and framework. This aligns with the biomedical model of healthcare (which centers on physiological facts). Consequently, our inductive findings align with earlier research on the meanings of digitalization, as women's experiences were largely structured by this biomedical logic (Ashcroft & Van Katwyk, 2016).

Firstly, women typically initiated their narratives on EMR use during interviews by recounting the registration process. This pivotal step unfolded at the registration counter, where women divulged personal information such as their name, age, gender, mobile phone number, address, and insurance provider status (if applicable). Except for Hospital_4, all hospitals furnished women with a designated file bearing a unique identifier, commonly known as the patient identification number (refer to Figure 1). Subsequently, a nurse or support staff member would meticulously document vital signs, including weight, blood pressure, and height, onto this file – the initial junctures where clinically pertinent details were officially recorded in the computer system.

Following the consultation sessions with the doctor, patients were furnished with either handwritten notes or printouts of EMRs. A glimpse into Hospital_1's sample notes is presented in Figure 2. In the next subsections, we summarize how EMR emerged as a pivotal facet of the consultation process, acting as a repository where doctors documented and conveyed details pertinent to the patients.

4.1.1. Embracing format and details in EMR

Women consistently characterized themselves as patients, drawing upon the details documented in either electronic or paper-based medical records. There was a discernible commonality as they

Figure 1. Hospital 4 note given to patient.

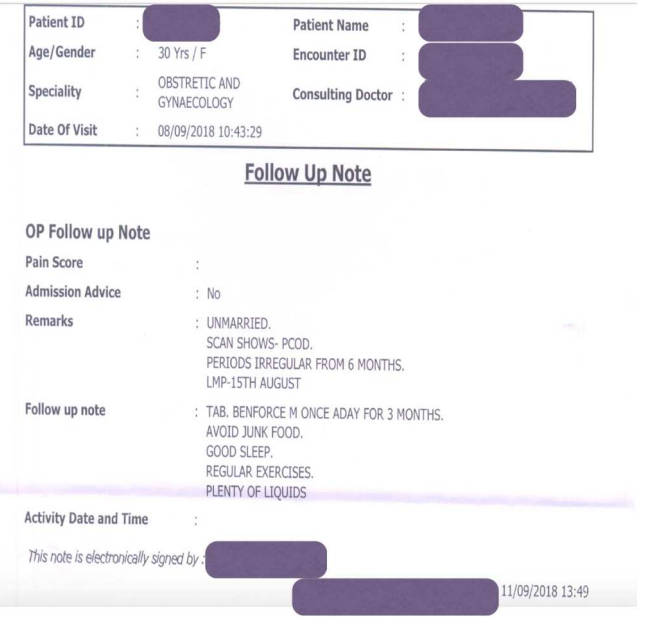

Figure 2. Hospital 1 note given to patient.

adhered to biomedical definitions of health and illness, employing a standardized language prevalent in EMRs. This shared terminology, such as symptoms, diagnosis, and treatment/care plans, which they utilized to articulate and describe their respective experiences. For instance, following her gynecological consultation at Hospital 1, Shweta (Patient_2) expressed a sense of assurance regarding her overall health status. This confidence was rooted in the diagnostic reports present in her printed EMR.

> *In particular, I see this stuff [pointing at diagnosis on the print out] I know that I am normal, so I don't have concerns. I only have to take care of this deficiency, so hopefully, I will take care of it.*

Another noticeable trend emerged, especially among women who were proficient in English – they exhibited hesitancy when broaching discussions about their lived experiences with health conditions or illnesses. Instead, they accorded greater significance to the components within medical records and the corresponding language employed. An illustrative instance unfolded during Juli's visit to an urban multispecialty hospital for antenatal consultation (Patient_5, Hospital 1). In this scenario, Juli's husband took an active role, intervening to deter her from openly sharing her emotional experiences after reviewing her ultrasound (diagnostic) reports. His emphasis rested on the indispensability of records and diagnosis section in the EMR to enhance clarity in comprehending medical information.

> *So, if we do have records (EMR) and better instruments, in such cases, it helps us to get better clarity. As novices, laypeople, we won't be able to understand beyond a particular medical boundary. But if something is made easy through equipment, then you can understand. – Juli's husband*

Patients used terms such as – clinical assessment, prescription, medical interventions, further diagnosis, and treatment – and this reveals that their construction of medical processes is informed by EMR components. Anita (Patient_3, Hospital 2), a woman in her early 30s, described her gynecological consultation for fertility assessment.

> *Nowadays, medical history has become so detailed and elaborate that keeping the record of everything on paper is difficult. In the first visit, we shared our problem, and then the doctor sent us for tests, scanning, and other examinations. We are now waiting for the diagnosis and advice. During the consultation, we realized that the doctors wouldn't handle the case until they have the report on the computer. – Anita (Patient_3, Hospital 2)*

Furthermore, we find that patients actively sought the completion of details regarding their diagnosis and other relevant information within the EMR. Their interactions with doctors were significantly influenced by the completeness of these records, a valuable lesson that many of them had learned from previous healthcare encounters. Another noteworthy finding is that certain patients, such as Juli and Shweta, exhibited a high degree of trust in the accuracy and reliability of the EMR, a finding that is explored in more detail later.

4.1.2. Utilizing medical jargon in health narratives

Women consistently framed their experiences through the lens of medical terms encountered in their EMRs. However, among all participants, factors such as technology proficiency, functional literacy, economic status, and the duration of their clinical concerns emerged as significant determinants in the extent to which they utilized medical jargon in their narratives. Those with a heightened awareness of medical terminology and confidence in their comprehension tended to employ such terms when narrating their experiences. Conversely, some participants chose to furnish the printouts of their EMRs during the interviews. Despite these differences, a common thread prevailed – most participants expressed an inclination toward the use of medical language from their records to articulate their health-related experiences. An illustrative case is that of Isha (Patient_9) consulting at Hospital 1, who exhibited uncertainty about her illness. Nevertheless, she leaned on the term used by the doctor – UTI (Urinary Tract Infection) – when communicating her health concerns, underscoring the pivotal role of medical language in shaping their narratives.

> *It's like UTI – you know, the urinary tract infection – it was a problem. Actually, I am not sure what is happening internally, so it's better to consult the doctor. This morning, I was feeling very suffocated and uncomfortable in the office. Isha (Patient_9, Hospital 1)*

Similarly, another patient, Juli, prompted by her husband, delved into her condition using clinical terms present in her EMR. In a distinctive turn, her husband expanded on their collective experiences, providing detailed insights into medical procedures and the meticulous documentation process followed in their past and current visits.

Juli:	'Last year, I just had post-traumatic stress disorder.'
Juli's husband:	'Yeah, last year we experienced that. The reason she was hospitalized was because we lost something, and she went into the ventilator. She choked, there was exasperation, and she wasn't breathing – it was this episode. So, the first thing today, the initial concern was her blood pressure. It wasn't diagnosed very clearly, but it was somewhat suggested that it may be related to blood pressure.'

Notably, some women, particularly those seeking antenatal consultation and hailing from affluent, educated backgrounds, briefly touched upon the emotional aspects underlying their health needs. However, this exploration was ephemeral, as they swiftly reverted to referencing details in their EMRs. Some patients reported that when they shared their discomforts and emotional distress with their doctors, these concerns were documented in the EMR. Common entries included

recommendations within the care plan, such as avoid stress' or 'require counseling.' However, these entries within the EMR were not perceived as comforting by the patients. They consciously refrained from delving into the realm of emotions, bodily experiences, and opinions. They used the details in EMR as they conveyed their willingness to adhere to suggested treatment processes despite certain bodily discomforts. The sentiment expressed was also of profound trust in the expertise of doctors and hospitals, made available to them as details on their EMR. Overall, the EMR emerged as a crucial reference for the women, as they demonstrated a preference for using medical terminology.

4.1.3. Framing experiences within biomedical temporal frameworks

Discussions about treatment and care plan with women often feature responses rooted in temporal concepts, such as trimesters and menstrual cycles. The structured format in EMR, accommodating timelines such as follow-up dates during infertility treatment or prenatal consultations, implies that clinical diagnoses were segmented chronologically. Fields note of consultation sessions for patients undergoing infertility treatment, had common observation about remark by doctors in EMRs: '*last month period date – xx/yy (10-14 days after this date spend time together), follow-up visit after 5 weeks.'* However, some patients had to take leave from work to adhere to the specified timelines, while others visited on weekends and encountered challenges with the follow-up dates in their EMR. Women had to coordinate their daily activities in conjunction with the timelines mentioned in the EMR.

Additionally, women seeking consultations at metropolitan city hospitals tend to adopt medical taxonomy's timeframes, like pregnancy trimesters, when narrating their interactions with doctors.

> *All the queries in my mind which were running in my mind, like what are the symptoms of the first trimester of pregnancy and how the lady experiences the delivery, how the pain comes in the nine-month of the delivery, this is the first pregnancy for me. Naina (Patient_10, Hospital 1)*

This linguistic choice signifies a shared recognition among women of the importance of acquainting themselves with the language embedded in their medical records. Similar observations unfold in rural settings, underlining a common thread of understanding among women. The use of terminologies, such as trimesters and MC (menstrual cycle), can be seen as indicative of their belief in medical professionals' expertise in comprehending and managing their ailments or medical conditions. This shared awareness transcends geographical boundaries, highlighting the universal need for women to decipher and engage with the language in their EMRs.

Field Note from observation of consultation Hospital_4: During the consultation, Dr. Rita inquired about the Shanti's menstrual cycle. She asked, 'When were your last periods? What was the date of your previous 'Mahina' (i.e. periods)? What was the date of your previous 'Tareek,' 'Parhez' (i.e. periods)?' The patient responded by asking, 'MC?'

Interestingly, in some instances the divergence between urban and rural healthcare practices becomes apparent, shedding light on the disparities. Unlike their urban counterparts, rural patients often do not receive printouts of their medical records. Instead, they rely on follow-up dates communicated verbally or occasionally on a small sheet of paper (refer Figure 1). For some of these patients, EMR emerged as a tool that contains timelines difficult for them to follow. However, it was required for them to access healthcare.

4.1.4. Embracing EMR as critical

In most interactions with women, the mere presence of the digital systems evoked positive perceptions of the doctors. For instance, a patient named Sitara (Patient_6) consulting in same hospital_4 exclaimed, '*Computer! Of course, they have computers. They are prominent, and good doctors, and all prominent doctors have computers. Everywhere in this hospital, there are computers.'*

Anita, Juli, Shweta (quoted above) and several others recognized and highlighted the significance of EMRs, underscoring the importance of information across different components, such as diagnostic report, to guarantee optimal care. In a similar vein, a subset of women expressed that having

correct and comprehensive assessment and prescription details on the EMR, accessible to doctors, is beneficial for ensuring ongoing care. Nimmi (Patient_14, visiting Hospital_1 with her husband) shared:

> *But over here I am coming here since beginning 2015 only, and I have so many problems, so they have a note of everything. It is on computer, so she just has to put my customer ID or whatever they saw [it] and simply get all the details.*

The endorsement of EMRs by patients is not a mere nod of approval but rather a result of their active engagement in the consultation process. For many individuals, technology, embodied in the form of EMR, serves as a critical tool facilitating accurate, comprehensive, and continuous care for them.

4.2. Experiences informed by everyday living and practices

As we have noted earlier, field notes and transcripts revealed that participants consistently initiated discussions related to their everyday lives and activities, often considered mundane and part of daily living, such as cooking, eating, etc., during consultation sessions. Thus, we present our findings grouped around everyday experiences and activities, i.e. applying *Jeevan Yapan* as a sensitizing concept for data analysis. *Jeevan Y*apan here distinctly refers to the everyday experiences and activities of women, and it encompasses the ordinary routines and indigenous wisdom embedded within daily existence[5]. We find that when discussing the use of EMR systems, participants simultaneously described the use of computers by doctors, reflected on their relationships with information documented on computers and reports provided to them, and recognized how those documents and information (mis)fitted[6] into their day-to-day experiences. Rather than conforming to the uniform patient experiences described earlier, our participants underscored their unique circumstances, accentuating distinctive elements that set them apart from one another. A subset of these patients critiqued EMRs for prioritizing biomedical paradigms at the expense of acknowledging the significance of their experiences. This section delves into the experiences around digital health and EMR use informed by the everyday living of patients and how that could be related to design justice in EMR.

4.2.1. Traditional norms and roles - unquantifiable excluded from EMR

While acknowledging the merits of EMRs, a subset of women highlighted a notable disconnect between the information encapsulated in EMRs and their traditions and roles within society. They recognized the necessity for documenting medical interventions like medication or surgery. However, they also expressed disappointment that healthcare providers predominantly adhered to predetermined formats within the EMR for recording information. The divergence between prescribed care and treatment plans and the practical feasibility of implementing them played a pivotal role in shaping this heterogeneity. Many traditional treatments for managing symptoms (vomiting and nausea) and physiological changes during the menstrual cycle and pregnancy are popular in India, like '*eating a morsel of ajwain*,' '*eating laddu*,' '*taking hot water bath*.' Women told doctors that elderly women (mother or mother-in-law) frequently cooked fatty food and compelled pregnant women to consume fatty food. Some food items are considered as 'hot' and some as 'cold,' depending on the site of fieldwork and trimester of pregnancy, women enquired about the suitability of consumption of hot/cold food from doctors. Discussions on the appropriateness of food products for consumption were common between doctors and patients. For instance, Renuka (Patient_24 was visiting hospital 3) exemplified this quandary when she requested her doctor to give a written note to convey to her mother-in-law her aversion to laddus[7] and the importance of rest during her pregnancy months. Renuka[8] asked doctor '*how many calories we should eat how many calories we need and how to tell the mother of mother-in-law that you cannot eat this heavy ghee laddu or other things.*'

Both Geeta and Sana (Consulting at Hospital_4) were aware of the meanings of proper food and rest on their health, they acknowledge that not all recommendations in treatment and care plan are

applicable to their daily lives. Sana, in particular, felt marginalized as her preferences for food were not reflected in the treatment and the EMR care plans, which are rooted in biomedicine. She was vegetarian and could not eat eggs and medicine prescribed to her contained eggs[9]. In another instance at Hospital 4, Geeta was provided with an explanation by doctors in line with her understanding of local traditions but nothing about this was recorded on her EMRs. Thus, EMRs designed and used at our field sites do not facilitate the documentation of such interactions, keeping them out of the system.

> Geeta was visiting for post-operation follow-up was concerned about bathing and getting the stitches wet during the bath. Dr. Sarita checked the date of her surgery from EMR, and since more than a week had passed, the doctor immediately advised the patient to take a bath. Dr. Sarita advised her to apply disinfectant on the stitches and clean them after bathing. She then placed an order for disinfecting ointment in the EMR. Dr. Rita overheard this conversation, and she asked the patient if she was aware of the process of drying the stitches. The patient did not respond to which Dr. Rita held the patient's hand and then dabbed her hands (with her saree) to demonstrate the cleaning process. The doctor instructed the patient to avoid applying soap over the stitches. After the patient left, Dr. Sarita explained that the region followed a custom 'Nahan ' where the mother would normally not take a bath for a few days after giving birth. After the customary days have passed, the mother would then take a bath in a local pond. – Excerpt from field notes Hospital_4

The meanings assigned to EMRs in above mentioned instances were articulated through women's struggle to align their actions with the biomedical treatment outlined in their records, hindered by the myriad demands placed on them because of community memberships (such as daughter in law, vegetarian family, etc.) rooted in traditions. However, viewing such struggles from a design justice perspective raises the question of 'who do we design for/with' and the users/everyday designers who were excluded from the dominant biomedical centered design along with their tacit and experiential knowledge (Costanza-Chock, 2018a; 2020).

4.2.2. Influence of living conditions on health management: dominant categories reproduced in EMR

In our data analysis, another distinct pattern emerged as those who, often functionally illiterate and seeking care in rural hospitals (here, Hospital_4), shared their experiences with doctors utilizing EMR systems. For women like Rama Devi (Patient 4), the intricacies of context hold profound significance. In her narrative, the limitations of EMR systems become glaringly evident as they fail to acknowledge the economic and logistical realities she faces. Rama Devi, unable to afford monthly visits to the hospital for prescribed medicines, feels a disconnect between her lived experience and the standardized protocols of the EMR. She mentioned, '*I have to spend 50 rupees on traveling to the hospital, and since I was short of money for travel, I had to take two pills less. Then what is the use of anything, or a computer for me?*' Rama Devi challenges the EMR design and the incorporation of her details in the EMR, or the lack thereof, of mention of her financial constraints and the contextual intricacies of her life. In doing so, she sheds light on a crucial aspect often overlooked – the need for a more culturally and contextually sensitive approach in healthcare IT, especially concerning women's health needs. Like Rama Devi, other women shared that the EMR system did not fit the healthcare needs of women from their villages. Their emphasis on the inadequacy of EMR systems stems from a lived reality where cultural nuances and situational intricacies shape their healthcare needs. Thus, patients and their context are not merely a backdrop but a vital actor in the digital healthcare narrative. Hence, as design justice scholars argue, it looks impossible to include the everyday experiential knowledge and practices (the *Jeevan Yapan*) without creating formal community accounting mechanisms in the design process (Basutkar et al., 2025; Costanza-Chock, 2018b; Leslie et al., 2022). Interviews with other women also led to this point: that doctors often neglected the distinctive aspects of women's daily routines due to the demands of EMR documentation.

A few women said that advice pertaining to family planning and fostering good health for fertility management often gets lumped under the broad category of 'advice lifestyle-related changes' within EMRs. Unmarried women shared that they self-impose dietary restrictions, steering clear of

fatty food products when their EMR notes 'advice lifestyle-related changes'. This behavior also stemmed from doctors noting phrases like 'advice physical exercise,' 'advice weight loss,' or 'lifestyle changes' in their EMRs, linking weight gain to reproductive health concerns and its potential impact on marriage prospects. During interviews, women showed their EMRs to researcher, pointing toward instances where doctors had advised weight loss, particularly in urban hospitals and especially for working professionals. Shweta acknowledged the importance of steering clear of certain foods for optimal health. However, she raised concerns toward doctor's documentation of 'avoiding junk foods' and other such instructions in the EMR. This information, accessible to others, has led to instances where individuals feel blamed for not adhering to the doctor's advice. Shweta and many other women shared their discomfort with such details on their EMRs, highlighting the lack of consideration for alternatives to home-cooked meals and the practical challenges of opting for convenience foods in office cafeterias. More importantly, the potential accessibility of the records (as the above instance indicates), also raised concerns about future implications (including potential marriage) which came out more clearly in some patients' narrations about their interactions with doctors.

For example, the meanings attributed to lifestyle and weight management related advice in EMR systems was indirectly linked to the societal emphasis on women's reproductive roles and the perceived importance of maintaining a specific body shape for marriage, especially prevalent in urban settings. For instance, Swati explained, '*If an unmarried female, experiencing some period-related problem, visits with an adult, maybe her mother, as two of our office juniors did, the doctors will say, 'You are like our kid, you are young, so you need not worry about it right now. You are only around 24.' However, if a similar-aged, married female presents with the same problem related to periods, the doctors will treat her with the intention of helping her conceive.*'

Such instances reveal what the feminist HCI labels, 'matrix of domination' (Collins, 2022) – for instance, the intersection of gender, patriarchy (paternalizing advice) and the socio-economic position (the urban class) – that the design helps to reproduce, which is a key concern of design justice and feminist scholars (Costanza-Chock, 2018; D'Ignazio et al., 2020). Adding to the matrix of domination was the potential imposition of certain diet preferences. For example, in rural regions (Hospital 4) where agriculture is the primary source of income, women emphasized the prevalence and affordability of rice, a staple grown in their fields. Ratna expressed discomfort when a doctor advised her to avoid eating rice, showcasing the disconnect between medical recommendations and the socio-economic realities faced by individuals. '*In our place, rice is the staple food. If we don't eat rice, who doesn't eat rice? If we don't eat rice, we don't feel full. We can eat as much Roti as we want, but we don't feel complete without eating rice.*'

4.2.3. Significance of family and community: individualized in EMR

The heterogeneity among women becomes evident as they highlight differences in the support, they have in their day-to-day lives to implement care and treatment plans documented by doctors in EMRs during antenatal consultations. Women attending such consultations expressed discomfort when doctors provided verbal advice without detailed explanations of the care plan, particularly in interactions, where rest was recommended. They desired written prescriptions on the EMR, such as 'advice bed rest,' that they could present to their family members, especially their mother-in-law. Sana's experience exemplifies the challenges faced when the doctor's advice for bed rest is documented in the EMR but conflicts with limited family support. Meena (Patient_5, hospital 2) actively resists the assumed meanings of recommendations in the EMR, as demonstrated by her reluctance to conform to the prescribed bed rest due to familial constraints. In another instance, Neeta, during her third-trimester antenatal consultation, expresses a tension between traditional dietary practices and biomedical norms. Neeta (Patient 6, Hospital 2) does not explicitly align with either traditional or biomedical perspectives; instead, she desires doctors to contextualize and provide meaning within the framework of biomedical culture. This underscores the nuanced negotiation between medical recommendations and the complex socio-cultural dynamics that shape

women's experiences during antenatal care. '*My mother-in-law believes that if I eat fruit, the child (referring to the fetus) will feel cold and may catch a cold. So, I checked with the doctor (referring to EMR and notes), and the doctor said that despite taking allopathic medicines, we should still consume fruits.*'

The dynamics between caregivers and patients during healthcare interactions often involve demands for explanations and instructions. Patients, in turn, express the desire to include their caregivers (opinions and instructions for them) in these interactions and consider them when notes are being documented in EMRs. However, it's important to note that there are instances when patients prefer limited details to be included in their records, as caregivers might have access to them, and certain clinical conditions carry associated stigma.

4.2.4. Navigating healthcare in the face of stigma: homogenized in EMR

Women living with their families, encompassing parents, in-laws, and husbands, who have encountered stigmatized conditions, perceive a misalignment between their day-to-day experiences and practices and the contemporary medical practice of documenting assessments and treatments on computers or electronic records. Consequently, these participants exhibit a greater hesitancy to embrace EMRs. Swati, a patient from Hospital_1, who has been visiting the same hospital since before her marriage, exemplifies this sentiment. Despite recently getting married, Swati prefers the company of her friend during hospital visits rather than her husband, as her medical records have a history with the hospital predating her marriage. Swati draws upon her personal bodily experiences as a pivotal point to illuminate the distinctions within the patient community. Initially, she discerns the diversity of circumstances based on the marital status of women. Subsequently, she delves into the implications of medical records for unmarried women and the subsequent changes in meaning after marriage. In our interviews with other women, a similar awareness emerges regarding the disparities and similarities in assumptions made about their sexual and reproductive health needs based on their marital status. They also recognize how these assumptions are reflected in their EMRs. This collective consciousness underscores the nuanced intersection of personal experiences, societal expectations, and healthcare documentation, highlighting the challenges faced by women in navigating the intricacies of EMRs within the context of stigmatized conditions and familial dynamics.

Shreya (Patient_23, Hospital_1), an unmarried woman who has predominantly lived with her parents, articulates the profound significance of sexual health meanings that underline her reluctance to engage with EMRs and any documentation of her health conditions. This reluctance stems from the tension between biomedical norms and cultural traditions that stigmatize sexually active unmarried women. Shreya's struggle lies in reconciling what she deems important to be included in computerized records while navigating the complexities of societal expectations and the potential for judgment. Her mistrust extends not only to EMRs but also to the doctors utilizing them. Shreya's perspective highlights the broader issue of trust in the healthcare system and the hesitancy of individuals to fully disclose sensitive information due to the fear of judgment or societal repercussions. Similarly, Vidhi (Patient_22, Hospital_1), a married woman, takes a contextual approach in critiquing EMRs based on her personal history. Through her experiences with sexual and reproductive health, Vidhi underscores the need for a more inclusive and culturally sensitive approach in healthcare documentation.

> *With a married person, what problem happens if you have been sexually active before your marriage, not with the same person, and if you have any problem after marriage, such as gynecological issues related to your sexual activity, periods, or ovaries, then you need to look for a new doctor. You can't go to your previous doctor. But do you think my husband was not sexually active before marriage? He has told me, but there is no record. He can go to any hospital.* – Vidhi, Hospital_1

Vidhi recognizes another source of difference when she distinguishes between 'stigmatized health conditions' and 'non-discriminated health conditions':

There is another major concern that you shouldn't get any email about that. We can delete SMS on other things, but how many emails will you manage? Everything is linked – Uber, food applications – so if someone else has your ID, they will get to know from the email. Oh my god, you have gone to the gynecologist, and that in itself is considered bad.

Laasya (Patient_13, Hospital 1) showed her EMR during the interview and shared her initial reaction upon seeing the printout. She said, '*I was scared, actually. What happened to me? Why are you giving this advice for USG?*' Being unmarried and living with her parents, she was worried about how they would interpret the advice for undergoing an ultrasound. Swati critiques the assumption that only married women have sexual health needs or require diagnosis of chronic conditions. But, at the same time acknowledge that association of chronic conditions such as PCOS on EMR might have many consequences for them, such as effect on marriage prospects or relationship with husband. Overall, stigma exemplifies a significant source of difference in meanings attributed to EMR recognized through the acknowledgement of the diverse cultural expectations imposed on women's bodies in India. It highlights tension between the documentation requirements aligned with biomedical norms and meanings around day-to-day lived experiences of women. These also shed light on the intricate interplay between personal experiences, societal norms, and the evolving landscape of healthcare documentation. More importantly, such lived experiences and the reflections raise a central question within the design justice perspective, 'what values and assumption do we encode in designed objects and processes?' (Costanza-Chock, 2018a; Le Dantec et al., 2009). Often, as in the case of EMR, the encoded values of the 'unmarked user' becomes a vehicle in reality to homogenize patience experiences and meanings (Costanza-Chock, 2018b; Søndergaard, 2020).

4.3. Adverse incorporations and omissions in EMR

In the above two sections we discuss that the use of EMRs tend to homogenize patient's experience and meanings. As patients start engaging with health needs and health management, particularly through EMR, the role of EMR becomes evident in making medical knowledge more accessible to them. The influence of universalizing tendency of biomedical logic, fostered by their interactions with EMR, becomes apparent as patients begin defining and describing their required medical care using biomedical language. However, we further find that the impact of this EMR doesn't conclude within the healthcare realm. Patients, after their medical interactions, inevitably re-enter society as members of communities with diverse social structures. Where the disconnect between details that are documented in EMR from their day-to-day lives results in adverse experiences for them. We came across instances of both: adverse digital incorporation (stemming from the biomedical structuring of lived experiences) and adverse digital omission (resulting from the unavailability of structuring conforming to the biomedical format prescribed in EMR). We next elaborate on this axial code category together labeled as adverse digitalization comprising of adverse digital incorporation (Heeks, 2022) and adverse digital omission that emerged from our analysis. We have also provided a detailed table in Appendix C where we have included our memos from analysis indicating mapping of quotes with adverse digital omission and adverse digital incorporation.

Adverse digital incorporation is evident in the case of Anita (Patient_3, Hospital 2). She had to wait for the doctor to upload her reports to the EMR system, even though her earlier records were already available. While Anita appreciated having her information in the EMR, she still had to wait and be re-examined at the same hospital simply to make her records accessible to the doctors. She had previously been diagnosed in a different town with her parents and had her physical records with her, but this was not sufficient. In another instance, Isha (Patient_9, Hospital 1) was able to explain her condition during clinical taxonomy and appreciated the use of EMR for this. However, she also expressed concern that due to this taxonomy, she lacked a layperson's understanding, as no explanation was provided to her. Similarly, patients across hospitals were indirectly forced to use biomedical timeframes like trimesters and menstrual cycles to describe their bodily experiences and thus structure them because these were readily available in the EMR. This was particularly problematic for people from rural areas and those with limited literacy, as they tend to rely on terms and

language originating in their local culture – for instance, remembering their menstrual cycle based on festival dates. Such esoteric language and notions accentuated the domination of the experts (in this case doctors who are part of the designer community) over the indirect users (the patients). The structured digitalization of health also impacted patients like Rama Devi (Patient_4, Hospital 4), who would have appreciated flexibility in prescriptions to align with the financial resources available to her at the time of purchasing medications. Many unmarried women shared their discomfort with EMRs, as they were concerned about details of their sexual activity and lifestyle becoming visible to others without their control. We find multiple instances where women articulated experiences with EMR in relation to inclusion of details not compatible with the situational nuances (such as stigma, traditions) explicating adverse digital incorporation. Thus, from the design justice perspective, this notion raises the questions of accountability in the design process (Costanza-Chock, 2018a; Keyes et al., 2019).

While adverse digital omissions manifest as the absence of local cultural and situational nuances from EMR when translated into a digital format. We came across instances where details around traditions, contemporary lifestyle, economic precarity, and living with patriarchal caregivers, are kept outside the EMR by doctors. For instance, Neeta (Patient 6, Hospital 2) requested a printed prescription from her doctor, specifying that she could eat fruit during pregnancy. Her mother-in-law was worried that fruit consumption would negatively impact the fetus's health. Similarly, Renuka (Patient_24, Hospital 3) asked her doctor to provide a note on the printed copy for high- and low-calorie diet, in addition to the EMR record, to share with her mother-in-law. Ratna (Patient 20, Hospital 4) was unable to convince her doctor to change the diet prescribed in her EMR, which included fruits she couldn't afford, to something more affordable. She had to have this discussion with the doctor every time and was unhappy about it. Juli (Patient_5, Hospital 1) could not have the triggers of her stress during pregnancy documented in the EMR, as they did not fit into the clinical taxonomy. Therefore, she and her husband had to either reiterate them or be extra careful on their own. Dr. Rita was unable to document the custom of 'Nahan,' followed in the patient's family during the post-natal period, in the EMR. She believed this would negatively affect care if another doctor with limited understanding of local customs consulted the patient.

5. Discussion

5.1. Implications for ITD research

Previous research on designing for marginalized people and ITD has emphasized the importance of conducting on-site observations to gain awareness of the everyday practical strategies employed by the users of technology (Holeman & Kane, 2020; Suchman, 2002). While such insights are crucial for the ITD community, our study reveals its limitations in understanding what would be most beneficial for the affected communities, especially those who may not be direct users. In our case, patients are not direct users of EMRs; however, its usage by doctors has implications for them. Therefore, we recommend understanding not only the practical everyday work of doctors or users, but also the *Jeevan Yapan* of the communities subject to such technology. Furthermore, our findings align with previous research in ITD on digitalization for marginalized individuals, such as women, trans, and queer people, and the dual challenges they face with digital systems: either invisibilizing their concerns or fearing loss of control over their information when their details are digitally documented (De et al., 2018; Wyers, 2024). In a similar vein, we extend prior scholarship on technology design-in-use within ITD (Holeman & Kane, 2020) by illustrating that engaging with users and their broader communities transcends the mere valuation of their expertise in the development of technological solutions for their needs and embrace their experiences of unfairness raising the concern of accountability. Hence, our findings underscore the necessity of formal community accountability mechanisms to integrate diverse voices, as proposed by design justice and HCI scholars (Costanza-Chock, 2018a; Keyes et al., 2019). Ultimately, our study highlights that achieving design justice for

marginalized communities, particularly within non-Western societies, is fundamentally predicated on 1) ensuring contextualized voices, which may appear non-scientific within Western epistemologies, and 2) incorporating accountability toward marginalized users in design. Without such inclusion and accountability mechanisms, as critical scholars have pointed out, it may lead to *epistemic violence* (Spivak, 1988).

Our study also provides empirical demonstration of 'adverse digital incorporation' (Heeks, 2022) explaining the varied disadvantages experienced by people as they become integrated into digital health systems. We also empirically illustrate the notion of 'adverse digital omissions' to explain the varied disadvantages experienced by people as their health experiences could not be integrated into digital health systems because of non-conformity to the biomedical format prescribed in EMR. We also explain how 'adverse digital omissions' occurs as a few relevant details are either absent from the recorded information in EMRs or, when recorded, do not align with other meanings that are important to women. Thus, we make it clear that the challenge of addressing 'adverse digital incorporation' is intrinsically linked to the challenge of addressing 'adverse digital omissions,' and both should be approached with an 'in-depth understanding of context and power' (Heeks, 2022, p. 697).

In fact, we find that women do not outrightly reject the digitization of health records; instead, they either advocate for more favorable incorporation or articulate the repercussions of the omission of certain aspects (from EMR) in relation to their *Jeevan Yapan.* For instance, patient data within digital records may wield disadvantages, particularly when it pertains to stigmatized conditions. However, we also learn that the omission of certain details from digital health records could create a situation in which patients may experience disadvantage. For example, patients who do not work with Gregorian calendar timelines in their day-to-day living might struggle to follow the timelines mentioned in their EMR. Although some doctors might write instructions for them that align with their approaches toward time, such instructions are outside the EMR systems, making patients responsible for incomplete or unusable digital health records for continued care. These findings are in line with Mol's research (2008) on diabetic people working with glucometers where she demonstrates that the technology may provide agency to users in one way but limit it in others. Similar to the glucometer, the EMR here presents itself as a technology that offers individuals a form of agency through the creation and access to digital health records, yet it may not consistently offer similar levels of agency or meaningful choices in how their diverse experiences and contexts are represented and accommodated within the system. Such experiences can materialize as 'adverse digital incorporations' or 'adverse digital omissions.' This underscores the urgent need for a design justice approach that prioritizes the marginalized voices and the mechanisms for accountability in design.

5.2. Implications for IS research

In the IS field, researchers focus on workarounds and related errors stemming from HIS. The overarching argument in these studies suggests that the effectiveness of EMR systems may be compromised when users resort to workarounds as responses to negative experiences with system design and available features. Comprehending the processes behind these workarounds is crucial, given the substantial financial investments required for EMR implementation and the considerable risks posed to patients if workarounds are not used appropriately (Yang et al., 2012, Van Offenbeek et al., 2024). Our study contributes to this stream of research by advancing understanding on needs of workarounds that is in line with *Jeevan Yapan* of patient (for example, countering omissions in EMR by verbal communication or writing on paper and countering incorporation in EMR.).

5.3. Implications for practice

While patient-centered care has long been a stated goal in digital health systems (Dubbin et al., 2013; Klecun, 2016; Mead & Bower, 2000; Paternotte et al., 2016), the development of EMR remains entrenched in biomedical models that abstract patients' lived realities into standardized clinical

data. Our findings expose how such exclusion reinforces systemic inequities through a 'matrix of domination' (Collins, 2022) – -where institutional priorities like efficiency override patients' needs. This exclusion also mirrors broader critiques in postcolonial studies (Dourish, 1999; Dourish, 2004; Keyes et al., 2019; Masiero, 2023), where Western-centric design paradigms often fail to accommodate localized epistemologies such as *Jeevan Yapan* as evinced in our study-a concept emphasizing mundane everyday living. The essence of *Jeevan Yapan* as a concept is encapsulated in the lines from a Chinese poem (translated), as quoted in The Janta Rural Health Scheme Philosophy (Griswold et al., 2018; Narayan, 2020)[10]:

> *Go to the people*
>
> *Live among them*
>
> *Learn from them*
>
> *Love them*
>
> *Start with what they know*
>
> *Build on what they have.*

We outline a set of design principles, that are pertinent for contextualizing design justice framework within the ethos of *Jeevan Yapan* (Costanza-Chock, 2020; Dourish, 2004):

- Centring Impacted Voices Beyond Clinical Abstraction:

By foregrounding the multifaceted realities of *Jeevan Yapan*, our findings highlight the prevalent exclusion of patient and caregiver experiences in the design of EMR systems. Our study demonstrates how designers' narrow focus on idealized clinical efficiency renders the crucial nuances of patient's *Jeevan Yapan* – such as family member's role in medication adherence – invisible to the design process. These situated practices, akin to the metaphors of learning and living with people as evoked in the poem quoted above, hold critical insights for the development of accountable design solutions that could also give voice to marginalized users.

- Every patient is an expert based on their own Jeevan Yapan:

Patients' daily negotiations around various barriers (such as literacy challenges, experiences of stigma, socioeconomic constraints, and cultural norms) and their contextual adaptations represent valuable forms of tacit knowledge that are far too rarely invited into formal design processes. Our findings strongly suggest a fundamental reorientation in design: treating patients and their caregivers as crucial co-experts whose everyday practices, aka *Jeevan Yapan*, should actively inform the fundamental requirements and functionalities of systems. Thus, as design justice perspective encourages, we need to embrace a broader notion of expertise as contextualized problem-solving skill that goes beyond the confines of material technologies.

- Before seeking new design solutions, look for what is already working in their Jeevan Yapan:

Design Justice principles explicitly call for the development of design solutions that are deeply rooted in existing, community-based strategies and adaptations rather than imposing external or top-down interventions. Our findings assert this idea of community (or patient) involvement in the design of digital health systems, to include mechanisms for institutionalizing and scaling up community led actions as they navigate their health needs (Narayan, 2013). Understanding *Jeevan Yapan* could provide practitioners with compelling examples of such emergent mechanisms and practices. Rather than disrupting these often invisible but crucial practices, digital systems could

be designed to amplify and support them by embracing designs that allow for greater localization, flexibility, and contextual awareness, much like the open-ended and interpretive approach invited by the poem quoted earlier.

6. Conclusion

This study aims to explore the implications of digital health records for women patients. We collected data through interviews with 52 patients and observations of 31 ambulatory consultation sessions in Obstetrics and Gynecology departments across four diverse healthcare organizations. Our findings reveal a critical gap between the standardized biomedical logic of EMR design-in-use and the mundane everyday experiences and activities of patients, termed *Jeevan Yapan*. While patient experiences can be superficially structured within biomedical frameworks into EMR, a deeper dive into their experiences using the *Jeevan Yapan* as sensitizing concept reveals a profound limitation of existing EMR design. This limitation stemming from the inherent diversity and complexity of individual patient's *Jeevan Yapan*, leads to the adverse digitalization. We urge ITD researchers and practitioners to prioritize understanding patients' *Jeevan Yapan* when designing patient-centered digital health technologies. To sum up, while design justice (Costanza-Chock, 2020) offers a critical lens for design-in-use (Dourish, 1999; Dourish, 2004), its application in the non-western context requires decolonizing participatory practices. To support this effort, we offer design principles for aligning design justice framework with the ethos of *Jeevan Yapan* applicable to the ITD field.

Notes

1. There is a common assumption that physicians and healthcare professionals undergo training in medical practice, relying primarily on biomedical knowledge. This knowledge guides them through logical steps, leading from specific observations to the correct diagnostic and therapeutic choices.
2. OB/GYN comprises two distinct specializations: OB involves care during pre-conception, pregnancy, childbirth, and post-partum, while GYN includes general gynecology, menstruation, menopause, and contraception
3. In brief, Mol (2002) approaches patients as individuals with limited rationality and requiring caring interventions. Berg (1999) explores how health conditions shape individuals' daily lives, relationships, and identities. Lupton's work (2016) come closest to ours as it highlights drifts in understanding of health, embodiment, and self-care, in contemporary societies.
4. Medical conditions (disease) are differentiated from both the lay comprehensions labelled as illnesses and the 'feelings' patients share with their doctors
5. For instance, a woman living in a strictly vegetarian household might not be able to act on a doctor's advice to consume eggs daily.
6. The term (mis)fitted refers to experiences of patients when information in EMRs is either properly specified (fitted) or contain systematic variations (mis-fitted), as identified by patients during interview.
7. Food item linked to rituals and celebrations during antenatal period. This patient belonged to Hindu religion.
8. Renuka was using mobile application to track her food intake, and she was able to quantify her consumption in terms of calories.
9. Eggs are commonly prescribed for managing reproductive health to women, see Farhangnia, P., Noormohammadi, M., & Delbandi, A. A. (2024). Vitamin D and reproductive disorders: a comprehensive review with a focus on endometriosis. *Reproductive Health*, *21*(1), 61.
10. ITD designers and developers working in digital health community could refer this video https://www.youtube.com/watch?v = XejbdYV52kI as it situates understanding of *Jeevan Yapan* before designing solution in healthcare. Furthermore, there are currently many vloggers (for instance, https://www.youtube.com/@kk.create.original and https://www.instagram.com/maroofculmen) generating content around people's *Jeevan Yapan* and its relation to various economic and environmental issues. Practitioners can learn from and incorporate similar sensitivities towards people's *Jeevan Yapan* before and during the design of health IT.

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Notes on contributors

Ayushi Tandon is an Assistant Professor at Trinity Business School, Trinity College Dublin, Ireland. Her research interests include user engagement with digital platforms and the economic and societal implications of digital technology usage. She has published experiment-based research leveraging mobile applications, as well as qualitative research on accessibility in virtual technology and the digitalization of women's health records in India. Her recent work has appeared in Information Systems Research and the Journal of Workplace Learning. Ayushi was listed among 100 Brilliant Women in AI Ethics, 2022. Prior to her PhD in management, she worked as an engineer at Qualcomm India on product lines such as Snapdragon.

George Kandathil (PhD, Cornell University, New York) is a Professor of Organizational Behaviour at the Indian Institute of Management, Ahmedabad. His current research interests are (1) power dynamics in the process of organizing, with a particular focus on the interactions of work, new technology, and gender in the workplace, and (2) alternatives to corporate capitalist organizing which emerge from subaltern ways of organizing. Related to alternatives, he has published a research monograph on the transformation of family-owned businesses into worker cooperatives through worker takeover. He has published in a variety of journals including Communications of the Association for Information Systems, Economic and Industrial Democracy, Gender, Work & Organization, Industrial Relations, Journal of Business Ethics, New Technology, Work & Employment, and Organization.

ORCID

Ayushi Tandon http://orcid.org/0000-0001-9824-4334

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Appendices

Appendix A

Table A1. Systematic description of EMR across four hospitals around key features relevant for our findings.

Features	Hospital_1	Hospital_2	Hospital_3	Hospital_4
Administrative and Clinical: Registration and recording demographic details	  Registration module was used for managing appointment and recording insurance and demographic details of patient. Unique user identification number was generated for each patient and linked with mobile number. The unique ID was included in the printout of consultation notes given to the patient.	 Registration module was used for managing appointment. Unique user identification number was generated for each patient and noted on the physical file given to the patient.	 Registration module was used for managing day-to-day appointments. Registration ID was noted on the physical file given to the patient.	  Registration module was used for managing appointment. After payment, Unique user identification number was generated for each patient. The inter-department links were well established. The unique ID was noted on a small paper slip given to the patient. Retrieving patient records was difficult as patients often misplaced paper slips and their names were often mis-spelt during registration.
Clinical: Consultation Notes	Free text entry using single page (or field) in EMR. Most commonly used template was the follow up notes template because of its simplicity. The template had two fields only: history/ assessment, care plan /progress.	Mostly handwritten notes were maintained. In case of obstetric consultation file was kept at hospital as structured entry in EMR was made. This digitizing was done later. For Gyn consultation no records were maintained in the hospital EMR.	In case of obstetric consultation and infertility treatment, handwritten notes followed unstructured format and a copy was kept at hospital as structured entry in EMR was made. This digitizing was done later.	Subjective, objective, assessment and plan template (SOAP template) of note-taking available in EMR was used. It required multiple clicks.
Clinical and Communication: Note taking and Print out of consultation notes	Print out of notes from EMR was provided to the patient.	Hand written notes were given to patients. If patients requested, doctors had the facility to provide print-outs (duplication of efforts, as doctors often maintained notes on computer also).	Hospital records were maintained by taking carbon copy of hand-written notes. The notes were digitized by junior doctors on rolling-basis.	Doctors maintained notes using EMR system. The facility of printing notes was there, but the cost of maintaining the printer was not sustainable for the hospital.
Clinical and Administrative: Appointment / Follow-up date	Written as part of the plan of care in the EMR.	Written in patient's file.	Written in patient's file.	Verbally communicated.

(*Continued*)

Table A1. Continued.

Features	Hospital_1	Hospital_2	Hospital_3	Hospital_4
Clinical: Family history	Noted as part of Gyn note and antenatal visit notes.	Provided as separate field in the EMR template, but not used.	Provided as separate field in the EMR template, and details were filled with lag on selective basis.	No separate field.
Clinical care management: Previous Consultation notes	Available as summary and can be browsed through in details.	Not easy to generate on EMR so patients maintain physical file.	Pdf can be generated, but patients prefer to carry file.	Pdf can be generated and browsed through in details. Doctors have to rely on this feature.
Clinical care management: OB/GYN Specialized templates	Gynecology notes, Gyn follow-up notes, and antenatal notes template with well-defined subheadings were provided. But only follow-up notes template was preferred by doctors.	No OB/GYN specific template was provided.	For Assistive reproductive treatment documentation dedicated template was there.	Not there
Communication and clinical: Integrating reports from other hospitals	Reports of other hospitals were scanned and integrated into both patient's EMR and physical files.	Scanned by support staff and emailed to doctors only if they requested.	Reports of other hospitals were scanned and print-outs were included in the patient's file.	No such feature was present.
Clinical and Administrative: Order Entry	Doctors and support staff both had permission to edit and place the order for medicine and diagnosis. The use of EMR was mandatory for placing orders within hospitals.	Not integrated in EMR. Orders were noted on the patient's file.	Not integrated in EMR. Orders were noted on the patient's file. But, for the common clinical conditions, there were pre-defined templates that doctors used to print and give to patients.	Only doctors had permission to edit and place the order via EMR. The use of EMR was mandatory for placing orders within hospitals. Order entry user interface was complicated, and doctors often relied on the phone call to communicate additional details.
Communication: Diagnostic Direct Report Integration from internal laboratories	Well integrated and used by the doctor, but navigation was difficult.	Not having features.	Not having features. Summary of the diagnostic report was entered by the junior doctor while digitizing notes.	Well integrated and used by the doctor, but navigation was difficult.
Obstetrician – Gynecologist-Specific: Private notes for documenting sexual history, marital relationship, psychological details, etc.	Not having features. Doctors used to write on the print out to keep certain details outside the EMR and restrict access by giving sharing control to patients.	Patients cannot access notes digitized about them unless they demand print out for some specific purpose. Notes with the hospital can be considered as restricted access within hospital.	Notes with the hospital can be considered as restricted access as they provided physical notes to patient. Doctors used specific symbols (metaphors) for writing private details on patient's file. Those were elaborated in digitized notes in EMR	Patients cannot access notes in EMR about them unless they demand print-out for some specific purpose. Notes with the hospital can be considered as restricted access within hospital.
Obstetrician – Gynecologist-Specific: Counseling of care	Sometimes written in EMR as part of the plan of care. Doctors mostly used to write	Verbally communicated or written on physical file. Doctors used	Verbally communicated or written on physical file. Doctors used	Verbally communicated. Doctors often noted counseling details in

(*Continued*)

Table A1. Continued.

Features	Hospital_1	Hospital_2	Hospital_3	Hospital_4
givers and support network	on print out, as it included instructions for mother/mother-in-law/husband for antenatal patients.	metaphors and symbols to take notes that can only be interpreted by others within same hospital to ensure privacy.	specific metaphors for noting details and were elaborated in digitized notes on EMR	the EMR for future reference.

Appendix B

Table A2. Supplementary notes to positionality of first author while doing field work.

Participant's identifiers (selected few)	Consulting hospital (Doctor)	Details from field notes (Nuanced positionality of researcher and researched)
Patient_1	Hospital 1 (Dr. Neeta)	Patient_1 was comfortable speaking in Hindi, and she was visiting the hospital with her husband. She used to wait for her husband to respond before sharing anything with me. Husband shared about managing her medical record file for insurance purposes. When I shared about having PCOS myself, she hesitantly mentioned having it too. She was also diagnosed with insulin resistance. Doctors told her that PCOS could be the probable reason for her infertility.
Patient_5	Hospital 1 (Dr. Neeta)	Patient_5 was visiting with her husband for antenatal follow up. She had a sore throat, so her husband responded to most of my questions. I shared that my past medical records potentially trigger my bad memories of managing PCOS. Year before, they had a bad experience and shared on record; after that, the talk took a very emotional direction. She began crying as she shared her experience of intrauterine death due to eclampsia. I held the hands of Patient_5 instantly. I switched the recorder off and apologized for reminding them of troubling memory. I could only think about God and the prayers which I could give from the end. I hugged the Patient_5, wishing them both good health.
Patient_4a and Patient_4b	Hospital 1 (Dr. Lilee and Dr. Fariya)	A group of friends, all of whom were office mates, had come for their health check-up. I shared my experience working in an IT organization with them, and that made them happy. They were candid about their experience of Ob/Gyn consultation. Patient 4b discussed the disparity between pre-marital and post-marital Ob/Gyn consultations. I am connected with Patient_4a via WhatsApp, and she had shared with me her recent experience of consultation where she felt humiliated for having delayed menstrual and was questioned about sexual activity.
Patient_9	Hospital 1 (Dr. Lilee)	Patient_9 had UTI, and she was not confident of talking to me in the presence of her husband. She even consulted the doctor alone while her husband was waiting outside.
Patient_19	Hospital 1 (Dr. Fariya)	Patient_19 had come for a regular health checkup, but her reports showed disturbed thyroid levels. She shared her concerns about PCOS and the age of marriage. She also talked to me about weight gain and facial hairs. Patient_19 mentioned that she noticed hairs on my face (around the chin) and suspected me to have PCOS too.
Patient_14	Hospital 1 (Dr. Savitri)	Patient_14 had a bad obstetrics history and was visiting with her husband for antenatal follow-up. They both worked at an academic college. They were candid and engaged in a lengthy conversation with me when they heard that I was a PhD student at premier institute.
Patient_17	Hospital 1 (Dr. Savitri)	Patient_17 had PCOS and thyroid disorders. Her experience of consulting Dr. Savitri was not so pleasant as she was unmarried and felt judged. She invited me to follow her to the cafeteria at the hospital, and we had a long conversation. After learning that I had similar encounters with the OB/GYN consultants, she expressed frustration and also warmth.
Patient_2	Hospital 2 (Dr. Reena Bhist)	Patient_2 was not comfortable talking to me and was reading something on her phone. Her husband showed interest in sharing the experience with me after knowing that I was doing a PhD at premier institute.
Patient_3	Hospital 2 (Dr. Reena Bhist)	Patient_3 was visiting for antenatal follow (second pregnancy) with her husband and two years old daughter. Initially, her husband joined over the conversation, but after some time went outside the hospital lobby.

(*Continued*)

Table A2. Continued.

Participant's identifiers (selected few)	Consulting hospital (Doctor)	Details from field notes (Nuanced positionality of researcher and researched)
		She spoke with me about opting for IVF in her previous pregnancy after learning that I have PCOS. She was diagnosed with PCOS and inevitably faced trouble with conceiving. The family of Patient_3 needed her to have a child, so she had to get IVF treatment.
Patient_4	Hospital 2 (Dr. Ashok Bhist)	Patient_4 was initially hesitant in talking to me. Her husband showed interest in sharing the experience with me after knowing that I was doing a PhD at premier institute. Patient_4 was looking at her husband before answering anything, and her husband was managing her medical records.
Patient_1- to-Patient_21	Hospital 3 (Dr. Vimala)	Patient_1's husband had a history of retinitis. Patient_2 experienced white fluid discharge from the vagina. Patient_3 and Patient_4 were not ready for TVS (Transvaginal Ultrasound). Patient_5 had a bacterial infection in the vagina. Patient_6 experienced calcium deficiency during pregnancy. In the 19th week, Patient_7 requested MTP (Male was speaking), and counseling was provided. Patient_8, a pregnant second-time mother, received counseling on tubectomy and vasectomy. At 5 weeks of pregnancy, Patient_9 believed she was 7 weeks according to her period dates. At 10 weeks pregnant, Patient_10 inquired about wearing jeans while traveling. Patient_11 and her daughter visited the clinic. A 25-year-old female, Patient_12, reported breast pain. Patient_13, a couple, actively tried to conceive. Patient_14 underwent MPT via pills but had leftover residue in the uterus. Patient_15 experienced delayed periods. Patient_16's husband worked at multi-national, and she was an employee in academic institute; they were trying to conceive for 2 months. Patient_17, age 21, had an external cyst. Patient_18, working in the IT industry, experienced delayed periods and had two health concerns. Patient_19, a G3, came for MTP and UPT. Another patient, Patient_20, had an 18-day menstrual cycle. A 21-year-old female patient, Patient_21, practiced washing and using a razor in the vaginal area.
Patient_22- to - Patient_25	Hospital 3 (Dr. Vindhya)	Patient_22 experienced missed periods; she was a young female working in IT, but her pregnancy test was negative. Patient_23 visited without paying the consultation fee; the doctor couldn't see her without an appointment, but the staff mentioned that she just wanted to talk. A pregnant patient, Patient_24, aged 28, had a follow-up visit, and the doctor advised her to avoid pineapple or papaya. Patient_25, aged 25 and UPT positive, requested me to go out of the chamber as she indicated the doctor, and the doctor asked to see her alone.

Appendix C

Table A3. Sample of quotes mapped to open and selective code categories.

Selective code	Open code	Quotes	Relation to adverse digitalization from *Jeevan Yapan* perspective
Uniform EMR Use: Structured by Biomedical Logic	*Embracing Format and Details in EMR*	*'In particular, I see this stuff [pointing at diagnosis on the print out] I know that I am normal, so I don't have concerns. I only have to take care of this deficiency, so hopefully, I will take care of it.'*	Adverse digital incorporation- Biomedical structuring in the digital system has led to a specific label ("diagnosis") that the patient, while not entirely accepting, feels they must now address, potentially shaping their understanding of their health in a way that is driven by the digital record.
		"So, if we do have records (EMR) and better instruments, in such cases, it helps us to get better clarity. As novices, laypeople, we won't be able to understand beyond a particular medical boundary. But if something is made easy through equipment, then you can understand.'	Adverse digital omission- While the EMR *exists* and is being valued (incorporation), Patient's emotional experiences are being *omitted* from the interaction (and potentially from the record itself).
	Utilizing Medical Jargon in Health Narratives	*'It's like UTI – you know, the urinary tract infection – it was a problem. Actually, I am not sure what is happening internally, so it's better to consult the doctor. This morning, I was feeling very suffocated and uncomfortable in the office.'*	The adverse digital incorporation arises because the attempt to include their experiences digitally, through a standardized biomedical lens, ultimately felt unhelpful and even discouraged further sharing.
		'EMR mentioned "require counseling" which I have to keep safe'	
	Framing Experiences within Biomedical Temporal Frameworks	*"last month period date - xx/yy (10-14 days after this date spend time together), follow-up visit after 5 weeks."*	Adverse digital incorporation, with a significant layer of adverse digital omission for the rural patients. We can see example of the digital system's biomedical structure encroaching upon and attempting to dictate personal behavior. While verbal communication led to less comprehensive and potentially less reliable form of information transfer compared to a detailed record.
		Field Note from observation of consultation Hospital_4: During the consultation, Dr. Rita inquired about the Shanti's menstrual cycle. She asked, "When were your last periods? What was the date of your previous 'Mahina' (i.e. periods)? What was the date of your previous 'Tareek,' 'Parhez' (i.e. periods)?" The patient responded by asking, "MC?"	
	Embracing EMR as Critical	*'But over here I am coming here since beginning 2015 only, and I have so many problems, so they have a note of everything. It is on computer, so she just has to put my customer ID or whatever they saw [it] and simply get all the details.'*	
Experiences Informed by Everyday living and Practices	*Traditional Norms and Roles Impeding Health Access*	*'how many calories we should eat how many calories we need and how to tell the mother of mother-in-law that you cannot eat this heavy ghee laddu or other things.'*	Adverse digital omission occurs because the EMR, with its biomedical structuring, lacks the functionality or the appropriate fields to document and convey patient's crucial social and cultural needs to her family
	Influence of Living Conditions on Health Management	*'I have to spend 50 rupees on travelling to the hospital, and since I was short of money for travel, I had to take two pills less. Then what is the use of anything, or a computer for me?'*	Here digital incorporation in a specific manner renders the digital system less useful and potentially exacerbates health inequities. This leads to a form of adverse digital incorporation where the *application* of the biomedical data is skewed by external, non-medical factors, resulting in potentially inequitable care.
		'… , if a similar-aged, married female presents with the same problem related to periods, the doctors will treat her with the intention of helping her conceive."	
	Significance of Family and Community	*"My mother-in-law believes that if I eat fruit, the child (referring to the fetus) will feel cold and may catch a cold. So, I checked with the doctor (referring to EMR and notes), and the doctor said that despite taking allopathic medicines, we should still consume fruits."*	Highlights interplay between adverse digital incorporation (of biomedical recommendations) and the patients' active negotiation of those recommendations within their socio-cultural contexts.
	Navigating Healthcare in the Face of Stigma	*"With a married person, what problem happens if you have been sexually active before your marriage, not with the same person, and if you have any problem after marriage, such as gynecological issues related to your sexual activity, periods, or ovaries, then you need to look for a new doctor. You can't go to your previous doctor … '*	Highlights the potential for adverse digital incorporation and the significant risks of adverse digital omission within EMR systems, particularly concerning sensitive aspects of sexual and reproductive health