



## Usage of Indigenous Languages as Risk Communication Interventions for Kidney Disease Awareness in Ado-Ota, Ogun State, Nigeria

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### ABSTRACT

**Background:** Kidney disease has become a major issue of public health concern globally with more prevalence in Africa and Nigeria. Available statistics indicate an annual increase of 15% of diagnosed cases in Nigeria, with Lagos, Oyo, and Ogun recording the highest number of cases, with ignorance ranking as one of the major causes of the illness. Among the challenges hindering the communication of the risk factors associated with kidney disease in the Ado-Ota community, which is a South-West region of Nigeria is Indigenous Language and professionals.

**Objective:** This study investigated the Usage of Yoruba, an indigenous language, as a risk communication intervention for kidney disease awareness in Ado-Ota, South-West Nigeria.

**Method:** A cross-sectional survey design was employed, utilising a structured questionnaire to collect data from residents in the Ado-Ota community.

**Results:** Findings from the study revealed that Individuals with High Exposure to health information on kidney disease ( $M = 3.6917$ ,  $SD = .64444$ ) exhibited significantly higher knowledge levels than those with Low Exposure ( $M = 2.5593$ ,  $SD = .80408$ ), with a mean difference of  $-1.13244$  (95% CI  $[-1.28458, -0.98029]$ ). High Exposure refers to individuals who regularly receive and engage with health information, while Low Exposure refers to those who have limited access to such information. However, despite the high exposure to messages on kidney disease,

**Conclusion:** There was a gap in the deployment of indigenous language as a risk communication tool for better health awareness. This low awareness gave room for misconception and misinformation as regards the potential risk of kidney disease. The research concludes that in order to create a sustainable cause of action that would facilitate residents' knowledge and engagement in a healthy lifestyle towards the prevention of Kidney disease, strategic risk communication using Indigenous languages, which involves targeted and culturally sensitive messaging, is necessary.

**Unique Contribution:** This work reveals vital insights into the lack of health awareness when communicating kidney disease information and the requirement to bridge this gap.

**Key Recommendation:** Therefore, the study recommends including healthcare professionals and communication experts to collaborate and host interactive workshops and educational sessions on kidney disease prevention in South-West Nigeria using indigenous languages, thereby enhancing their ability to communicate health information to the community effectively.

**Keywords:** indigenous language, risk communication, kidney disease, health communication,



## **INTRODUCTION**

The recent high prevalence of kidney disease in Nigeria, particularly in the South-West region, presents a significant public health challenge. Globally, the World Health Organization has estimated that millions of people die annually from kidney-related conditions, further emphasising the urgent need for improved awareness and treatment options. (WHO, 2023). The Kidneys, which are the main organs responsible for filtering extra water and wastes out of one's blood and body, are said to be infected when this process is interrupted and damaged (Ojuroungbe, 2024). This process of damage is known as Kidney Disease (KD). Kidney disease is a nephropathy damage that often leads to functional and/or structural abnormalities in the original nature of the kidney. The severity of kidney disease cannot be overemphasised. Globally, over 1.2 million people dies from kidney failure annually (NIDDK. 2019). KD is often called a "silent killer" because it frequently goes undetected until it has reached an advanced stage Nduka (2023) says that many Nigerians with KD are unaware of their condition due to inadequate awareness and insufficient health screenings, he emphasized the urgent need for widespread public health campaigns to educate people on the risk factors and symptoms of KD, as early detection and treatment can prevent the progression to kidney failure (Nduka, 2023).

Where risk communication is the mutual transference of risk messages between credible sources, experts and the public to prevent or curtail crises (Sutton, Rivera, Sell, and Moran, 2021). This form of communication enhances the transference of health-based information between health enthusiasts, organisations, health institutions, governments and the public in order to prevalent diseases-related risks, data, symptoms, prevention tactics, possible cure and susceptibility information to a specific public or the general public where such disease is domiciled such as kidney disease (Varghese et al, 2021; Sleigh, Amann, Schneider & Vayena, 2021; Kristensen, Lorenz, May & Strauss; 2021 and Warren & Lofstedt, 2021; Adeyemi, Falobi, Akin-Odukoya, Onyejelem & Ridwan, 2024).

In assessing this increase, it was observed that several studies have been conducted in the medical and clinical unit regarding kidney disease spread. However, little report has been done to assess the role of risk communication towards the reduction and prevention of kidney disease, with fewer studies on the employment of indigenous languages as a risk communication tool for creating awareness about kidney disease. More so, it was observed in these studies the key contributing factors to the high prevalence of kidney disease are the lack of awareness, delayed diagnoses, and limited preventive measures among the diagnosed patients (Ojuroungbe, 2024). This is further affirmed by Okpongpong, Asemah & Ekharefo (2024) and Nwafor, et al., (2024), who opined that the lack of awareness contributes substantially to the burden faced by health practitioners when dealing with this condition (Aonover, Okuneye, & Onyejelem, 2024). Hence, enhancing strategic risk communication can potentially bridge the knowledge gap and alleviate the burden of kidney disease. However, the effectiveness of risk communication interventions in Nigeria, especially in the Ogun State, remains largely unexplored. This lack of robust data hinders the development of evidence-based risk communication strategies. Therefore, there is a critical need to investigate the efficacy of using Indigenous languages as risk communication interventions in Nigeria,



particularly in the Ogun western region, to inform the development of targeted public health policies and practices

### **Research question**

1. What indigenous language is used as a risk communication strategy to create awareness about kidney disease to Ado-Odo/Ota LGA residents?
2. What is the extent of Ado-Odo/Ota LGA residents' knowledge about kidney disease due to exposure to indigenous language?
3. What are Ado-Odo/Ota LGA residents' attitudes towards kidney disease due to exposure to indigenous language information sources?

### **Hypotheses**

H<sub>01</sub>: There is a significant relationship between indigenous language and risk communication message acceptability

H<sub>02</sub>: There is a significant relationship between clarity and relevance of kidney disease risk communication messages and adopting health-seeking behaviours.

### **METHOD**

The study adopted the descriptive survey of rural residents in the Ado-Odo/Ota Local Government Area of Ogun State using the multi-stage sampling procedure. The study population constitutes men and women aged 18 and above currently residing in rural communities of 5 selected wards in the LGA. Next, the 5 selected wards were limited to 2 streets each, resulting in a total of 10 streets using the simple random sampling process. Using a face-to-face researcher approach of administering a questionnaire, the sample size for this study was determined through the Krejcie and Morgan formula (1970), which states that the required sample size for a population above 1,000,000, with the inclination to accept an error margin of 5%, is 381. This was gotten from a projected population figure of 1,080,080 arrived at using the Malthusian population projection formula.

Lastly systematic sampling technique using the Wimmer and Dominick (2002) random selection matrix for respondents was utilized in selecting the respondents evenly apportioned across their residential houses. However, after distribution and collection of the questionnaire, only 371 was valid for analysing. The SPSS version 23 and Excel table was used to conduct a statistical analysis that test for absolute and relative frequencies reported for the binary and categorical response options. A descriptive analysis was implemented to identify the response characteristics for each questionnaire item and the socio-demographic characteristics of the participants; the semi-structured variables were summarised as mean with standard deviation (SD) and medians with inter-quartile range. Furthermore, the correlation between items was analysed using Spearman's rank correlation. All confidence intervals (CIs) were calculated with 95% coverage with an unadjusted p-value on both sides.



To ensure the validity and reliability of the research instrument, a reliability test was conducted using the standardized Cronbach's Alpha. The expertise of a professional statistician analysed the data generated before the commencement of the research with a signed consent duly obtained from participants.

**Contributions of the Research:** This study seeks to fill existing knowledge gaps in previous research which is essentially biased and skewed towards the educated and those living in urban settings and also seek to make a novel contribution to knowledge by ensuring a balanced perspective on the subject of Kidney Disease hesitancy and acceptance in Nigeria in order to arrive at a more logical conclusion that may inform public health policy to expand rural access to correct and accurate diagnosis and information on Kidney disease.

## RESULT

**Table 1: Exposure to Risk Communication Messages using indigenous language**

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total	Mean	SD
I frequently encounter messages about kidney disease in my indigenous language.	27 (7.1%)	50 (13.5%)	68 (18.1%)	102 (27.4%)	127 (34.0%)	373	2.32	1.26
I have seen or heard information about kidney disease on local media radio, TV, using the local language.	20 (5.4%)	47 (12.5%)	-	118 (31.6%)	189 (50.6%)	373	1.90	1.22
health workers regularly provide information about kidney disease using the indigenous language.	23 (6.1%)	32 (8.6%)	87 (23.2%)	94 (25.2%)	138 (36.9%)	373	2.22	1.20
I have attended community meetings or events where kidney disease was discussed using indigenous language	37 (10.0%)	56 (14.9%)	88 (23.7%)	78 (20.8%)	114 (30.6%)	373	2.53	1.33
There are posters, flyers, and other printed materials about kidney disease in my community written in the indigenous language.	45 (12.0%)	84 (22.5%)	98 (26.2%)	69 (18.6%)	78 (20.8%)	373	2.86	1.30

Source: Fieldwork, 2024



This table reflects respondents' exposure to risk communication messages about kidney disease using indigenous languages. The data suggests that while there is some level of exposure, it is not widespread using the indigenous language. Only 29% of respondents strongly agreed that they frequently encounter messages about kidney disease in their indigenous language, with a mean of 2.32 (standard deviation 1.26), reflecting a moderate overall exposure. Similarly, exposure to information on local media was low, as only 22% strongly agreed (mean 1.90, standard deviation 1.22).

**Table 2: Knowledge Level Regarding Kidney Disease Risk Intervention Messages**

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total	Mean	SD
I understand the causes of kidney disease, as explained in the risk communication messages I have received.	112 (30.1%)	104 (27.9%)	82 (22.0%)	30 (8.1%)	45 (12.0%)	373	3.56	1.31
The messages I have received clearly explain how to prevent kidney disease.	34 (9.0%)	41 (11.0%)	90 (24.0%)	105 (28.1%)	104 (27.9%)	373	2.45	1.25
I can identify the symptoms of kidney disease based on the information provided in the messages.	48 (13.0%)	97 (26.0%)	112 (30.0%)	97 (26.0%)	45 (12.0%)	373	3.00	1.19
The information about kidney disease treatment options is clear and understandable.	52 (13.9%)	82 (22.0%)	86 (23.0%)	82 (22.0%)	71 (19.1%)	373	2.89	1.32
I feel well-informed about the risk factors for kidney disease.	33	49	98	119	110	409	2.45	1.23

Source: Fieldwork, 2024

Table 2 focuses on respondents' knowledge about kidney disease based on risk communication messages. The respondents generally indicated a moderate understanding of kidney disease causes, with 123 (mean 3.56, standard deviation 1.31) strongly agreeing that they understand the causes. However, lower agreement was seen in terms of messages about prevention (mean 2.45, standard deviation 1.25) and symptoms (mean 3.00, standard deviation 1.19), indicating a gap in how well prevention and symptoms are communicated. The relatively lower ratings for prevention and symptoms may suggest that these messages are not being effectively communicated in indigenous languages. Indigenous languages often have the power to make medical terms more relatable, and insufficient use of native languages in explaining prevention strategies could leave significant knowledge gaps in vulnerable communities.



**Table 3: Attitudes Towards Kidney Disease and Its Risk Intervention Messages**

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total	Mean	SD
I believe that kidney disease is a severe health issue in my community.	52 (13.9%)	82 (22.0%)	105 (28.1%)	82 (22.0%)	52 (13.9%)	373	3.00	1.25
I believe using indigenous interventions can prevent kidney disease.	164 (43.9%)	145 (38.9%)	-	45 (12.0%)	25 (6.7%)	373	4.03	1.19
It is essential to pay attention to messages about kidney disease.	108 (29.0%)	90 (24.0%)	86 (23.0%)	37 (10.0%)	52 (13.9%)	373	3.29	1.44
The risk communication messages are trustworthy and reliable.	27 (7.1%)	41 (10.9%)	86 (23.0%)	119 (31.9%)	135 (36.0%)	373	2.30	1.22
I am motivated to change my behaviour based on the information received about kidney disease.	78 (20.9%)	90 (24.1%)	102 (27.3%)	78 (20.9%)	62 (16.6%)	373	3.11	1.33

Source: Fieldwork, 2024

This table reflects respondents' attitudes toward kidney disease and intervention messages. The strongest agreement (mean 4.03, standard deviation 1.19) was with the statement "I believe using indigenous interventions can prevent kidney disease." This high level of agreement reflects a positive attitude towards indigenous interventions, highlighting the cultural value placed on traditional knowledge systems. This suggests that using indigenous languages to communicate health information might resonate better with local populations, potentially improving the uptake of health interventions. However, attitudes toward the trustworthiness of risk messages were less positive, with a mean of 2.30 (standard deviation 1.22). This lower trust level may stem from a disconnect between the formal medical information being communicated and the local language and cultural context. Bridging this gap through more tailored communication in indigenous languages may enhance both trust and behavioural change.





**Table 4: Perceptions towards the Effectiveness and Clarity of Kidney Disease Risk Communication Interventions**

Statement	SA (%)	A (%)	N (%)	D (%)	SD (%)	Total	Mean	SD
The risk communication messages about kidney disease are easy to understand.	114 (30.6%)	123 (33.0%)	98 (26.2%)	45 (12.0%)	29 (7.9%)	373	3.61	1.20
The information provided is relevant to my lifestyle and health concerns.	109 (29.2%)	115 (30.8%)	103 (27.6%)	49 (13.1%)	33 (8.8%)	373	3.53	1.23
I believe the messages are effective in raising awareness about kidney disease.	122 (32.7%)	123 (33.0%)	94 (25.2%)	45 (12.0%)	25 (6.7%)	373	3.66	1.19
The communication methods (e.g., posters, radio, and community meetings) are appropriate and effective.	110 (29.5%)	107 (28.7%)	98 (26.2%)	57 (15.3%)	37 (9.9%)	373	3.47	1.27
The frequency of the messages is sufficient to keep me informed about kidney disease.	57 (15.3%)	90 (24.1%)	115 (30.8%)	90 (24.1%)	57 (15.3%)	373	2.99	1.25

(Source: field, 2024)

Respondents rated the clarity and effectiveness of kidney disease communication interventions moderately. For instance, the ease of understanding the messages had a mean of 3.61 (standard deviation 1.20), and the relevance to their lifestyle had a mean of 3.53 (standard deviation 1.23). These relatively higher ratings suggest that when the language used is accessible (potentially including indigenous languages), the messages are better understood and considered more relevant.



### Testing of Hypotheses

**Hypothesis 1: there is a significant relationship between indigenous language and risk communication message acceptability**

**Table 5a:**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.691	.478	.472	.56207

Source: SPSS Version 23

**Table 5b:**

ANOVA					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	116.630	5	23.326	73.835	.000
Residual	127.316	403	.316		
Total	243.947	408			

Source: SPSS Version 23

The regression analysis revealed that positive attitudes towards the trustworthiness and importance of kidney disease risk communication messages are significantly associated with increased motivation to adopt preventive behaviours and seek regular medical check-ups, as indicated by a substantial R-value of 0.691, R Square value of 0.478,  $F(df) = \text{value}$ ,  $p < .001$ . This suggests that the predictors can explain nearly half of the variance in motivation levels. A standard error value of 0.563 shows a moderate level of prediction accuracy in the model. The results of the ANOVA table indicated that the regression model significantly predicted the motivation level,  $F(5, 403) = 73.835$ ,  $p < .001$ . This suggests that positive attitudes towards the trustworthiness and importance of kidney disease risk communication messages are significantly associated with increased motivation to adopt preventive behaviours and seek regular medical check-ups. This means a significant association exists between the predictors (including positive attitudes towards the trustworthiness and importance of kidney disease risk communication messages) and the dependent variable (motivation level). Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted, which is that positive attitudes towards the trustworthiness and importance of kidney disease risk communication messages are significantly associated with increased motivation to adopt preventive behaviours and seek regular medical check-ups.





**Hypothesis 2**

H<sub>02</sub>: There is a significant relationship between clarity and relevance of kidney disease risk communication messages and adopting health-seeking behaviours.

Table 6a

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.496	.246	.236	.67567

Source: SPSS Version 23

Table 6b

ANOVA					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	59.967	5	11.993	26.271	.000
Residual	183.979	403	.457		
Total	243.947	408			

Source: SPSS Version 23

Table 6 shows an analysis of the model summary, which reveals that the predictors account for a moderate portion of the variance in the motivation to adopt health-seeking behaviours, with an R-value of .496. This indicates a moderate correlation between the independent variables (the clarity, relevance, effectiveness, appropriateness, and frequency of kidney disease risk communication messages) and the dependent variable (adoption of health-seeking behaviours). The R Square value of .246 suggests that the model can explain approximately 24.6% of the variance in motivation. This highlights the importance of these communication factors in influencing health-seeking behaviours. The ANOVA table demonstrates that the regression model is statistically significant, with an F value of 26.271 and a p-value of less than .001. This implies that the independent variables collectively have a substantial relationship with the dependent variable. The significance of the model indicates that the predictors included in the regression are meaningful and have a combined effect on the motivation to adopt health-seeking behaviours.

Examining the coefficients, several predictors significantly contribute to the model. The perception that the risk communication messages about kidney disease are easy to understand has a significant positive impact on motivation (B = .073, p = .013). This suggests that when messages are clear and comprehensible, individuals are more likely to be motivated to engage in preventive health behaviours. Furthermore, the belief that the messages effectively raise awareness about kidney disease is a highly significant predictor (B = .173, p < .001). This underscores the importance of perceived effectiveness in influencing individuals' motivation to adopt health-seeking behaviours. The appropriateness and effectiveness of the communication methods used, such as posters, radio, and community meetings, also significantly predict motivation (B = .122, p = .001). This indicates that diverse and suitable communication channels enhance the impact of the messages. The frequency of the messages is another significant factor (B = .148, p < .001), suggesting that regular and repeated exposure to communication messages increases motivation to adopt health-seeking behaviours. However, the relevance of the information to the individual's lifestyle and health concerns is not a significant predictor (B = .054, p = .077), indicating that while relevance is essential, other factors like clarity and frequency may play a more critical role.



This analysis proves that positive perceptions of the clarity, effectiveness, and frequency of kidney disease risk communication messages are significantly associated with increased motivation to adopt health-seeking behaviours. The regression model and individual predictors collectively indicate that well-crafted and frequently delivered communication messages can significantly influence individuals' motivation to engage in behaviours such as maintaining a healthy diet, avoiding harmful substances, and engaging in regular physical activity. Therefore, the null hypothesis is rejected, affirming that there is indeed a significant relationship between these positive perceptions and the adoption of health-seeking behaviours.

## **DISCUSSION**

### ***RQ1: What indigenous language is used as a risk communication strategy to create awareness about kidney disease to Ado-Odo/Ota LGA residents?***

From the findings of this study, it was observed that less indigenous language was used by the media to create awareness on kidney disease. The role of indigenous language seems limited, as higher percentages (34% strongly disagreed on message frequency and 50.6% strongly disagreed about hearing local media messages). This shows that even when health messages are communicated, they may not be reaching audiences effectively in their native languages. This lack of communication in indigenous languages may contribute to lower awareness, as health communication in more familiar languages has been proven to enhance comprehension and engagement, especially in rural or less literate populations. Conversely, rural communities often suffer from limited access to such resources, resulting in lower levels of awareness. This urban-rural divide means that those in rural areas are at a disadvantage when it comes to early detection and prevention of kidney disease, highlighting the need for targeted communication strategies to bridge this gap.” In addition, it was observed that while there are messages about kidney disease in the community, the frequency and depth of these messages are insufficient to create a significant impact. Although some health campaigns do address kidney disease, they are often sporadic and not comprehensive enough to change behaviour or raise substantial awareness. A sustained and detailed approach is necessary to ensure that these messages reach and resonate with the community, fostering a deeper understanding and proactive health management.” Furthermore, Younger people seem to be more aware due to their higher engagement with social media, while older adults are often left out of the loop. With their constant access to digital platforms, the younger generation frequently encounters health-related information, including about kidney disease. However, older adults, who may not be as tech-savvy or connected online, miss out on these vital messages. This generational disparity in information access underscores the need for multi-faceted communication approaches, such as the implementation of an indigenous language that caters to all users.



***RQ2: What is the extent of knowledge Ado-Odo/Ota LGA residents have about kidney disease as a result of exposure to indigenous language?***

Tables 2, 5a, and 5b provide critical findings for the knowledge levels of respondents regarding kidney disease risk intervention messages. Table 2 reveals a generally positive understanding of the causes of kidney disease and clarity on preventive measures, with mean scores of 3.58 and 3.54, respectively. However, respondents show uncertainty in identifying symptoms of kidney disease, as indicated by the lower mean score of 2.99. There is also a neutral perception regarding the clarity of information about treatment options. Despite these uncertainties, respondents report feeling well-informed about the risk factors for kidney disease, with a mean score of 3.54.

Tables 5a and 5b present an independent samples t-test that tests the hypothesis that individuals with higher exposure to kidney disease risk communication messages possess significantly greater knowledge about kidney disease compared to those with lower exposure. The analysis reveals significant differences in knowledge levels between the low-exposure and high-exposure groups [ $t(407) = -14.632, p < .001$ ]. Individuals with High Exposure ( $M = 3.6917, SD = .64444$ ) exhibit significantly higher knowledge levels than those with Low Exposure ( $M = 2.5593, SD = .80408$ ), with a mean difference of  $-1.13244$  (95% CI  $[-1.28458, -0.98029]$ ). Levene's test indicates unequal variances ( $F = 3.893, p = .049$ ), but the t-test results remain consistent, leading to the rejection of the null hypothesis and acceptance of the alternative hypothesis.

The findings from RQ2 align with TPB by showing that higher exposure to kidney disease risk communication messages correlates with greater knowledge among residents. This relationship is a key aspect of TPB, which suggests that an increase in knowledge could enhance perceived behavioural control and positive attitudes towards preventive behaviours, leading to stronger intentions to adopt such behaviours. However, the uncertainty in identifying symptoms and the neutral perception regarding treatment options indicate that despite knowledge gains, perceived control over managing kidney disease might still be limited, which could hinder actual behavioural change (Bandura, 1986). The disparity in knowledge regarding symptoms and treatment options could imply that current risk communication strategies are not sufficiently comprehensive, potentially neglecting the aspect of perceived severity and the benefits of early detection and treatment, which are crucial for effective behaviour change (Bandura, 1986). The significant differences in knowledge levels between high and low-exposure groups underscore the effectiveness of comprehensive risk communication messages in improving knowledge about kidney disease. This theory highlights the importance of continuous educational campaigns to address knowledge gaps, particularly in recognising symptoms and understanding treatment options. Future strategies should focus on making information more accessible and more precise to ensure effective communication and improved public health outcomes.



***RQ3: What are the attitudes of Ado-Odo/Ota LGA residents towards kidney disease as a result of exposure to indigenous language information sources?***

Tables 3 and 5 provide crucial insights into the attitudes towards kidney disease and the effectiveness of risk intervention messages among residents in selected communities in South West Nigeria. Table 3 shows that while respondents acknowledge the seriousness of kidney disease to some extent, with a mean score of 2.99, they exhibit strong confidence in the efficacy of recommended interventions to prevent kidney disease, reflected by the highest mean score of 4.14. The respondents generally perceive the risk communication messages as important and trustworthy, as indicated by mean scores of 3.33 and 3.71, respectively. However, respondents seem to lack motivation to change their behaviour based on the information received, evidenced by the lower mean score of 2.89 for this statement.

This indicates that the use of indigenous languages could further enhance these perceptions. Since indigenous languages better capture the cultural nuances and everyday realities of the population, using them in risk communication could increase both the perceived relevance and effectiveness of health messages. Conversely, if messages are not delivered in the local language, they may be perceived as foreign and disconnected from the community's health practices. In addition, Table 5 reveals through regression analysis that positive attitudes towards the trustworthiness and importance of kidney disease risk communication messages are significantly associated with increased motivation to adopt preventive behaviours and seek regular medical check-ups. This is indicated by a substantial R-value of 0.691, an R Square value of 0.478, and an  $F(df) = 73.835, p < .001$ . These findings suggest that nearly half of the variance in motivation levels can be explained by the predictors, and the standard error value of 0.563 demonstrates a moderate level of prediction accuracy in the model. The results further indicate that the regression model significantly predicts motivation levels. This supports the hypothesis that positive attitudes towards the trustworthiness and importance of kidney disease risk communication messages significantly increase the motivation to adopt preventive behaviours and seek regular medical check-ups.

Several studies align with the findings from Tables 4 and 5 regarding the impact of positive attitudes towards health communication messages on preventive behaviours and motivation. For instance, a study by Glanz and Bishop (2010) highlight the effectiveness of health communication interventions that are perceived as trustworthy and important in promoting healthy behaviours and preventive actions. Similarly, Champion and Skinner (2008), in the context of the Health Belief Model, support the findings that trust and perceived importance of health communication messages significantly influence individuals' motivation to engage in preventive health behaviours. Contrary to these supportive findings, a study by Viswanath et al. (2006) found that socioeconomic and demographic factors can modulate the impact of health messages on behaviour change, suggesting that while positive attitudes towards health messages are crucial, they are not the sole determinants of behaviour change.

The findings highlight that positive attitudes towards the trustworthiness and importance of kidney disease risk communication messages are significantly associated with increased motivation to adopt preventive behaviours. This strong association provides further validation for TPB, where



attitudes are a crucial determinant of behavioural intentions. The confidence in recommended interventions (high mean scores) reflects positive attitudes that could enhance the intention to engage in preventive behaviours, thereby fostering actual behaviour change as suggested by TPB (Ajzen, 1991; Glanz & Bishop, 2010).

The strong association between positive attitudes towards the communication messages and increased motivation to engage in preventive actions underscores the importance of fostering trust and perceived importance in health communications which can be enhanced through the usage of indigenous languages. By implementing this theory, the findings highlight the need for well-designed risk communication strategies that convey kidney disease's seriousness and preventive measures and effectively motivate individuals to change their behaviours, ultimately improving public health outcomes.

## **CONCLUSION**

From this study, the researchers observed that despite the high exposure to information on kidney disease, nuanced areas of uncertainty exist, particularly regarding identifying symptoms, causes of kidney disease and available treatment options. These uncertainty indicates a need for targeted communication efforts in these areas. To this end, this study concludes that the adoption and usage of indigenous language for communicating health awareness on kidney disease is low. This leaves room for a need to create strategic, intentional communication pattern involving the usage of local dialect, targeted at informing and educating the people about the available health options. The present existing knowledge gap will not only be bridged but will also foster an environment for trust and engagement among community members, which allows them to make informed decisions about their health. To achieve this, the study recommends for the inclusion and collaboration of the local community health workers and healthcare professionals to host interactive workshops and educational sessions on kidney disease prevention in major communities using the indigenous language. Also, Public health agencies and research institutions should conduct regular surveys to evaluate the effectiveness of their communication strategies and identify areas for improvement in reaching diverse population segments. Finally, Media agencies especially radio, should be strategic in their adoption and usage of indigenous languages for health awareness.

## **Ethical clearance**

Ethical approval was obtained from the appropriate institutional review board before commencing the study. Informed consent was obtained from all participants, and confidentiality was maintained by anonymising participants' identities, ensuring their voluntary participation and understanding of the research objectives, which were solely for academic purposes.

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### **Conflict of interest**

The authors acknowledge there is no conflict of interest

### **Authors' Contributions.**

Grace imaikop Okpongkong conceived and wrote the manuscript, including the design. Ezekiel Asemah, PhD was the main supervisor for this study; he provided a step-by-step guideline for the study. Dan Ekharefo, Ph.D co-supervised this work by ensuring proper methodological alignment with the interpreted data. All authors have read and approved the final manuscript for publication in its current form.

### **Availability of data and materials.**

The datasets on which conclusions were made for this study are readily available upon request.

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