Moderating Effect of Mobile Technology on the Relationship Between Health Systems Governance and Service Delivery in National Referral Hospitals in Kenya

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Abstract
In recent years, there is an increased attention to build formidable health systems governance to promote the highest attainable standard of health service delivery which has become a fundamental part of our human rights and of our understanding of a life in dignity. The health systems governance through the establishment of health policy has taken on increasing importance in the provision of health care services in the health institutions. The public hospitals in Kenya have weak health systems governance attributed to the existing health policy affecting quality healthcare. The current study sought to examine the moderating effect of mobile technology on the relationship between health systems governance and service delivery in National Referral Hospitals in Kenya. The study was anchored to the Contingency Leadership Theory. The study identified six categories of the target respondents, namely, 5 directors, 43 board members and 88 head of departments. The study used regression analysis to analyze the association between the variables at 0.05 level of significance. Results revealed that mobile technology positively and significantly moderated the relationship between health systems governance and service delivery in national referral hospitals in Kenya. The results support the current theories related to the study. Consequently, this study provides national referral hospitals with insights of how to improve health care service delivery through the adoption of appropriate mobile technology and health systems governance in the national referral hospitals. This could go a long way in ensuring there is improved service delivery in the national referral hospitals in Kenya. The implications of the study are that the moderating effect of mobile technology on the relationship between health systems governance and healthcare service delivery in Kenyan hospitals can lead to positive outcomes such as improved communication, data management, and patient-centered care. However, it also presents challenges that need to be carefully addressed through appropriate governance mechanisms. The successful integration of mobile technology requires a comprehensive and adaptive approach to healthcare governance in the national referral hospitals in the country.

Introduction
Background
As awareness of the role governance in the performance of health systems has increased, so has the need to come up with systematic means to evaluate governance shortcomings to develop adequate interventions to improve health care service delivery [1]. Responding adequately to the health needs of a
population requires not only health systems governance but also technology to enhance timely and efficient delivery of preventive and curative services. This is all the more meaningful as it is often found that in those settings where health needs are the greatest, the technology capacity of the state to implement policy is limited. The acknowledgement that successful healthcare delivery requires effective technology and health systems governance has led government officials, academics and international donors alike to emphasize governance as a key element in the quest for practical solutions for strengthening health systems [2].

The health system governance and technology are undertaken with the objective to protect and promote the health of the people. Governance involves; setting strategic direction and objectives; making policies, laws, rules, regulations, or decisions, and raising and deploying resources to accomplish the strategic goals and objectives; and overseeing and making sure that the strategic goals and objectives are accomplished [3].

Mobile technology, the use of mobile computing and communication technologies in health care and public health, is a rapidly expanding area within e-health. There is considerable enthusiasm for mobile-health interventions and it has been argued that there is huge potential for mobile-health interventions to have beneficial effects on health and health service delivery processes, especially in resource-poor settings [36]. This is the application of mobile device(s) and medical or clinical application(s) run on the device by physicians in a hospital domain, for communication, collaboration, and coordination of the physician’s healthcare delivery daily activities in hospital premises including diagnosis, treatment, and disease management [4].

Statement of the Problem

In recent years, there is an increased attention to adopt mobile technology to build formidable health systems governance to promote the highest attainable standard of health service delivery which is a fundamental part of our human rights and enhancing a life of dignity [5]. According to WHO (2021) mobile technology and health systems governance has taken on increasing importance in the provision of health care services in the health institutions. Nevertheless, the situation in Kenya presents a very difference scenario all together. Specifically, a report by UNESCO (2018) revealed a sharp increase in the number of revivals of referral hospitals in Kenya over the last eight years to deliver health care services. However, there are poor health care services in the most of these public hospitals due to low level of health systems governance because of a challenge of adoption of appropriate technologies [5]. This has posed imminent challenges by stakeholders reaching a consensus and communicating a clear agenda on how to improve functional technology and health systems governance to enhance healthcare services in Kenyan public hospitals [6].

Moreover, various studies have been carried out on the health systems governance in the context of enhancing health care service delivery [7,8,9] in their study on mobile technology and health systems governance reports that there is a general lack of understanding of the role of mobile technology on health systems governance and health care service delivery. This is further echoed by Mohamoud et al. (2018) noted that there is a potential benefit of mobile technology on the health systems governance implementation in public hospitals and concludes that limited attempts have been made to ascertain reasons for the observed levels of adoption technology and therefore notes of inadequacies in strategies to promote health systems governance in Kenya [32]. It is due to this knowledge gap that the current study focused on assessing the moderating effect of mobile technology on the relationship between health systems governance and service delivery in national referral hospitals in Kenya.

Research Objective

The objective of the study sought to examine the moderating effect of mobile technology on the relationship between health systems governance and service delivery in national referral hospitals in Kenya.

Research Hypothesis

The study hypothesized that H0: Mobile technology does not moderate the relationship between health systems governance and service delivery in national referral hospitals in Kenya.

Theoretical Review

The current study was based on the Technological Acceptance Theory (TAT). It is a technological theory that models how users come to accept and use technology [33]. M-health in itself is a technology driven approach that aims at solving health related problems in the community and therefore it is important to subject it to the theoretical technological models that have been studied before concerning technological innovations and adoption. The theory suggests that when users are presented with a new technology, there are a number of factors influence their decision about how and when they will use it e.g. Perceived usefulness (PU) –Fred Davis defined this as the degree to which a person believes that using a particular system would enhance his or her job performance. Perceived ease - of- use (PEOU) - Davis defined this as the degree to which a person believes that using a particular system would be free from effort [33].

Mobile technologies include mobile phones; personal digital assistants (PDA) and PDA phones (e.g., BlackBerry, Palm Pilot); Smartphones (e.g., iPhone); enterprise digital assistants (EDA); portable media players (MP3-players and MP4-players, e.g., iPod);
handheld video-game consoles (Playstation Portable (PSP), Nintendo DS); and handheld and ultra-portable computers such as tablet PCs (e.g., iPad and Smartbooks). These devices have a range of functions from mobile cellular communication using text messages (SMS), photos and video (MMS), telephone, and World Wide Web access, to multimedia playback and software application support. Technological advances and improved computer processing power mean that single mobile devices such as smart phones and PDA phones are increasingly capable of high level performance in many or all of these functions [5]. Mobile health interventions designed to improve health care service delivery processes have been used to provide support and services to health care providers (such as education, support in diagnosis or patient management) or target communication between health care services and consumers (such as appointment reminders and test result notification) [34]. The features of mobile technologies that may make them particularly appropriate for improving health care service delivery processes relate to their popularity, their mobility, and their technological capabilities. The mobility and popularity of mobile technologies means that many people carry their mobile phone with them wherever they go [10]. This allows temporal synchronisation of the intervention delivery and allows the intervention to claim people's attention when it is most relevant. For example, health care consumers can be sent appointment reminders that arrive the day before and/or morning of their appointment [5]. Real-time (synchronous) communication also allows interventions to be accessed or delivered within the relevant context, i.e., the intervention can be delivered and accessed at any time and wherever it is needed. For example, at the time health care providers see a patient, they can access a management support system providing information and protocols for management decisions to whomever requires them. This application could be particularly relevant for providing clinical management support in settings where there is no senior or specialist health care provider support or where there is no such support at night or at weekends. As mobile technologies can be transported wherever one goes, interventions are convenient and easy to access [11]. The Technology Acceptance Theory (TAT) was adopted to expound on the moderating effect of mobile technology on the relationship between health systems governance and service delivery in the national referral hospitals in Kenya.

**Conceptual Model and Hypothesis**

A conceptual framework is a diagrammatical representation that shows the relationship among study variables [35]. Linked to the problem statement, the conceptual framework for the current study is used to concisely describe the study variables setting the stage for presentation of the specific research objectives and research hypotheses that drive the research assessment, accompanied by visual depiction of the study variables and their measurements as depicted in Figure 1. The current study hypothesizes that health policy, social accountability, oversight institutions; stakeholder participation linearly and directly influences service delivery in the national referral hospitals in Kenya. The independent variables are health policy, social accountability, oversight institutions, stakeholder participation.

[Figure 1: Conceptual Framework]

Dependent variable is service delivery in the national referral hospitals in Kenya. Health policy is conceptualized as; strategic plan, health reforms and legislative framework. The social accountability is depicted by information campaigns, complaint social audits and public hearings. Oversight institutions comprises of public expenditure tracking systems, complaint mechanisms and monitoring. Stakeholder participation is constituted as participatory budgeting, partnerships and advisory. The mobile technology is conceptualized as social media, mobile insurance and mobile app. Service delivery in the national referral hospitals is conceptualized as accessibility of services, efficiency of services, quality of services, timeliness of services and affordability (cost) of the services in the referral hospitals. The conceptual framework is illustrated in Figure 1.

**Literature Review**

Mobile technology, the use of mobile computing and communication technologies in health care and public health, is a rapidly expanding area within e-health. There is considerable enthusiasm for mobile-health
Interventions and it has been argued that there is huge potential for mobile-health interventions to have beneficial effects on health and health service delivery processes, especially in resource-poor settings [36]. This is the application of mobile device(s) and medical or clinical application(s) run on the device by physicians in a hospital domain, for communication, collaboration, and coordination of the physician’s healthcare delivery daily activities in hospital premises including diagnosis, treatment, and disease management [4]. Digital technologies, such as mobile wireless technologies, have the potential to revolutionize how populations interact with national health services. Digital health and specifically mHealth have been shown to improve the quality and coverage of care, increase access to health information, services and skills, as well as promote positive changes in health behaviours to prevent the onset of acute and chronic diseases [12]. With time, the mHealth applications will be used by all people regardless of their education level or social classes. They will remotely monitor their health information, consult their doctors, see their high quality health-related images and videos whenever and wherever they want, and use the valuable applications to control their health at home which will result in healthier communities in the developing world [11].

In low income countries, the primary focus is on reducing health care costs, optimizing assets utilization and efficiency, delivering higher quality of care, and improving patient experience [4] SSA, the focus is in improving access to basic health care, remote diagnosis, remote monitoring and prevention; followed by access to health-related information, quality and effectiveness of service delivery, and reducing the shortage of well-educated health care professionals [13]. As mobile phones become widespread in Kenya, continued effort towards attaining efficient pro-poor health care requires an integrated approach, strategic partnerships and new business models [14]. Mobile health applications (m-Health apps) play an increasingly important role in the digitalization of nationwide healthcare services for better health outcomes due to the ubiquity of smartphones in society [15]. Although literature agrees on the considerable potential of m-Health apps, the current adoption of m-Health apps is still low [13,14]. Furthermore, the retention rate of actual m-Health app users is comparatively low. Due to the plethora of available m-Health apps [37,38], there is a wide variability in quality and key features of the apps [15]. Because of this abundance, users struggle to identify appropriate, secure, and trustworthy m-Health apps that fulfill their specific needs [39]. To overcome this challenge, several authors suggest to better involving relevant stakeholders to the app development process [40,41].

With the adoption of the 2010 constitution and the onset of devolution, Kenya’s governance architecture and political environment changed dramatically. Under the new constitution, a range of political, administrative and financial functions have been delegated to 47 semi-autonomous counties established after the 2013 elections. These changes have entailed substantial changes in the health sector’s governance structures, with the national level remaining responsible for overall leadership and regulatory and policy guidance, while county governments have assumed responsibility for health service delivery. In June 2017, parliament passed a new health law, the Health Act No.21 of 2017, bringing scattered pieces of health legislation together under one unified framework. The new law, which is more intentional, establishes a rights-based approach to health, clarifies the roles of national and county governments, creates new regulatory bodies, and provides guidance on issues such as health financing and private sector participation. However, the Health Act has not been disseminated and, therefore, the proposals on new regulatory bodies and mechanisms have not been fully instituted.

According to Health System Assessment (HSA) (2019) report, it was recommended that in order to improve adoption of health governance systems, there is need to strengthen health sector management structures at county level and build counties’ capacity, including their ability to frame necessary health laws and integrate civil society in the decision-making process by improving the effectiveness of coordination bodies (for example, the HSIF and the department of Health Sector Coordination and Intergovernmental Relations. There is need to improve enforcement of health laws and norms, especially in the private sector by actively engaging the private sector through the partnership framework and establishing a mechanism to bring all regulatory bodies into one policy dialogue space. The report also recommends that there is need to disseminate the Health Act, 2017 and raise awareness of the mandate and responsibilities of the new authority.

Social accountability is gaining rapid acceptance as a way to address health systems inefficiencies and improve basic public health performance, including planning and service delivery, and to contribute to the attainment of the highest possible standards of health [5]. Social accountability is a participatory process in which citizens are engaged to hold politicians, policy makers and public officials accountable for the services that they provide [16]. In the context of health care, social accountability is a form of participatory citizen engagement in which citizens are recognized as service users who are ultimately impacted by health care decisions and thereby can affect change in health...
policies, health services and/or health provider behaviour through their collective influence and action [17]. Although global accountability standards play an important guiding role, the successful implementation of global health initiatives depend on national context [1].

Blake, Annorbah-Sarpei and Bailey (2016) study on whether engaging multiple health and non-health stakeholders resulted in improvements [42]. They documented that engaging a broad range of stakeholders, including citizens, in social accountability initiatives targeting local health facilities can lead to improvements in maternal and newborn health services due to a heightened sense of shared ownership. They also identified higher levels of community engagement in districts where the chiefs of maternal and newborn health councils were engaged [18]. Social accountability approaches, such as the community scorecard (CSC), can improve the performance of health systems in low-income countries by providing a mechanism for obtaining and incorporating community input [10]. The implementation of a community scorecard approach enhances a culture of social accountability, transparency, and engagement of citizens in planning, implementing, and evaluating maternal, neonatal, and child health services. In addition, it improves the negotiation capacities and involvement of both community members and health workers, resulting in increased availability and utilization of health service [19]. Program managers and development partners should continue their support for the government-led social accountability interventions to ensure the sustainability of improvements in maternal, neonatal, and child health outcomes [20].

The recurring problems with patient safety have led to a growing interest in helping hospitals’ governing bodies provide more effective oversight of the quality and safety of their services [21]. As corporate entities with statutory oversight responsibilities, hospital governing boards are accountable for the overall quality and safety of the care their hospitals provide. They therefore have a fundamental governance role in the oversight of quality and safety, by defining priorities and objectives, crafting strategy, shaping their culture, and designing systems of organizational control. However, recurrent problems with quality and patient safety on both sides of the hospitals have raised concerns about the boards’ ability to discharge these duties with appropriate effect [22].

According to Bhatt and Bathija (2018) the boards of medicine play an important role in regulation and oversight, even though the information they work with is limited to patient complaints, limited retrospective record review and interviews [43]. Moreover, they have only blunt instruments at their disposal as remedies. They can take actions at the licensing level, such as limiting, revoking or suspending a license, or requiring treatment for alcoholism or drug addiction [24]. Boards are effective in suspending, revoking, or limiting licenses and in refusing to grant or renew licenses of physicians who are obviously incompetent, convicted of fraud or other felony, alcoholic or impaired by substance abuse. Boards are also reasonably effective in limiting the practices of physicians who improperly prescribe or dispense opioid drugs, or inappropriately dispense medical marijuana certificates, and in disciplining physicians who have been found to have engaged in improper sexual conduct involving patients or trainees [23].

Quality health care services involve a combined effort among health care staff and stakeholders to diagnose and treat problems in the health care system [44]. Stakeholder participation from varied organizational levels is essential to successful healthcare quality improvement. Norris, White, Nowell and Mrkals (2017) study highlighted the commonalities of how stakeholders in a large healthcare system defined engagement a shared understanding and terminology to guide and improve stakeholder engagement [45]. Overall, engagement was an active and committed decision-making about a meaningful problem through respectful interactions and dialog where everyone’s voice is considered.

O’Rourke, Higuchi and Hogg (2016) study focused on stakeholder participation in system change: A new conceptual model [46]. The perspective on stakeholder participation that includes both those who supported the proposed change and those who advocated for a different change were presented. The findings identify stakeholder activities used to shape, share, and protect their visions for system change. The conceptual model presented in this study adds to the understanding of challenges and complexities involved in healthcare system change. Understanding why and how stakeholders participate in change can help healthcare leaders in planning activities to enhance stakeholder involvement in healthcare system change. Mbuthia, Mbuthia, Molyneux and Njue (2019) findings on the Kenyan health stakeholder views on individual consent, general notification and governance processes for the re-use of hospital inpatient data to support learning on healthcare systems; identified the key role stakeholders play to enhance quality of health care to the patients in the health facilities [25].

Abuya, Obare and Matanda (2018) study on the stakeholder perspectives regarding transfer of free maternity services to National Health Insurance Fund in Kenya: Implications for universal health coverage; found out that stakeholder can assist to achieve UHC, eliminating dependency on free services, and encouraging people to take responsibility of their...
health. However, skepticism regarding the efficiency of NHIF may limit support [26]. Diverse and robust systems were recommended for enrollment of clients while standardization of services through accreditation and quality assurance linked to performance-based reimbursement would improve greater predictability in the payment schedule and better coverage of referrals and complications. Wandabwa & Yusuf (2019) indicated form their study that there is need for understanding stakeholder Interests in projects as these impacts on the way the health project performs. Stakeholders’ communication is an essential basic tool which project performance relies on [27]. The stakeholders should be actively engaged throughout the project cycle with emphasis on the monitoring and evaluation which ensures the project goals and deliverable are within the scope.

**Research Methodology**

The study adopted a descriptive design, which took into consideration of the analysis of the relationship between health policy as a health systems governance aspect and service delivery in the referral hospitals in Kenya. A descriptive research design was useful in capturing unbiased representation of perceptions and experiences research design enables the researcher to fully describe the moderating effect of mobile technology on the relationship between health systems governance aspects influencing service delivery national referral hospitals in Kenya. This study was based on the positivism philosophy. Positivism is a philosophy that seeks real facts of social phenomena that are objective, neutral and predictable with little regard for the subjectivity of individuals (Argaw, Desta, & Mamo, 2021). The target population was based on Ministry of Health on Health Systems Assessment report (2020) listed national referral hospitals in Kenya to include Kenyatta National Hospital; Moi Teaching and Referral Hospital; National Spinal Injury Hospital; Mathari National Teaching & Referral Hospital; and Kenyatta University Teaching and Referral Hospital. The study identified six categories of the target 136 respondents, namely, 5 directors, 43 board members and 88 head of departments of the national referral hospitals in Kenya. The study adopted census to collect data from the respondents. Data was collected by use questionnaires as the data collection instruments. Pilot study was carried out to pre-test the research instrument to establish its validity and reliability.

**Results**

Under this section regression analysis was run in order to validate whether mobile technology influenced the relationship between health systems governance and service delivery in national referral hospitals in Kenya. The study hypothesized that;

**H₀: Mobile technology does not significantly moderate the relationship between health systems governance and service delivery in the national referral hospitals in Kenya.**

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 Z + \beta_6 X_1 Z + \beta_7 X_2 Z + \epsilon, \]

Where \( Y \) = Service delivery in national referral hospitals in Kenya,
\( X_1 \) is Health Policy, Social Accountability (X₂) Stakeholder Participation (X₃) and Oversight Institutions (X₄), Z is Mobile technology and \( BZ \) i is the coefficient of \( X_i * Z \) the interaction term between mobile technology and each of the independent variables for \( i = 1,2,3,4 \).

<table>
<thead>
<tr>
<th>Change Statistics</th>
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<tr>
<td>Model</td>
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<td>1</td>
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<td>2</td>
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</table>

Model 1 represents the regression model with the independent variables (1 is Health Policy (X₁), Social Accountability (X₂) Stakeholder Participation (X₃) and Oversight Institutions (X₄), Z is Mobile technology as a predictor. As shown in Table 1, the moderator as a predictor was significant in the model. This shows that the joint relationship between health systems governance and service delivery in the national referral hospitals in Kenya with mobile technology as a predictor was significant (F (4, 106) =113.584, p < 0.001). With \( R^2 = 0.814 \), the results indicate that the percentage of variation accounted for by the model increased from 81.40% to 82.60% (see Table 1). This means that when the moderator (mobile technology) was introduced as a predictor in the joint model, the model gained 1.20% of its predictive power. Further, to measure the validity of the model, Table 2 indicate F-statistics model 1 \( F(4,106= 292.515, p-value < 0.001) \) show that there is a significant relationship between 1 is Health Policy (X₁), Social Accountability (X₂) Stakeholder Participation (X₃) and Oversight Institutions (X₄), Z is Mobile technology and service delivery in the national referral hospitals in Kenya and at least one slope (β coefficient) is not zero. Also when mobile technology was added into the analysis, the resulting model (Model 1) was statistically significant.
(p-value < 0.001) suggesting that mobile technology is a significant predictor of service delivery in the national referral hospitals in Kenya.

Finally, when the product terms were introduced into the analysis (Model 2), the F-statistics \( F(9,101 = 53.277, p \text{-value} < 0.001) \), the model was statistically significant suggesting that independent variables (Health Policy \((X_1)\), Social Accountability \((X_2)\) Stakeholder Participation \((X_3)\) and Oversight Institutions \((X_4)\), \( Z \) is Mobile technology) are significant predictors of service delivery in the national hospitals in Kenya. Further, Model 2 represents the regression model with the independent variable, the moderating variable and the interaction term.

The results in Table 3 indicates that the inclusion of the interaction term resulted into an increase of \( R^2 \) by 1.20% \( F(9,101 = 53.277, p \text{-value} < 0.001) \). The model was also significant (\( p < 0.001 \)) showing the presence of moderating effect. Using the results in Table 3, The null hypothesis (\( H_0: \beta_1 = 0 \)) is therefore rejected \( F(9,101 = 53.277, p \text{-value} < 0.001) \) and conclude that mobile technology has a significant moderating influence on the relationship between health systems governance and service delivery in the national referral hospitals in Kenya.

Finally, Table 3 for model 1 showed the Beta coefficient for health systems governance aspects as a predictor was significant (\( \beta = 0.488, t = 2.178, p < 0.05 \)), meaning that for one unit increase in health systems governance index, service delivery in the national referral hospitals in Kenya increases by about 0.488 units. The model equation is:

\[
Y = 0.432 + 0.334X_1 + 0.288X_2 + 0.356X_3 + 0.411X_4 + 0.404Z + 0.376X_1*Z + 0.345X_2*Z + 0.387X_3*Z + 0.489X_4*Z
\]

Besides, the study found that mobile technology does significantly moderate the relationship between health systems governance and service delivery in the national referral hospitals in Kenya (\( p<0.001 \)). The results revealed that mobile technology has a significant moderating influence on the relationship between health systems governance and service delivery in the national referral hospitals in Kenya.

### Table 2: ANOVA for Joint Moderated Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
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<tbody>
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<td>1 Regression</td>
<td>1451.626</td>
<td>4</td>
<td>355.406</td>
<td>113.584</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>331.699</td>
<td>106</td>
<td>3.129</td>
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<tr>
<td>Total</td>
<td>1783.325</td>
<td>110</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2 Regression</td>
<td>1473.026</td>
<td>9</td>
<td>163.669</td>
<td>53.277</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>310.299</td>
<td>101</td>
<td>3.072</td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>1783.325</td>
<td>110</td>
<td></td>
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</tr>
</tbody>
</table>

### Table 3: Regression Coefficients for Joint Moderated Model

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<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>12.565</td>
<td>.912</td>
<td>13.777</td>
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<tr>
<td></td>
<td>Health Policy</td>
<td>.745</td>
<td>.198</td>
<td>.632</td>
</tr>
<tr>
<td></td>
<td>Social Accountability</td>
<td>.666</td>
<td>.217</td>
<td>.611</td>
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<tr>
<td></td>
<td>Stakeholder Participation</td>
<td>.799</td>
<td>.176</td>
<td>.703</td>
</tr>
<tr>
<td></td>
<td>Oversight Institutions</td>
<td>.826</td>
<td>.137</td>
<td>.819</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>.432</td>
<td>.178</td>
<td>.242</td>
</tr>
<tr>
<td></td>
<td>Health Policy</td>
<td>.334</td>
<td>.109</td>
<td>.329</td>
</tr>
<tr>
<td></td>
<td>Social Accountability</td>
<td>.288</td>
<td>.124</td>
<td>.267</td>
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<tr>
<td></td>
<td>Stakeholder Participation</td>
<td>.356</td>
<td>.098</td>
<td>.346</td>
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<td></td>
<td>Oversight Institutions</td>
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<tr>
<td></td>
<td>Health Policy.* Mobile Technology</td>
<td>.376</td>
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<td></td>
<td>Social Accountability.* Mobile Technology</td>
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<td>.323</td>
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</table>
Discussion of the Findings

The study findings are in tandem with the findings by Vincent and Gilles (2016); Koragerous et al. (2018) revealed that the integration of mobile technology improves communication and coordination among healthcare professionals and administrators. The mobile devices facilitate real-time sharing of information, leading to better decision-making and coordination in healthcare service delivery. The study results also corroborate with the findings by Magrabi et al. (2019) that mobile technology enhances Data Management and Information Systems. It contributes to more effective health information systems, improved data collection, analysis, and reporting. The study findings are in tandem with the findings by Thies, Anderson and Cramer (2017), which revealed that mobile technology enhances Data Management and Information Systems. It contributes to more effective health information systems, improved data collection, analysis, and reporting. Moreover, in terms of the overall governance strategies, the study corroborates the findings by Masefield, Msosa and Grugel (2020) that mobile technology empowers the healthcare providers. The findings of the study suggested that healthcare providers feel empowered through the use of mobile technology, allowing them to deliver services more efficiently. It was also seen as a tool that streamlines tasks, reduces administrative burdens, and enhances the overall capacity of healthcare professionals.

Further, Leigh and Ashall-Payne (2019) established a positive outcome related to patient-centered care, where patients have better access to information and healthcare services through mobile technology. Mobile applications and telemedicine may contribute to improved patient satisfaction and engagement. Findings may indicate that mobile technology has the potential to bridge gaps in healthcare access, especially in underserved and remote areas. However, there might be disparities in access that need to be addressed to ensure equitable healthcare services. Nisbett (2017) noted that it has impact on governance practices since mobile technology influences governance practices within health systems. This could involve changes in decision-making processes, policy formulation, and overall governance strategies. Moreover, in terms of the economic considerations, the study corroborates the findings by Thies, Anderson and Cramer (2017) that integrating mobile technology into healthcare systems, including cost-effectiveness and return on investment. Cost considerations may play a role in the scalability and sustainability of mobile technology solutions.

Conclusion and Recommendations

The study concluded that mobile technology significantly moderated the relationship between health systems governance and service delivery in the national referral hospitals in Kenya. Therefore, based on the study findings, the study concludes that there is a need to develop and implement Robust Health Information Systems, promote training and capacity building, establish clear regulatory frameworks, encourage collaboration and communication, prioritize patient-centered care, address infrastructure challenge such as invest in the necessary infrastructure to support the widespread adoption of mobile technology in healthcare settings. There is need to ensure that hospitals and healthcare facilities have reliable internet connectivity and the necessary hardware and software resources. The management of the national referral hospitals should collaborate with Technology Partners both in the private and public sectors, to leverage their expertise and resources in implementing mobile technology solutions. Foster partnerships that support innovation and the development of tailored solutions for the Kenyan healthcare context. Thus, these recommendations collectively aim to harness the potential benefits of mobile technology while addressing the challenges and ensuring that the integration aligns with the goals of the healthcare system in Kenya. It’s crucial to approach the implementation of mobile technology with a strategic and adaptable governance framework that considers the unique context of the country’s healthcare landscape.

References


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