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Moderating Effect of Demographic Factors on the Relationship Between Digital Health and Universal Health Coverage Equity in Kenya

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Abstract

Digital health, encompassing tools and platforms that enhance healthcare access, has demonstrated potential for advancing Universal Health Coverage (UHC). However, demographic factors such as age, gender, income level, geographic location, education, and digital literacy significantly influence the equitable adoption and impact of these technologies. The objective of this research was to evaluate how these demographic variables moderate the relationship between digital health and equitable UHC access. A quantitative approach was adopted, employing exploratory and confirmatory factor analysis, structural equation modeling, and path analysis to test the hypotheses. The study utilized survey data from 348 respondents in Makueni County. Key findings revealed that equitable access was strongly influenced by demographic variables, as depicted in their high R^2 values with age ($R^2 = .85$), gender ($R^2 = .89$), income ($R^2 = .84$), education ($R^2 = .92$), location ($R^2 = .77$), and digital literacy ($R^2 = .80$). A regression analysis revealed that demographic factors significantly moderated the relationship between digital health and equitable access to universal health coverage, $p = .033$. Given that the p-value was below the conventional alpha level of .05, the findings suggest a statistically significant moderation effect of demographic characteristics on the relationship between digital health and equitable UHC access. From the foregoing, the study recommends investing in digital infrastructure in rural areas, enhancing affordability through subsidies, and integrating digital literacy programmes to bridge disparities. Policymakers should adopt targeted strategies to address demographic disparities, ensuring that digital health technologies serve as equitable enablers for UHC in Kenya and similar contexts.

Keywords: Digital health, Universal health coverage, Demographic factors, Equitable access

Introduction

The goal of universal health coverage (UHC) is to guarantee that everyone, regardless of their income, has access to necessary medical treatment. Significant gaps in healthcare access still exist, especially in low- and middle-income nations, despite international promises to achieve universal health coverage (UHC) as specified in the Sustainable Development Goals (SDGs) (World Health Organization, 2021). In Kenya, UHC is still a top priority but systemic issues such socioeconomic disparities, inadequate funding, and lack of infrastructure make it difficult for everyone to have equitable access to healthcare (Bloom et al., 2023). Innovative strategies that use digital health technologies to close gaps in healthcare delivery are needed to address these inequities.

Digital health, which includes technologies like electronic health records, telemedicine, mobile health (mHealth), and health information systems, is a powerful tool for addressing healthcare disparities (Koehle et al., 2022). These innovations enhance healthcare delivery, expand access to remote areas, and enable real-time health data collection, promoting more equitable outcomes (World Health Organization, 2021). However, adoption of digital healthcare systems lacks consistency across healthcare facilities with factors like age, gender, education, income, location, and digital literacy playing a significant role in its impact (Campanozzi et al., 2023). This digital divide creates a significant challenge for achieving equitable UHC, particularly in rural regions like Makueni County, Kenya.

The difficulties in attaining fair access to healthcare are clearly illustrated in Makueni County situated in southeast Kenya. Due to a preponderance of rural residents, poverty, a lack of digital literacy, and limited health infrastructure, there are significant gaps in access to healthcare services (Mulandi et al., 2024) within the county. Digital health programmes have demonstrated promise in enhancing health outcomes, including the deployment of mHealth applications for maternal and child health and digital platforms for managing chronic diseases (Till et al., 2022). The most vulnerable people, however, often do not experience these interventions because of contextual and demographic constraints. This emphasises the necessity of evaluating how demographic variables influence the connection between equitable access to UHC and digital health.

Numerous studies have shown that demographic characteristics have a substantial impact on healthcare consumption and availability. For instance, geographic location influences internet connectivity and accessibility to medical facilities, both of which are essential for utilizing digital health interventions (Onsongo et al., 2023). While gender dynamics frequently impact decision-making and access to healthcare resources, income levels and education define an individual's capacity to comprehend health information and afford digital tools (Abdullahi et al., 2024). Additionally, age and digital literacy are important factors in the adoption of digital health technology; younger, more educated, and urban people are more likely to gain from these advancements (Hung & Katapally, 2025). These differences highlight how crucial it is to include demographic factors in digital health interventions to improve their efficacy and equity. Therefore, this study examines how variables such as age, gender, income, education, geographic location, and digital literacy moderate access dimensions, including availability, affordability, coverage, and utilization.

Background

Digital health interventions are acknowledged as essential facilitators of Universal Health Coverage (UHC) on a global scale and in this regard, recent years have seen a growing interest in the role that digital health can play in promoting healthcare equity. For instance, Koehle et al., (2022) pointed out that telemedicine and mobile health (mHealth) technology reduced socioeconomic and geographic gaps, especially in underprivileged areas. They emphasised that health information systems guaranteed fair access to healthcare and enhanced service delivery. These advantages, however, depended on removing structural obstacles including sociodemographic inequalities and infrastructure constraints.

Digital health solutions have been implemented with varying degrees of success in sub-Saharan Africa. While electronic medical records have increased service efficiency in metropolitan regions,

rural areas still face issues such as poor digital literacy and insufficient internet connectivity, according to (Campanozzi et al., 2023). According to Onsongo et al. (2023), geographical and income gaps substantially impede the use of digital health platforms in Kenya. These results highlight the necessity of focused efforts to remove context-specific obstacles to the adoption of digital health.

Local studies in Kenya have examined the link between digital health and demographic factors (Wambua et al., 2025). While mHealth applications have improved maternal and child health outcomes, they often do not reach low-income populations. Further, gender dynamics, such as decision-making roles and cultural norms, add complexity to accessing digital health services (Abdullahi et al., 2024). These findings align with global research, which underscores the crucial role demographic factors play in determining health equity outcomes.

The impact of demographic factors on digital health adoption has been largely emphasised not limited only in Kenya, but across the globe. A study in India for instance found that income and education were key predictors of digital health usage, with wealthier and highly educated individuals more likely to adopt these technologies (Inampudi et al., 2024). In Western Uttar Pradesh, Aslam et al. (2024) observed that while digital health tools like telemedicine and mobile health services have improved healthcare accessibility, challenges such as digital literacy, internet connectivity, and inadequate infrastructure remain. Similarly, (Hung and Katapally, 2025) found that younger populations in urban areas were more likely to adopt digital health technologies, aligning with broader global trends. While Stoumpos et al. (2023) reveal that individuals with higher digital literacy are more adept at navigating health platforms and accessing services, disparities in digital literacy still remain a major barrier to equitable healthcare access (Hung & Katapally, 2025).

On the other hand, high costs of digital tools and internet services disproportionately impact low-income populations according to the World Health Organization, with local studies confirming affordability as a major barrier for many Kenyan households in accessing digital health services (Onsongo et al., 2023; Wambua & Oduor, 2024). Further, women in rural Kenya face additional obstacles to accessing digital health services, such as cultural restrictions and limited financial independence (Abdullahi et al., 2024). Moreover, rural areas in Kenya, such as Makueni County, often suffer from poor infrastructure and limited healthcare access (Mulandi et al., 2024). Therefore, income disparities, gender dynamics, and geographic disparities, significantly influence access to digital health solutions, and remain challenges echoed in global research (World Health Organization, 2021).

Methodology

This study employed a cross-sectional survey design with a quantitative approach to research examining the moderating effect of demographic factors on the relationship between digital health and equitable access to UHC in Makueni County, Kenya. The cross-sectional survey design allowed for the collection of data at a single point in time (Saunders et al., 2019). This method was chosen due to its effectiveness in capturing relationships among study variables and providing a snapshot of the current state of digital health adoption and UHC access.

The target population, in this case, Makueni county population was estimated to be 987,653 people according to the 2019 Kenya population and housing census (KNBS, 2019). Further, according to the Makueni county UHC policy of year 2022, 34.6% of the population in Makueni county was

not covered by any prepayment plan and was likely to suffer financial hardship, informing the study percentage of the target population proportion of the total population estimated to have the characteristics being measured. Therefore, from the Cochran (1977) formula, $n = (Z^2pq)/d^2$, and the corresponding tabulations, $n = (1.96^2 \times (0.346) \times (1\text{-}0.346))/ 0.05^2$, the sample size for this study was three hundred and forty-eight (n = 348).

Data was collected using structured questionnaires, which were designed to measure variables such as demographic factors (age, gender, income, education, geographic location, and digital literacy), digital health adoption, and UHC access dimensions (availability, affordability, coverage, and utilisation). The questionnaire items were pre-tested to ensure validity and reliability, and adjustments were made based on feedback from a pilot study.

The data analysis involved both descriptive and inferential statistics. Descriptive statistics, such as means, standard deviations, and frequency distributions, were used to summarise the data. Inferential analyses included structural equation modeling and path analysis, which were employed to test the hypothesised relationships between variables and examine the moderating effect of demographic factors. Diagnostic tests, such as normality, multicollinearity, and heteroscedasticity, were conducted to validate the assumptions of the statistical models. The findings were interpreted within the context of existing literature to provide insights into the role of demographic factors in shaping the impact of digital health on equitable access to UHC.

Results

A total of 348 respondents participated in the study. Key demographic characteristics of the sample are summarised in Table 1, showing distributions by gender, age, education, income level, geographic location, and digital literacy. These elements provide valuable insights into the population under study.

Table 1: Demographic Factors

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	139	40
	Female	209	60
Age	18–25	30	9
	26–35	67	19
	36–45	108	31
	46+	143	41
Geographic Location	Kathonzweni	28	8.0
	Kibwezi	70	20.1
	Kilungu	21	6.0
	Makindu	31	8.9
	Makueni	45	12.9
	Mbooni East	35	10.1
	Mbooni West	35	10.1
	Mukaa	38	10.9
	Nzaui	45	12.9
Digital Literacy Level	Basic	285	82
	Intermediate	35	10
	Advanced	28	8

Following Table 1 above, in terms of gender distribution, there is a notable difference between male and female participation, with 60% of the respondents being female and 40% male. This suggests that women were more engaged in the study which may be reflective of the social dynamics or the specific focus of the research. This gender imbalance implies that future interventions or programmes in the region should adopt a gender-sensitive approach, ensuring that both men and women are equally involved, to avoid skewing the results or missing out on male engagement in community activities.

Looking at the age distribution, the study reveals that the largest proportion of respondents falls within the 46+ age group (41%), followed by 36–45 years (31%). The 26–35 years group makes up 19%, while the 18–25 years group is the smallest at 9%. This distribution indicates that the study population is primarily middle-aged to older adults, who are likely to be more settled in their socioeconomic lives and possibly more invested in the topics covered. The underrepresentation of younger individuals highlights a potential gap in participation, suggesting that targeted efforts are needed to engage younger age groups, ensuring their inclusion in relevant interventions. A focus on youth may also be important for fostering long-term change.

The geographic distribution of the participants shows considerable variation across different sub-counties. The highest representation comes from Kibwezi (20.1%), while the lowest comes from Kilungu (6%). Other regions, including Kathonzweni, Makindu, Mbooni East, and Mbooni West, are relatively evenly represented, with percentages ranging from 8.0% to 12.9%. This spread reflects differences in population density, access to the study, and regional engagement, which should be considered when designing interventions. Areas like Kilungu, which have lower participation, may require targeted outreach or tailored strategies to increase engagement, while Kibwezi, with a higher representation, could serve as a model for scaling efforts to other areas.

In terms of digital literacy, the majority of respondents, report having only basic digital skills (82%), with smaller percentages possessing intermediate (10%) or advanced (8%) digital literacy levels. This finding highlights a significant gap in digital competency, which could limit the population's ability to engage with more advanced technological tools and platforms. Given the importance of digital literacy in modern health and educational interventions, there is a pressing need to focus on upskilling the population, particularly in foundational digital skills. Programmes aimed at improving digital literacy, especially in rural and underserved areas, would enhance the effectiveness of digital health initiatives and other technology-driven programmes in the region.

Overall, the data from Table 1 points to several important implications for designing and implementing interventions. The demographic diversity, particularly in terms of age and gender, suggests that future programmes should be inclusive and tailored to meet the needs of different groups. There is also a clear need for increased focus on digital literacy training, as most respondents are at the basic level of digital competence. Additionally, geographic disparities in participation highlight the importance of addressing regional differences to ensure equitable access to programmes. These insights can guide policy development and intervention strategies aimed at improving universal health coverage across Makueni County.

Table 2: R-Square Values for Demographic Factors

Demographic Factors	R^2
Age	0.711
Gender	0.463
Income	0.861
Education	0.948
Location	0.301
Literacy	0.812

Table 2 presents the coefficient of determination following the linear regression analysis that was conducted to show how the demographic variables explain the variability in digital health adoption and equitable universal health coverage. This is depicted in the R-squared (R^2) values for various demographic factors which also provide insights into how strongly each demographic characteristic influences digital adoption and universal health coverage.

Starting with the age factor, the R^2 value of 0.711 suggests a strong positive relationship between age and digital adoption for universal health coverage. This means that 71.1% of the variance in the dependent variable can be attributed to age. The high R^2 value highlights that age plays a significant role in shaping equitable health coverage, implying that interventions should be designed with a focus on different age groups. Tailoring programmes to specific age demographics could enhance their effectiveness by addressing the distinct needs of each group.

For gender, the R^2 value of 0.463 indicates a moderate influence, with 46.3% of the variance explained by gender differences. While gender is an important factor, it is not as strongly determinative as other factors such as age or income. This suggests that gender-specific approaches could be useful, but other demographic factors should also be considered to ensure a more holistic and inclusive intervention strategy.

Income has a very strong relationship with the dependent variable, as indicated by its R^2 value of 0.861. This suggests that 86.1% of the variance in the outcome is explained by income levels, making income a critical factor in determining the outcome. As a result, addressing income disparities should be a primary focus in interventions. Policies or programmes aimed at improving financial stability and addressing income inequality could have a profound impact on the relationship between digital adoption and equitable universal health coverage.

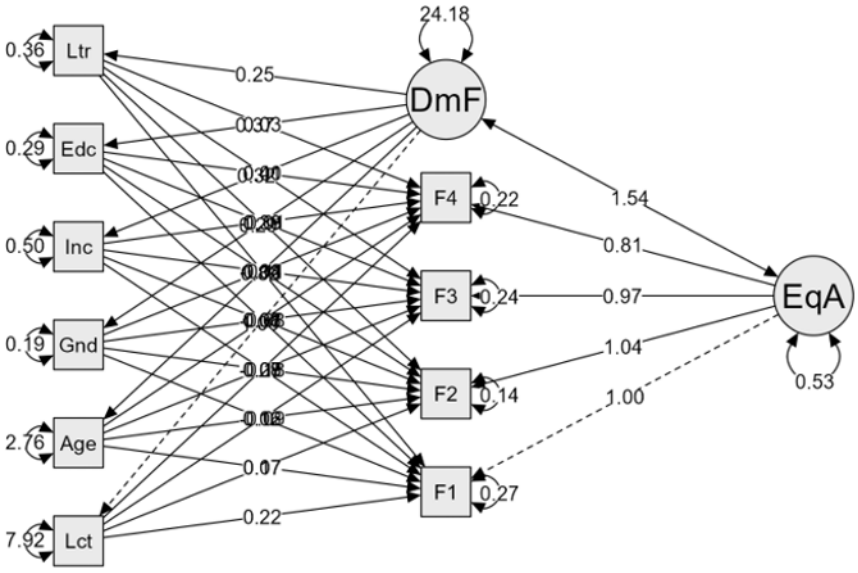
The R^2 value for education is particularly striking, at 0.948, meaning that 94.8% of the variance in the outcome is explained by education. This demonstrates that education has the strongest explanatory power among all the demographic factors, emphasising its crucial role in influencing the outcome. Given this, interventions aimed at improving educational attainment, particularly in underserved communities, could lead to significant improvements in universal health coverage. In contrast, location has a weaker influence, with an R^2 value of 0.301, explaining only 30.1% of the variance in the dependent variable. Although geographic location may still have some impact on access to universal health coverage, it is less significant compared to factors like education and

income. Therefore, while location-based strategies may be useful in some contexts, they should be secondary to more influential factors such as income, education, and literacy.

Finally, literacy shows a strong relationship with the digital health and universal health coverage equity with an R^2 value of 0.812. This indicates that 81.2% of the variance is explained by literacy levels. Literacy, particularly digital literacy, plays a key role in influencing digital health adoption and universal health coverage, suggesting that improving literacy should be a priority in programme design. Offering literacy training, especially in underserved areas, could help improve engagement with digital platforms and enhance the overall effectiveness of interventions.

In summary, the analysis indicates that education, income, and literacy are the most significant factors influencing digital health adoption and universal health coverage. Interventions aimed at improving education and literacy, especially for low-income individuals, would likely yield the most substantial benefits. While age and gender also play a role, their impacts are less pronounced, though they should still be considered in designing inclusive and targeted interventions. Location, with the weakest R^2 value, should be a secondary consideration when developing strategies for equitable universal health coverage, though it may still be relevant in certain contexts where geographic-specific barriers or opportunities exist.

The structural equation model (SEM) in Figure 1 depicts the relationship between demographic factors (DmF) and equitable access (EqA) to universal health coverage. The demographic factors are represented by latent variables, digital literacy (Ltr), level of education (Edc), monthly income (Inc), gender (Gnd), age (Age), and physical location (Lct), which load onto the main latent construct of demographic factors (DmF). The path coefficients indicate the strength and direction of relationships. For instance, Ltr and Edc have relatively higher path coefficients (e.g., 0.36 and 0.25, respectively), suggesting that these variables strongly influence the DmF construct. Similarly, other demographic variables have weaker contributions. The loadings onto DmF appear consistent with the hypothesized structure of demographic influences.



Chi-square ($\chi 2$) = 368.240, DF = 138, p-Value = 0.182, CMIN/DF (x2 /df =2.67, RMSEA = 0.017, IFI= 0.772, CFI= 0.770, NFI= 0.754, GFI =0.976, AGFI=0.966

Figure 1: SEM for demographic factors and equitable access

The second part of the model shows DmF influencing four factors: availability, access, coverage and affordability (F1, F2, F3, F4), which ultimately load onto EqA, representing equitable access to universal health coverage. The direct path from DmF to EqA has a standardised coefficient of 1.54, indicating a strong influence. The model fit indices suggest a good overall model fit, with a Chi-square (x^2) of 368.240, degrees of freedom (DF) = 138, and a non-significant p-value (p = 0.182), indicating the model fits the data well. The RMSEA value (0.017) is excellent, and other indices like GFI (0.976) and AGFI (0.966) show high goodness of fit. Overall, the SEM highlights how demographic factors significantly shape equitable access to universal health coverage, with certain factors like literacy and education playing key roles.

Table 3: R-Square Values for Demographic Factors and Access

Demographic Factors	**R-Square (R^2)**	**Equitable Access**	**R- Square (R^2)**
Location	0.775	Availability	0.930
Age	0.850	Access	0.950
Gender	0.899	Coverage	0.967
Monthly Income Levels	0.843	Affordability	0.960
Level of Education	0.923	Equitable access	0.929
Digital Literacy Levels	0.808		

Table 3 presents the R-squared (R^2) values for various demographic factors and their relationship with both the overall equitable access and the four components of equitable access: availability, access, coverage, and affordability. These values highlight how strongly each demographic factor influences the outcome and its subcomponents, providing insights into where efforts should be focused to improve equitable access.

Location shows a strong relationship with equitable access, with an R^2 value of 0.775, suggesting that 77.5% of the variance in equitable access can be explained by geographic location. This indicates that the availability of resources or opportunities varies significantly across different locations, which could be due to regional disparities in infrastructure or service provision. However, its R^2 value for availability (0.930) indicates that location has an even stronger influence on the availability of services or resources. This suggests that geographic differences strongly determine the presence of services, which may require targeted outreach to underserved regions. For equitable access, strategies should prioritise improving service distribution across different locations, particularly in areas with lower availability.

Age is strongly correlated with equitable access, showing an R^2 value of 0.850, meaning 85% of the variance in equitable access can be attributed to age. The strong relationship with access (0.950) further emphasises that age significantly influences individuals' ability to access resources. This suggests that younger and older individuals may face different barriers to accessing services, such as technological literacy or mobility challenges. Tailoring interventions to specific age groups could help address these barriers, ensuring that all age demographics have equal opportunities for access.

For gender, the R^2 value for equitable access is 0.899, indicating a very strong relationship between gender and access to resources, with 89.9% of the variance explained. The relationship with coverage (0.967) is even stronger, suggesting that gender plays a crucial role in determining the

extent to which services or resources are distributed equitably. This highlights the need for gender-responsive strategies, ensuring that both men and women have equal access to services, and addressing any gender-specific barriers to service coverage.

Monthly income levels have an R^2 value of 0.843 for equitable access, reflecting a strong connection between income and access to resources. This is further reinforced by the affordability component, with an R^2 value of 0.960, indicating that income is a key determinant in the affordability of services or resources. This suggests that income disparities significantly influence access to resources, particularly those that may require financial investment. Programmes or policies should prioritise financial assistance or subsidised services for lower-income groups to ensure they can afford essential resources, improving overall equitable access.

The level of education is another important factor, with an R^2 value of 0.923 for equitable access, meaning that 92.3% of the variance can be explained by educational attainment. This highlights education's crucial role in ensuring equitable access. Education is closely linked to better access to resources and understanding of available services. Improving education levels, particularly in underserved populations, could lead to greater awareness of and access to necessary resources. The high correlation with availability (0.930) further supports the idea that better education levels are linked to a higher likelihood of services being available and accessible.

Finally, digital literacy levels show a moderate yet significant relationship with equitable access ($R^2 = 0.808$), indicating that 80.8% of the variance in equitable access can be attributed to digital literacy. This is particularly relevant in the context of increasing digital platforms for accessing services, where individuals with higher digital literacy are more likely to benefit. This suggests that improving digital literacy could enhance equitable access, particularly in areas where digital platforms are used to provide service.

Table 4 presents the moderating influence of demographic factors on the relationship between Digital Health Model (DHM) and Equitable Access to Universal Health Coverage (EA_UHC).

Table 4: Moderating Influence of demographics on relationship between DHM and EA_UHC

Indirect effects										
									95% Confidence Interval	
Predictor	Path	Moderating	Path	Outcome	Estimate	Std. Error	z-value	p	Lower	Upper
DHM	→	Demographic Factors	→	EA_UHC	0.033	0.015	2.126	0.033	0.003	0.063
Note. Delta method standard errors, normal theory confidence intervals, ML estimator.										

The indirect effect is calculated with an estimate of 0.033, a standard error of 0.015, a z-value of 2.126, and a p-value of 0.033. Since the p-value is less than the conventional threshold of 0.05,

this suggests that there is a statistically significant moderating effect of demographic factors on the relationship between DHM and equitable access to UHC. The confidence interval (0.003 to 0.063) does not include zero, further confirming the significance of this moderating effect.

The null hypothesis for this analysis stated that demographic factors do not significantly moderate the relationship between DHM and equitable access to UHC. Given that the p-value is less than 0.05, the null hypothesis is rejected, indicating that demographic factors do indeed influence the effectiveness of DHM in promoting equitable access to UHC.

Discussion

Following the findings of the study, education, income, gender, and digital literacy are key drivers of equitable access to health care coverage, with location and age also playing significant roles. These insights suggest that comprehensive, multifaceted strategies are required to address the various barriers individuals face in accessing healthcare resources, ensuring that all demographic groups are equitably served. On the other hand, geographical location and monthly income emerge as the most significant demographic factors influencing all components of UHC, with strong positive relationships with the dimensions of access, affordability, availability, and coverage. Education also plays a role in improving affordability, while digital literacy appears to have a complex negative impact, particularly on affordability and coverage. Age and gender show weaker or insignificant effects, indicating that other structural factors such as income and location may be more crucial in determining equitable access to UHC. These findings suggest that policies aimed at improving access to UHC should focus on addressing income disparities and geographic inequities while considering education and digital literacy as additional factors to enhance overall accessibility. This is consistent with the study by Hung and Katapally (2025) which pointed on the influence of demographic factors of age, income, education, and geographical location in research.

The findings of this research contribute to the growing body of knowledge on digital health and healthcare equity, providing actionable insights for policymakers, healthcare providers, and technology developers. For instance, policymakers and health planners should consider these demographic variations to ensure that digital health initiatives are effectively reaching all populations, particularly those from underserved groups. This is in line with the study by Koehle et al. (2022) that advocated for policies that addressed demographic variables, and another by Hung and Katapally (2025) which highlighted the importance of involving local communities in the development and implementation of digital health solutions.

To add to this, by highlighting the role of demographic factors in shaping the outcomes of digital health interventions, the study informs the design of inclusive digital health policies that address the unique needs of diverse populations, as well as the need for more personalized and context-specific approaches in the design and implementation of digital health interventions. Ultimately, supporting efforts to achieve equitable UHC by leveraging digital health innovations in a manner that leaves no one behind. This is in line with the findings from other low- and middle-income countries, where rural populations faced significant barriers to adopting digital health technologies as was reported in the study by Salmaso et al. (2023).

Conclusion

This study highlights the significant moderating effects of demographic factors on the relationship between digital health and equitable access to Universal Health Coverage (UHC) in Makueni

County, Kenya. The findings reveal that demographic variables, including age, gender, education, income, geographic location, and digital literacy, play critical roles in shaping healthcare access and utilisation. Digital health technologies hold great promise in bridging gaps in healthcare delivery, but their potential is often hindered by socio-economic and demographic disparities. Addressing these disparities is essential for achieving the equity goals embedded within UHC.

The study concludes that while digital health interventions can improve the availability, affordability, and coverage of healthcare services, their effectiveness is contingent upon addressing demographic barriers. For instance, limited internet connectivity in rural areas and low digital literacy among older populations significantly impede access to digital health tools. Additionally, gender dynamics and income disparities further exacerbate inequities, underscoring the need for inclusive strategies that prioritise underserved populations.

Achieving equitable access to UHC through digital health requires a multifaceted approach that addresses the interplay between technology and demographic factors. By bridging demographic divides and fostering inclusive digital health ecosystems, Kenya can make significant strides toward its UHC goals, ensuring that no one is left behind in accessing essential healthcare services.

Recommendations

Based on these findings, the study recommends the development and implementation of tailored digital health policies that account for demographic disparities. Policymakers should prioritise investments in digital infrastructure, particularly in rural areas, to enhance connectivity and accessibility. Education programmes focusing on digital literacy should be integrated into community health initiatives to empower individuals to utilise digital health platforms effectively. Furthermore, gender-sensitive policies are crucial to addressing cultural and systemic barriers that limit women's access to healthcare services.

To enhance affordability, subsidies or financial support mechanisms should be introduced to ensure that low-income populations can access digital health tools and services. Collaboration between government, private sector stakeholders, and non-governmental organisations is essential to mobilise resources and implement sustainable solutions. Additionally, engaging local communities in the design and implementation of digital health interventions will ensure that these solutions are contextually relevant and responsive to the unique needs of diverse populations.

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