INTRAPERSONAL AND INSTITUTIONAL FACTORS AS DETERMINANTS OF UTILIZATION OF DIGITAL TOOLS FOR HEALTH EDUCATION DELIVERY AMONG PRACTITIONERS IN AKINYELE LOCAL GOVERNMENT, OYO STATE

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Abstract
Health education delivered by practitioners is pertinent to behavioural change and informed decisions by community members. Digital tools have revolutionized society, therefore there is a need to optimize practitioners' capacity to utilize digital tools in the delivery of health education. The study examined intrapersonal and institutional factors as determinants of the use of digital tools for health education delivery among practitioners in Akinyele Local Government Area of Oyo State. The study adopted a descriptive survey research design using 50 health practitioners in Akinyele Local Government. The instrument used for the data collection was a self-constructed questionnaire with 0.74 reliability coefficient. The collected data were analyzed using regression statistics. The findings of the study showed a significant correlation of the variables of intrapersonal and institutional factors to utilization of digital tools. Findings equally showed that variables of intrapersonal and institutional factors jointly contributed to the utilization of digital tools ($F_{(2,47)}$ = 8.305; R=0.511; R^2= 0.261; R_{Adj} =0.230; P <0.05). *It was concluded that intrapersonal and institutional factors contributed to the utilization of digital tools. Regular training, technical support, infrastructure, enabling policy, monitoring and supervision were recommended for the utilization of digital tools.*

Introduction
Rural community people are more likely to contract illnesses and diseases due to low health literacy, poor attitudes and defective habits which can be prevented with effective health education. Also, rural residents' health is facing difficulties as a result of economic, regional and gender inequities, despite multiple government measures. Morbidity patterns in rural areas are characterized by infectious and water-borne diseases, including cholera, diarrhea, infectious hepatitis, worm infestation, measles, malaria, whooping cough, respiratory infections, pneumonia and reproductive tract infections. Non-communicable diseases including cancer, blindness, mental illness, hypertension, diabetes, accidents and injuries are on the rise.It is therefore important to enhance the health knowledge, attitude and practices of the rural community members through effective health education delivery using digital tools.

Africa's health situation at the moment is complicated. In addition to an epidemic of non-communicable diseases that now account for over 37% of all deaths on the continent, the region has some of the highest rates of preventable neonatal and maternal mortality, deaths from infectious diseases, antimicrobial-resistant infections and malnutrition. (WHO, 2022). The prevalence of these illnesses lower life expectancies as well as increased the likelihood that a person will have several chronic illnesses. In order to diagnose and treat

individuals with co-occurring diseases, public health interventions are necessary in Africa due to the impact of increasing multi morbidity on health (Awogbeni,2012). People in Nigeria have extremely low living and health circumstances.There are several possible causes for this, including the unfavourable living conditions, particularly for women and children and the high infant and under-five death rates brought about by the lack of access to primary health care for normal vaccinations. In countries that are still developing, especially Asia and Africa, malnutrition is a constantly serious public health concern (WHO, 2004). Nigeria ranks fifth out of 22 high disease –burden as the country accounts for 80% of the world's tuberculosis cases; HIV/AIDS and the multi-drug-resistant tuberculosis (MDR-TB) have contributed to the country's high health problem and of course maternal mortality and stunted child development as well as malaria remain serious public health issue (WHO, 2024). More than 70% of Nigerians reside in rural areas, however, there are no enough health facilities or initiatives in these areas to significantly meet the demands of the population. According to Wilfred (2019), the majority of healthcare facilities are concentrated in urban areas, neglecting rural areas, and the few facilities that are located in rural areas are not operating efficiently (Ajilowo and Olujimi, 2007). The provision of healthcare services in rural areas can be regarded as inadequate. Even though rural residents contribute to the country's agricultural economy, they fall short in terms of fundamental infrastructure such as health facilities. The Nigeria's metropolitan regions are superior to its rural ones due to the concentration of a sizable portion of the country's public and private health services.

According to Sugh (2010), a higher proportion of Nigerians reside in rural areas with little or nonexistent access to quality healthcare facilities. Therefore, there is a lack of development in the provision of healthcare services in Nigeria. This is exacerbated by issues of insufficient medical staff including lack of facilities and their unequal distribution (Adeyemo, 2005). Nigerians are therefore underserved when it comes to medical treatment. In the meantime, health education is a more effective and economical approach to illness prevention. (Odelola, 2017). Any combination of educational activities aimed at enhancing health literacy for the prevention of diseases in individuals as well as neighborhoods is referred to as health education (WHO, 2015). In order to address a wide range of health issues, from chronic diseases to mental health, health policy and economic desired outcomes, health education must be effective. It is a matter of fact that health education plays a critical role in enhancing community well-being as well as promoting knowledge and healthy practices across all age groups (Danielle, 2024). Since some health education is provided by health practitioners in the form of brief, one-on-one, or small group interaction, it is more convenient to use digital tools to improve health education delivery to community people.Digital technology has revolutionized health education. This development brought a plethora of new resources and platforms that can be leveraged to increase health education's efficacy (Emre, 2024). In this study, projectors, computers, social media sites like Facebook, Instagram, TikTok, and YouTube, as well as movies and video snippets, are all considered digital tools. According to Digital Adoption (2023) digital tools are software and online resources that help people to do many tasks easily; they include apps like words processors and spreadsheets as well as software for graphic design, data analysis and

projects management. These tools help people to be more productive, work together and communicate better.

Indices of intrapersonal and infrastructure factors covered in this study can influence how digital technologies are used by community health practitioners. How health educators incorporate digital resources into the teaching of health issues is influenced by these indices taken together. In this context, intrapersonal indices are the practitioners' self-efficacy, intrinsic motivation and digital literacy in using digital tools to communicate health education and empower people to make informed health decisions. When health education is delivered through digital tools, a wide and inclusive network spanning multiple societal sectors can be established. Infrastructure, institutional policies, training and assistance are all taken into account as institutional indices.

Health educators, junior community health extension workers, environmental officer and community health extension officers are among the health practitioners in Nigeria who employ strategies to improve the health of the community members. These strategies include care coordination, health coaching, social support provision, health assessment, resource linking, case management, medication management, remote health care, follow-up, administration and support for health literacy (Leah, 2018). However, the issue of limited access to health information is one that community members face daily. According to Anie (2011) and Odelola (2017), there can be no successful health education anywhere in the globe if digital tools are not used. Using digital tools can help health practitioners, who are vital in educating communities about health to perform better. Using digital tools to convey health education increases people's grasp of health information and promotes understanding, which leads to change in behaviour. Community health professionals who have faith in their abilities to use digital technologies effectively are more likely to accept and use them to raise community awareness. Positive views about technology and the perceived value of digital technologies are important indicators of how often people utilize them. The availability of technical assistance and training programmes can facilitate the adoption of digital tools by health practitioners. The use of digital tools by health practitioners may be influenced by institutional rules that promote or require their usage. Utilizing digital tools effectively requires having access to dependable internet and the required hardware and software. Cascade health education may be made much more effective and influence community members' behaviour by using the several digital tools available to health practitioners. The health of the community people in the Nigeria has continued to be ravaged by treatable communicable diseases and manageable non-communicable diseases, sadly, the health care delivery system that could be leveraged to bring about solution to the health problem is bedeviled by poor resource allocation, therefore health education which is preventive in nature remains the only option. Health education is concerned with knowledge provision for attitude change that brings about the practices of prevention of diseases, therefore, effective health education delivery using digital tools for wider coverage and effectiveness is imperative. This study examined intrapersonal and institutional factors as determinants of the utilization of digital tools for health education delivery among health practitioners in Akinyele Local Government Area of Oyo State Nigeria

Methodology

The study adopted the descriptive survey design. The population comprised of health practitioners at primary health care centres in the Akinyele Local Government Area. Simple random sampling technique was used to select ten (10) primary healthcare centers. The self-developed questionnaire designed according to the variables were the instruments used to test the hypotheses The questionnaire was administered to 50 respondents selected using total sampling technique. The questionnaire was in two sections, section A was used to gather information on demographic data, while section B sought information on the variables selected for the study. The questionnaire was on a 4-point Likert modified scale and was validated by experts in the field of Health Education as the reliability coefficient of the instrument was 0.74. The data collected were analyzed using regression analysis at a 0.05 level of significance.

Results

Research question one: What is the relationship between the independent (intrapersonal and institutional factors) and dependent (utilization of digital tools) variables of the study?

Table 1: Inter-correlation matrix showing the relationship between independent variables and dependent variable

Items	1	2	3	4	5	6	7
Utilization of digital tools	1						
Self-efficacy	.321	1					
Digital literacy	.317	.367	1				
Intrinsic motivation	.466	.321	.352	1			
Policy	.345	.352	.310	.393	1		
Infrastructure	.346	.348	.384	.316	.352	1	
Training	.409	.309	.362	.301	.329	.323	1

Table 1 showed that there was a moderate positive relationship between utilization of digital tools and self-efficacy (r=.321). A moderate positive relationship was found between the utilization of digital tools and digital literacy (r=.317), utilization of digital tools and intrinsic motivation (r=.466), utilization of digital tools and policy (r=.345), utilization of digital tools and infrastructure (r=.346) and lastly between utilization of digital tools and training (r=.409).

Hypothesis 1: There will be no significant joint contribution of intrapersonal variables (Self-efficacy, intrinsic motivation, and digital literacy) to the utilization of digital tools among health practitioners in Akinyele Local Government Area of Oyo State.

Table 2: Regression table showing the joint contribution of intrapersonal variables (Self-efficacy, intrinsic motivation and digital literacy) to the utilization of digital tools among health practitioners in Akinyele Local Government Area of Oyo State

R = .491 Multiple R = .241 Multiple R^2 adjustment = .192 Standard Error Estimate = 4.83656 Analysis of Variance					
Model	Sum of square	Df	Mean square	F	P
Regression	341.955	3	113.985	4.873	.000[b]
Residual	1076.045	46	23.392		
Total	1418.000	49			

Table 2 revealed that the joint contribution of the intrapersonal variables on the utilization of digital tools was significant ($F_{(3,46)} = 4.873$, $p < .05$). The independent variable also yielded a coefficient of multiple regression (R) of .192, indicating that about 19% of the variation is accounted for by the independent variables. Therefore, the null hypothesis was rejected.

Hypothesis 2: There will be no significant relative contribution of intrapersonal variables (Self-efficacy, intrinsic motivation and digital literacy) to the utilization of digital tools among health practitioners in Akinyele Local Government Area of Oyo State

Table 3: Regression table showing the relative contributions ofintrapersonal variables (self-efficacy, intrinsic motivation and digital literacy) to the utilization of digital tools among health practitioners in Akinyele Local Government Area of Oyo State

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	18.788	4.841		3.881	.000
	Self-efficacy	.698	.206	.235	4.805	.000
	Digital literacy	.453	.216	.214	4.172	.000
	Intrinsic motivation	.607	.211	.194	2.874	.006

Table 3 showed for each intrapersonal variable, the unstandardized regression weight (**ß),** the standardized error of estimate (SEß), the standardized coefficient, the t-ratio and the level at which the t-ratio was significant. The table revealed that self-efficacy has the highest contribution of 23.5% (ß=.235, t=4.805, p<0.05) followed by digital literacy with 21.4% (ß=.214, t=4.172, p<0.05) while intrinsic motivation contributed least with 19.4% (ß=.194, t=2.874, p<0.05).

Hypothesis 3: There will be no significant joint contribution of institutional variables (Policy, Infrastructure and Training) to the utilization of digital tools among health practitioners in the Akinyele Local Government Area of Oyo State

Table 4: Regression table showing the joint contributions of institutional variables (Policy, Infrastructure and Training) to the utilization of digital tools among health practitioners in Akinyele Local Government Area of Oyo State

R = .528 Multiple R = .279 Multiple R^2 adjustment = .232 Standard Error Estimate = 4.71408 Analysis of Variance					
Model	Sum of square	Df	Mean square	F	P
Regression	395.762	3	131.921	5.936	.002
Residual	1022.238	46	22.223		
Total	1418.000	49			

Table 4 revealed that joint contribution of all the institutional variables on the utilization of digital tools was significant ($F_{(3,46)}$ = 5.936, p< .05). The independent variable also yielded a coefficient of multiple regression (R) of .232, indicating that about 23% of the variation is accounted for by the independent variables. Therefore, the null hypothesis was rejected.

Hypothesis 4: There will be no significant relative contribution of institutional variables (Policy, Infrastructure and Training) to the utilization of digital tools among health practitioners in the Akinyele Local Government Area of Oyo State

Table 5: Regression table showing the relative contributions ofinstitutional variables (policy, infrastructure and training) to the utilization of digital tools among health practitioners in Akinyele Local Government Area of Oyo State

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.706	3.950		4.988	.000
	Policy	.356	.184	.329	2.938	.036
	Infrastructure	.426	.173	.499	3.462	.018
	Training	.683	.222	.582	4.076	.004

Table 5 showed for each institutional variable, the unstandardized regression weight (**ß),** the standardized error of estimate (SEß), the standardized coefficient, the t-ratio, and the

level at which the t-ratio was significant. The table revealed that training has the highest contribution of 58.2% (ß=.582, t=4.076, p<0.05) followed by infrastructure with 49.9% (ß=.499, t=3.462, p<0.05) while policy contributed least with 32.9% (ß=.329, t=2.938, p<0.05).

Hypothesis 5: There will be no significant joint contribution of intrapersonal and institutional variables to the utilization of digital tools among health practitioners in the Akinyele Local Government Area of Oyo State

Table 6: Regression table showing the joint contribution of intrapersonal **and institutional variables to the utilization of digital tools among health practitioners in Akinyele Local Government Area of Oyo State**

R = .511 Multiple R = .261 Multiple R^2 adjustment = .230 Standard Error Estimate = 4.7214 Analysis of Variance					
Model	Sum of square	Df	Mean square	F	P
Regression	370.262	2	185.131	8.305	.000
Residual	1047.738	47	22.292		
Total	1418.000	49			

Table 6 revealed that the joint contribution of the intrapersonal and institutional variables on the utilization of digital tools was significant ($F_{(2,47)}$ = 8.305, p< .05). The independent variable also yielded a coefficient of multiple regression (R) of .230, indicating that about 23% of the variation is accounted for by the independent variables. Therefore, the null hypothesis was rejected.

Discussion of findings

The findings from the study showed a significant joint correlation between self-efficacy, digital literacy and intrinsic motivation and utilization of digital tools for health education delivery among practitioners. This implies that when the variables of intrapersonal factors were taken together, it contributed significantly to the utilization of digital tools for health education delivery. Self-efficacy was reported to be relatively contributed to the utilization of digital tools for health education delivery. This is in agreement with the findings of Fereshteh et al (2019) that self-efficacy is an important factor in the success and performance of the health educator. In this study digital literacy contributed to the utilization of digital tools. Personal training, specifically in digital tools can enhance the utilization of digital tools and improve the beliefs on how digital can impact the community health and ultimately improve competence (Courtney,2024). Intrinsic motivation was reported to have the least contribution to the utilization of digital tools, this implies that one may not still utilize digital tools if there is no inner drive even with the availability of necessary equipment. This was

corroborated by Hsu and Lin (2022) who found in a study that intrinsic motivation was the inner drive for the utilization of digital tools and that willingness to use digital tools for health education delivery can actively enable consistent and positive use.

It was found in this study that there was ajoint correlation between the variables of policy, infrastructure and training on the utilization of digital tools for health education delivery among practitioners. This implies that the variables of institutional factors when taken together determine the utilization of digital tools for health education delivery. Odelola (2017) found that infrastructure contributed to the utilization of digital tools for health education delivery. In this study, it was found that training and infrastructure were ranked high and policy was reported as least for the utilization of digital tools for the delivery of health education among practitioners. The role of policy in the utilization of digital tools among practitioners cannot be ruled out as it serves as the binding order for the implementation of health programme. Formulation of the policy statement on the utilization of digital tools will enhance monitoring, evaluation, accountability, further learning and innovation. Effective monitoring and supervision of the utilization of digital tools might encourage the utilization of the digital tools (Odelola, 2017).

It was revealed in this study that interpersonal and institutional factors jointly contributed to the utilization of digital tools for health education delivery among practitioners. This is in agreement with Courtney (2024) who found in a study that the institution's policy, the appropriate infrastructure, training, positive beliefs and self-efficacy determined the utilization of digital tools. This was corroborated by the finding of Odelola (2017) that policy, infrastructure and personnel training are necessary for the utilization of digital tools for the delivery of health education. Digital tools training was a significant indicator of the use of digital tools as well as having a greater belief in digital impact.

Conclusion

The utilization of digital tools in the delivery of health education has an impact on health practices of community people. Health information can now be delivered in animation and content for a better understanding of the audience due to new discoveries and innovations. Digital health tools have the potential to increase the capacity of practitioners and shape the future of community health education. Interpersonal (self-efficacy, intrinsic motivation and digital literacy) and institutional factors (policy, infrastructure and training) are reported to jointly contribute to the utilization of digital tools for the delivery of health education in this study. Given the foregoing, the under-listed are recommended for the effective utilization of digital tools among practitioners:

1. Health practitioners should adopt digital tools early enough in their personal lives due to the fact that higher level of digital literacy can enhance the likelihood of its utilization for the delivery of health education.
2. Health practitioners should be encouraged to believe in their ability to effectively use digital tools for the delivery of health education because positive attitudes towards digital tools and the perceived usefulness of digital tools are vital to their utilization for the delivery of health education.

3. Local government authority should organize regular training in digital tools to encourage the use of digital tools among health practitioners because the availability of training programmes and technical support can facilitate the utilization of digital tools for the delivery of health education.
4. Infrastructure for the utilization of digital tools by the practitioners should be made available at the Primary health care centers because it was found in the study that access to reliable internet and necessary hardware/software is crucial for the effective use of digital tools
5. There should be a policy statement on the utilization of digital tools for the delivery of health education by the practitioners at primary health care centers. This is as a result of the finding from the study that definite policy statement can mandate the use of digital tools for health education delivery among practitioners.
6. There should be a functioning monitoring, supervision and evaluation team to enforce compliance with the utilization of digital tools for the delivery of health education by the health practitioners.

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