

Log-in, Track-it and Customer-Care: Women's Perspective of Queueing Technology System in Healthcare in Kenya

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Abstract

Customer relationship management system in healthcare is a key strategy in efficient hospital services. To enhance customer relations and service in healthcare, hospitals are adopting innovative technology to improve customer satisfaction, loyalty, and profitability by acquiring, developing and maintaining effective customer relations and interactions. There are significant researches in areas such as telecommunication, banking and manufacturing but limited in healthcare in Africa. This study is an analysis of the queueing system in an outpatient clinic in Nairobi, Kenya. This study interrogates the queueing system at the healthcare facility waiting lobby from an African's women patients' perspective. The study uses the contingency theory to interrogate the perspectives the element of accommodation and advocacy service quality and culture. The study utilized the exploratory research design to interrogate these perspectives. The results show that the women patients have adopted the queueing system but still require personalized (human interaction) service when calling the patient, the use of follow-up using contact details that were used during registration. This study hopes to sensitize hospital management to evaluate the impact of the queueing system on customer experience, particularly women patients.

Keywords: Customer relations management; Queueing management system; Care, Healthcare; Communication

Introduction

Globalization and development in information technology has increased competition in customer relationship management at healthcare facilities. This competitive advantage has compelled hospitals to balance between enhancing cost savings, efficiency, quality and safety but yet provide exceptional services in line with patients' demand and expectations. Healthcare sector in Africa has an opportunity to enhance customer

service through the adoption of relevant technology in tackling poor patient experience and efficiency in care. Healthcare institutions in Kenya have to incorporate women's perspective during the adoption and adaption of customer relations management platforms. Women play a crucial role in household management, nurture, and health decision making. Kenya population census shows that women, ages 25 to 65, are 33 percent of Kenya population, thus, a target client for healthcare

facilities. Healthcare facilities, especially, outpatient private clinics are spread in selected parts within Nairobi County and one of their targets are the middle-income women and educated mothers. These well-equipped clinics are located in the carefully selected shopping malls to facilitate the middle-class woman to visit these clinics.

This study begins with an illustration of the log-in system. The lady goes to the queuing system machine, registers her mobile phone details, selects a service option, presses a button and gets a patient number which has the arrival time is recorded. The patient then waits at the clinic lobby for the queuing number to be called so as to begin the registration and consultation process. In the waiting room, there are several screens each serving a different subject and purpose. One screening news, traumatizing news, another screen advertising services and products and one showing the queuing system process. In addition, there are security CCTV cameras for surveillance, air-conditioning facilities, water and sanitizer dispensers. One encounters all these gadgets and facilities before human interaction. These are standard information technology and communication and procedures in modern private hospitals and their out-patient facilities in Kenya, to gain competitive advantage, that a middle-income woman must undergo to access medical service.

Adoption and adaption of customer relationship management studies, in Africa, interrogate customer service improvement in energy, hospitality, finance, aviation and telecommunication sectors. Cost effectiveness, enhancement of customer experience and technological innovation endorses healthcare services to introduce queuing management systems to manage customers order and service length. The queuing system in healthcare studies been undertaken in different contexts such as developed and developing nations and academic institutions whose findings patients' dissatisfaction with queuing management strategies. Leading private hospitals in Kenya are private non-profit organizations operating as healthcare facilities and academic institutions, have adopted and adapted to the queuing system service to enhance customer service management. Therefore, this study interrogates women patients' perspective on the adoption of the queuing management system at out-patient medical facilities in Nairobi from

a cultural and behavioral perspective in an African context.

The study objectives are: (1) To identify features of the queuing management system in an outpatient medical facility in Nairobi, and (2) To analyze women patients' perspectives on the adoption of queuing system in an outpatient medical facility in Nairobi.

Theoretical Framework

Studies in developing countries on healthcare technology access and utilization analyse the delicate balance between adoption challenges and customer satisfaction. Baashar, et al. (2020), assert that a group of computer and data analysts from Asia, outline three main research categories in customer relations management system and identify significant gaps in the knowledge of the system in healthcare, from an information system perspective. The scholars posit that, non-verbal characteristics such as physical interaction and cleanliness were significant factors that influence patient's choice of hospital, satisfaction, and service quality (Baashar, et al., 2020). Customer service quality studies, using a mathematical approach, on queuing management system from patient arrival to service provision time and outline patient dissatisfaction with service quality (Oladimeji & Ibidoja, 2020; Suleiman, Burodo, & Ahmed, 2022; Moyi, Gamagiwa, Olayemi, & Muhammad, 2022).

Healthcare service provision on customer satisfaction and customer relations management systems adoption and management in Africa should incorporate women's perspective as women play a crucial role in households and the aged persons healthcare management. The hospital management perceive the implementation of queuing system machines, which is a part of customer relations management (CRM), as a modern approach which seeks to learn about patients in order to communicate appropriately, build good relations by timely delivery of information, track patients, and make necessary adjustments (Benz & Paddisson, 2004). It was presumed that an effective CRM collects comprehensive data from patients through a multi-media platform at various clinical networks and integrates it with hospital information systems, call centers, and SMS-based systems with the aim of service delivery and satisfaction enhancement (Yina, 2010).

Since most studies in women and healthcare in Sub-Sahara focus on service availability, affordability and decision-making (Azuh, Adeyemi, & Oluwatomisin, 2019), maternal healthcare, female condoms use, family planning services, (Izugbara & Covan, 2014) and disruptive technology (Signe, 2021) which are undertaken by international institutions. The current study aims at interrogating women's perceptions on queueing system in out-patient private clinics as main hospitals in Kenya are adopting queueing system as part of cost effectiveness, efficient patient management and effective data management through introduction of Information technology (IT) resources such as hardware, software and infrastructure. Thus, queueing system management has become a critical part of customer relations in the service industry, beginning with out-patient clinics of main private hospitals as efficient health service access to households.

The contingency theory of accommodation was developed by Cancel, Cameron, Sallot and Mitrool (1997) to address public issues in organizations for mutual benefit through advocacy and accommodation (Lee, Hong, Kim, & MacPherson, 2022). This theory is pertinent as it integrates elements of issues management and stakeholder management in healthcare during adoption of queueing management system as it promotes issue advocacy and accommodation. Change in corporate strategy and customer service, without public participation, promotes power imbalance and client tension in business relations (Engelseth & Kritchanchai, 2017). The scholars interrogate the human interaction, power relations and environmental concerns in healthcare service supply chain which incorporates information, processes and service performance (ibid).

Theoretical Framework

Most studies use either a causal design to understand the impact of technology adoption phenomenon and experimental research design to identify a causal relationship on the queueing management system adoption in hospitals and customer satisfaction. This preliminary study adopts an exploratory design in order to gain insight on women patients' perception of queueing management system at a hospital. An exploratory study is critical in generating new ideas and theories on systems adoption and

utilizes small sample sizes. This preliminary study interviewed five professional media and communication women to interrogate their perceptions on queueing system machine in a healthcare center. The study undertook a purposive sampling technique to interview women who are tech savvy and highly educated. The in-depth telephone interviews were undertaken using an unstructured interview guide to ascertain their perspectives on adoption and adaption of the queueing management system and its impact on customer relations in a context that specializes in healthcare caring.

This being a preliminary study, the study will focus on women patients and their perception on the queuing management system at the hospital lobby, prior to accessing the consultation room.

Material and Methodology

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Result and Discussion

The preliminary findings on women perception on queueing management system, customer care and healthcare addresses three

sections: Log-in, Track-in and Care. *Log-in*, is based on an analogy of the visitors' book, but is used in healthcare for patients to sign-in in order to access health services and begin the queueing process.

All the respondents appreciated the introduction of the queueing management system in the hospital set-up as this, they believed, would enhance transparency and integrity in healthcare services. The respondents recognized that technology will transform healthcare but were reserved about the human care component, which is a key ingredient in the service industry. These reservations align with the thought that though technology may drive healthcare, care culture is human and humans must actively ensure the best outcomes for society (Thimbleby, 2013).

Customer Data and Integrated system:

One respondent, a film producer and scholar, stated that she was yet to encounter the queueing management system in a hospital. But it is important to note that the respondent had last visited a healthcare facility to escort her ailing elderly mother and recommends the use of queueing system in patient service management. However, the said respondent adds that the queueing system be integrated with other hospital service networks for effective customer relations management. An integrated system involves patient data access to medical practitioners countrywide for effective diagnosis and interpretation. This assertion promotes a unifying approach to managerial aspirations in the business operations service and customer's role in adoption strategy (Sampson & Froehle, 2006) but encroaches on data privacy which is handled in national policy. The implication of managerial decisions and corporate strategy has to incorporate symmetrical approach to customer service management, especially the women customers, a critical client in healthcare services. This data integration will generate huge amounts of patient data which may generate data analysis and promote medical science but how about more patient care?

Other respondents stated that patient data and network integration should reduce on waiting time for repeat customers. The respondent, a media and communication scholar, was dissatisfied with the process of waiting too long to access consultancy services. The respondent stated that she had to visit the medical facility the next day to access medical

consultation regarding laboratory results. This involved the *log-in process* all over again which negates effective time management. The study proposes that the mobile telephone details which are taken at the point of signing-in, be used in providing results at a minimal cost. This would accommodate both the healthcare and customer concerns and promote further repeat visits. Time management promotes mutuality between the healthcare facility and the customer, an African woman, in line with the contingency theory aspect of accommodation.

Data integration empowers women patients as it provides an option for one to seek alternative medical facilities for further medical diagnosis and interpretation. The concept of accommodation aligns with the African context and concept of reciprocity and mutuality for critical and creative interaction in customer management process, an inclusive process (Nweke, 2021).

Track-in and Healthcare

A tracking system is put in place to monitor patient movements throughout their time in hospital with the hope of serving higher volumes of patients as well as locating high-risk patients. *Queueing software navigation:* A respondent advocated for human intervention and interaction during the checking-in or queueing log-in to ensure the customer navigates through the machine options correctly and accesses the required healthcare products, services and hospital facilities.

One respondent, a film scholar, stated that she appreciated the queueing system at the maternity section as it deemed to 'promote honesty, time management and was just' and each patient concentrated on watching the tracking screen and wait for their turn. The respondent reiterated that the system discourages corruption and eases anxiety. Another respondent, a university administrator, agreed that the queueing system manages congestion and etiquette.

However, one respondent, a business management scholar, disagreed stating that often times the queueing system was manipulated for priority list clients and emergency patients access the out-patient section rather than the accidents and emergency section. In addition, the queueing system disappears after laboratory tests and on returning to the medical consultant. Thus, the

system works well in financial institutions but not at a care institution.

Institutional navigation as one moved from one section to the next. An electronic or goggle map may ease patient navigation. The respondent's preference for an integrated healthcare system would complete the innovation process. On the contrary, one respondent stated that the accommodation of human intervention in directing patients to the queueing system was critical. This perception aligns with an oral cultural orientation collectivism and trust and care in authority and guidance in contrast to the dominance and individualistic innovative process through objectivity and challenging new ideas (Dakuidreketi, 2012).

Care and Healthcare

The Oxford Advanced Learners Dictionary (2010) defines care as the attention and thought towards something or someone to avoid accidents and mistakes. The dictionary further states that care is something that is important and worth worrying about. One aspect of customer care is the provision of the television screen in waiting lobby are as a form of distraction. The following were the observations:

Communal psyche: A respondent stated that the watching together of television in the waiting area of the hospital serves as a social occasion and promotes collective psyche. The film producer stated that, while at the hospital lobby, the television topic was elections and viewers collectively commented on the presentation challenging each other amicably.

It was a good feeling to watch television together. The four other respondents seemed not to notice the television screen for news and market /service promotion but all tracked the roaster television to know their turn for service.

The media and communication scholar stated that the television screen for the various services are important even though a patient may not follow closely due to the psychological state at a given time. One respondent stated that the location of the out-patient in a shopping mall was good as it provides for an alternative during the waiting period as well as a distraction from the pain.

One stated that the communal approach should be felt in front office where one seeks

information. However, the front office did not seem to have adequate information as expected. Front office staff ought to be knowledgeable on medical services and insurance matters.

Client Identity: The business management scholar preferred personal identity when been called to the triage rather than a queueing number. The respondent further stated that the personal identification ensures that the right patient receives the right diagnosis. In addition, a media and communication scholar, stated that personal identification through name was important as one can misplace or forget the queueing number contrary to queueing at the bank for one service. Thus, patients are not good in tracking their number through the long waiting process. The other four had no problem with being tracked through the numbering system from the queueing machine.

Personalization of queueing management system: the system should decipher relevant priority needs among the healthcare clients for enhanced customer relations. A pregnant woman, a young lady, a girl with special needs may all get efficient and timely service.

Patient Follow-up: Instead of using contact information to promote healthcare products and service, the facility may use the contact information for follow-up on patient care regarding medical history. This information was able used during pandemic for contact tracing.

Personal care: Liaise the queueing number with patient's contact details for follow-up in the event a patient failed to respond to the queue number call.

Conclusions

Technology changes are going to be routine in the future but human stories about relationships, hopes, loss and grief are subjective experiences that cannot be packed within a routine process. Technology is market driven but human culture and care still remains the best investment in hospital care.

Tom Landauer's book on the *Trouble with Computers* posits that technology is successful in areas where there is commonality such as banking, stock control and office administration but less success in areas that depend on human care.

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