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Appraising Breakthrough Action Organisation's Social and Behavioural Change Communication in the "*Check Am O*!" Tuberculosis Campaign in Nasarawa State

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Abstract

This study examined the effectiveness of Breakthrough Action's social and behaviour change communication (SBCC) campaign titled "*Check Am O*!" on tuberculosis (TB) awareness and behavioural response among residents of Nasarawa State, Nigeria. Adopting a survey research design, data were collected using structured questionnaires administered to a sample of 400 respondents, determined using Yamane's (1967) formula from a projected population of 2,946,138. A multistage sampling technique was employed to ensure representativeness. The study was anchored on the Knowledge, Attitude, and Practice (KAP) theory, and data were analyzed using the Pearson Product Moment Correlation Coefficient (PPMC) at a 0.05 alpha level. The findings established a statistically significant relationship between residents' knowledge of TB, their attitudes, and the adoption of recommended health behaviours as promoted in the "Check Am O!" campaign. Respondents demonstrated high awareness of TB risks (WMS = 4.43), and this knowledge positively influenced their adoption of precautionary measures (WMS = 4.22). The study concluded that the campaign effectively influenced knowledge, attitude, and behavioural change regarding TB prevention. It recommended

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the inclusion of diverse folk and indigenous media platforms to enhance message penetration, particularly in peri-urban and rural areas, ensuring equitable access to campaign information across all communities in Nasarawa State.

Keywords: Appraising; Breakthrough Action; SBCC; "*Check Am O*!"; Tuberculosis Campaign

INTRODUCTION

Health communication campaigns are designed, initiated, and rolled out by concerned health promoters in order to achieve some pre-determined objectives. The pre-determined objectives for rolling out health communication campaigns are often premised on the notion that by creating awareness on a particular public health issue, the audience would gain sufficient knowledge about the public health issue. Although knowledge building about public health issues is always the preliminary objective that health promoters often aim to achieve, attitudinal and behavioural change after exposure to health communication campaigns seems to be one of the major reasons for rolling out public health campaigns (Abdissa et al., 2024; Obong, 2024; Ghahramani et al., 2025). This makes it apposite to submit that health communication campaigns that fail to strike a responsive chord at the heart of audience members' attitude or behaviour have failed to achieve their main objectives.

The foregoing idea attempts to pigeonhole health communication campaigns as potential avenues for reaching the public with engaging and persuasive communication stimuli whose core and overt intents and purposes are to cause a change in behaviour among people in society. It is in this perspective that health communication campaigns are critically pivotal in galvanising social and behavioural change agenda. This is further underscored by their social responsibilities in keeping the public abreast of public health crisis; crusading or advocating for social action in mitigating public health crisis; educating the public about public health crisis; sensitising the public with relevant cues to build consensus about public health crisis; mobilising the public to take a collective stand or action against public health crisis; and influencing a change in the attitudinal or behavioural inclinations of the public towards safeguarding public health at the wake of public health crisis.

Consequently, the aforementioned social responsibilities of health communication campaigns are the hallmarks for assessing whether or not they are socially relevant. The social relevance of health communication campaigns are hinged on their presumed potential in saturating society with persuasive/compelling messages. This takes into cognizance the issue of whether or not they are far reaching in appeal in correcting previously held perspectives that are at variance with current situation; providing cues to guide action; altering previously exhibited attitude that negates adoption of acceptable attitudinal predisposition; and causing a change in behaviour by persuading compliance to the suggested ideals specified in the campaign messages (Obong & Targema, 2023). These concerns place health campaigns at the heart of social and behaviour change communication (SBCC) with regards to increasing knowledge, stimulating discussion, promoting mindset change, engendering attitude, and equipping the targets with cues to execute the communicated behaviour from an individual, group, to community level (Scutchfield & Keck, 2003; Ashiekpe, 2012; Ngigi & Buluso, 2018).

From such perspective, SBCC is thereby positioned as a genre of communication that blends holistic persuasive approaches with an integrative creative strategy in encouraging or compelling individuals and communities to change their behaviour by triggering them to adopt healthy, beneficial, and positive behavioural practices (Ministry of Health and Medical Services, 2021). As Asemah et al. (2023) buttress, SBCC entails the strategic and creative application of communication campaigns to encourage individuals and communities to adopt healthier and more sustainable practices to solve their pressing public health problems. It can therefore be insinuated that the principal goal of SBCC is to affect or influence the behaviour of the members of the public in a positive way (Asemah et al., 2023). It is from such insinuations that the perceived success or failure of Breakthrough Action organisation's health intervention campaigns on tuberculosis (TB) in Nasarawa State tagged '*Check Am O!*' can be interrogated.

Statement of the Problem

Tuberculosis (TB) has continued to pose a significant threat to global public health, especially in emerging economies, where Nigeria accounts for 4% of the global TB burden (Ohiengbomwan et al., 2022). Nigeria is ranked among six countries responsible for the majority of TB cases in the world (Balogun et al., 2019). This has pushed the Nigerian government to emphasise community-based case finding to increase detection of TB

(Balogun et al., 2019). This is the sole justification for the inauguration of the first national unified TB Social and Behaviour Change (SBC) campaign tagged "*Check Am O!*" (Breakthrough ACTION, n.d.). The campaign was launched based on the fact that lack of awareness about TB symptoms is a significant threat to controlling TB prevalence in Nigeria (Naseri et al., 2020).

The major intent behind Breakthrough Actions' efforts in designing, initiating, and rolling out the "*Check Am O!*" health campaigns on TB in Nasarawa State seems to be anchored on tripartite objectives which include: creating knowledge about the disease; influencing desired behaviour towards the disease; and enforcing the adoption of specified ideals put forth by concerned health organisations, institutions or authorities to the public. Thus, as the health campaign purveys precautionary messages about TB to residents of Nasarawa State, knowledge was expected to be built, attitude formed, and desired action (practice) undertaken. These tripartite objectives are hallmarks of an effective and successful SBCC campaign.

Consequently, Breakthrough Action's "*Check Am O!*" SBCC campaign seems to have lived up to its expectations by bringing precautionary messages about TB to the attention of Nasarawa residents. The underlying problem is the uncertainty as to whether or not Nasarawa residents are/were sufficiently exposed to and are aware of the campaign's precautionary messages on TB. As the level of knowledge of Nasarawa residents on precautionary messages of the TB campaign is quite uncertain, the nexus between the residents' awareness, attitude, perception, and practice of the specified health behaviours in the campaign cannot be established with empirical precision. This poses a wide research gap in evidence, practical knowledge, empiricism, perception, and population pertaining to Nasarawa State residents' knowledge, attitude, and adoption of the campaign messages. The uncertainties as necessitated by the observed research gaps prompt the researchers to ask: do Nasarawa State residents' level of knowledge of TB precautionary measures as specified in the Breakthrough Action's "*Check Am O!*" campaign affect their attitude and influence their behaviour towards adoption of the TB precautionary messages?

Objectives of the Study

The specific objectives of this study were to:

i. ascertain whether Nasarawa State residents have knowledge of the repercussions of TB as specified in the Breakthrough Action's "*Check Am O!*" campaign;

ii. assess the attitude of Nasarawa State residents towards the precautionary measures detailed in the Breakthrough Action's "*Check Am O!*" campaign on TB; and

iii. find out whether Nasarawa State residents have adopted the precautionary measures detailed in the Breakthrough Action's "*Check Am O!*" campaign on TB.

Statement of Hypotheses

H_1: There is a relationship between Nasarawa State residents' extent of exposure to Breakthrough Action's "*Check Am O!*" campaign on TB and their knowledge of the repercussions of TB as specified in the campaign.

H_2: There is a relationship between Nasarawa State residents' knowledge of the repercussions of TB as specified in the Breakthrough Action's "*Check Am O!*" campaign and their attitude towards the precautionary measures on TB as specified in the campaign.

H_3: There is a relationship between Nasarawa State residents' attitude towards the precautionary measures on TB specified in the Breakthrough Action's "*Check Am O!*" campaign and their adoption of the precautionary measures on TB as specified in the campaign.

Conceptual Framework

Social and Behavioural Change Communication (SBCC)

According to White and Muturi (2023, p.1), "Social and behaviour change communication (SBCC) entails addressing issues that impact people directly or indirectly and that require behaviour change at the individual, societal, national, and international levels." As the name suggests, this form of communication has one target in focus: using every available means of persuasion to change, modify, alter, adjust or transform the mannerism or behavioural predisposition of the target audience so that they conform to, adopt or comply with the ideals of the communicated message. To achieve a positive change in the behaviour of the target audience, social and behavioural change communicators often aim at affecting, moulding, shaping or influencing the attitude of the target audience. This is supposed to occur by when cognitive dissonance messages are entwined with an attempt made to align targets' mental perceptions and information processing filters to accept ideals in the messages that seem to provide a sort of equilibrium

(Targema et al, 2023). This makes SBCC too often be considered as a form of communication that is overtly multifaceted, persuasive, pervasive, and integrative in nature.

Speaking on the multi-facetedness of SBCC, White and Muturi (2023, p.1) submit that "it is a multifaceted communication approach to addressing challenges that hinder access to basic human needs including food insecurity, shelter, clothing, clean water, basic education, health care, and security, among other factors and social injustices that contribute to various inequalities at a societal level." This submission entrenched the notion that SBCC is pervasive and broad in scope.

On the pervasiveness of SBCC, Koenker et al. (2014) say that it is all-encompassing to include health communication, social, and community mobilisation, and it is thought to have evolved from information, education, and communication (IEC) strategies. The Centre for Disease Control (2024) sees it as the strategic utilisation of communication approaches to promote positive health outcomes, which are based on proven theories and models of behaviour change among residents. In delivering on its behavioural change objective, SBCC "employs a systematic process beginning with formative research and behaviour analysis, followed by communication planning, implementation, and monitoring and evaluation" (Ngigi & Busolo, 2018, p.85).

In an integrative sense, social and behaviour change communication is "an integrated approach that improves health outcomes through processes that foster community dialogue and action, strengthen social contexts and systems that underpin health, and sustain healthful individual and group behaviours" (Mahumud et al., 2022, p.2). Mahumud et al. (2022) further maintain that SBCC is basically made up of three complementary domains. The first domain has to do with communication using channels of communication that are mostly appropriate and widely preferred to target community in addressing health needs that pertain to the community. The second domain entails a change in behaviour among members of the community in order to facilitate and maximise health actions. The third domain speaks to social change in order to achieve shifts that enable communities' engagement and participation in health interventions and/or policies (Remsberg, 2021).

On his part, Ngwu (2017, p. 202) maintains that "social and behaviour change communication (SBCC) is a modern communication initiative used to proffer solutions to the myriads of development and health issues facing the world, especially issues with

behavioural and attitudinal underpinnings." The scholar believes that SBCC has to do with the application or integration of a variety of communication strategies and approaches to influence individual and collective behaviours that affect public health.

Conscientiously, the Ministry of Health and Family Welfare Government of India (2013) sees SBCC as systematic communication change process that leverage conversational, theory-based, and research-driven communication processes and strategies to mitigate change in health behaviour at individual, community, and societal levels. The author specifically considers SBCC as a framework that addresses both social change and behaviour change. This is in contextual consideration of the fact that behaviour change entails a modification or alteration of human behaviour positively, while social change focuses on changes in social order, institutions, social behaviours, and norms (Ministry of Health and Family Welfare Government of India, 2013).

Considered very holistically is the idea that SBCC is multi-purpose and multi-disciplinary in approach. This implies that it has been empirically proven to be particularly useful in various intervention programmes and purposes that are geared towards changing individuals' behaviours and social norms such as family planning and HIV prevention (Albarracín et al., 2003; Bertrand et al., 2006; Kaggwa et al., 2008; Wakefield et al., 2010), malaria prevention (Koenker et al. 2014), hygiene and sanitation (Curtis et al., 2001; Curtis et al., 2008), nutrition (Bhutta et al., 2008; Ruel et al., 2008), public health crisis (Hornik 2002; Snyder et al., 2004; Snyder, 2007), environment, economic, risk, disaster preparedness, and climate change among other social and developmental challenges (White & Muturi, 2023), and reduction in consumer demand for illegal wildlife products and promotion of desired conservation practices (USAID Wildlife Asia, 2020).

The foregoing empirical evidences clear the doubt pertaining to its potential in influencing attitude and changing behaviour in concerted ways specified by the ideals of Breakthrough-Action's '*Check Am O!*' tuberculosis campaigns. To achieve desired objectives of the campaigns, it is very important for the planners and initiators of the campaigns to ensure that the SBCC component of the campaign applies a Socio-Ecological Model (SEM) that recognises the relationship between target audience and their environments to identify what is tagged the "tipping points" to be able to change individual behaviours and social norms (USAID Wildlife Asia, 2020).

SBCC Campaign Strategies and Behavioural Change

"Change is a multi-component SBCC strategy designed to shift attitudes, norms, and behaviours" (Clark et al., 2017, p.2). According to the Ministry of Health and Family Welfare Government of India (2013) and USAID Wildlife Asia (2020), SBCC utilises three major strategies in changing people's behaviour with recourse to a given communication campaign or intervention programme. These strategies include: advocacy, social mobilisation, and behaviour change communication (BCC).

Advocacy: This strategy entails a holistic process of raising campaign resources as well as political and social leadership commitment to development actions and goals (Ministry of Health and Family Welfare Government of India, 2013; USAID Wildlife Asia, 2020). In addition to raising campaign resources and political-social commitment, USAID Wildlife Asia (2020) specifically consider this strategy as that which deals with generating of active support base and creating an enabling environment that engenders sustainable change in desirable or positive behaviour.

Advocacy involves the deployment of the mass mediated channels and other composite communication approaches or platforms to influence policy and structural issues pertaining to public health crisis (USAID, 2013). Ngwu (2017) is of the view that advocacy is critical to the SBCC campaigns or intervention programmes in the sense that apart from aiding in creating adequate awareness about public health issues through multi-mediated channels of communication, it provides the avenue to attract sponsorship, endorsement and donation from popular and influential individuals and government to champion or frontline causes or movements to mitigate the health issues.

Social and community mobilisation: This specifically speaks to collective drive or invitation to concerned stakeholders for wider participation, coalition building, and local ownership, among groups and association including community mobilisation (Ministry of Health and Family Welfare Government of India, 2013; USAID Wildlife Asia, 2020). For change in behaviour and social norms to be obtainable at the individual, social, or community level, it is imperative for networks of influential and change-desiring stakeholders to be built and charged to chart a universal front in achieving such objective. Social and community mobilisation strategy is used to push members of the community to see reasons to adopt and accept desired behaviour changes (Ngwu, 2017).

Behaviour change communication (BCC): This strategy specifically entails leveraging the affordances of the mass and social media, community-level activities, interpersonal communication, integrated marketing communication approaches, and opinion leadership to achieve changes in people's knowledge of a given health cause, affect desired attitudes towards a given health cause, and influence practices of acceptable standard behaviour concerning the health cause. This strategy aims to use persuasive communication messages to change target audience's knowledge, attitudes, beliefs, and practices and social norms (USAID Wildlife Asia, 2020).

Ngwu (2017) is of the opinion that this strategy is used to move or motivate the people from the stage of awareness to the stage of action. It is the process of working with individuals, families, and communities through different communication channels to promote positive health behaviours and support an environment that enables the community to maintain positive behaviours (USAID, 2010).

These strategies present SBCC as a framework distinctly marked by dynamic characteristics which suggest that it is a process which heavily relies on a socio-ecological context of its target audience. These characteristics are heavily weighted by its core and overarching principles which entail that it follows a systematic approach such as 'C-Planning'; uses research, not assumptions to drive intervention programmes; considers the social context of its target audience; keeps the focus of its intervention on key audience(s); leverages theoretical frameworks and epistemic models to guide decisions such as the socio-ecological model; involves partners, concerned stakeholders, and communities throughout all its stages or phases of intervention; sets smart and realistic objectives and works with cost-effective and implementable budgets; utilises mutually-reinforcing materials and activities at composite levels, phases, and stages of its implementation; adopts and uses emotive and motivational strategies that are action-oriented; and ensures quality delivery of persuasive content at every step (Ministry of Health and Family Welfare Government of India, 2013).

Conceptualising the "*Check Am O!*" Tuberculosis Campaign

Tuberculosis (TB) has continued to pose a significant threat to global public health, especially in emerging economies, where Nigeria accounts for 4% of the global TB burden (Ohiengbomwan et al, 2022). Nigeria is ranked among six countries responsible for the majority of tuberculosis (TB) cases in the world (Balogun et al., 2019). This has pushed the

Nigerian government to emphasise community-based case finding to increase detection of TB (Balogun et al., 2019). This process requires efforts to improve knowledge, attitudes, and practices (KAP) of TB, particularly in the poorest of communities in Nigeria, where access to basic social amenities and health infrastructures is still a mirage (Balogun et al., 2019).

The tangible and impressive achievements made in reductions of new cases, regardless, considerable efforts are urgently needed to meet and maintain elimination targets (Khundi et al., 2021). Hence, awareness about the disease is needed for residents to build knowledge, form an attitude, and change behaviour. But where knowledge is lacking, the worst-case scenario can happen. This justifies why Naseri et al. (2020) maintain that the lack of awareness about the TB symptoms, stigmatisation, and discrimination against TB patients are the significant threats in controlling TB prevalence in Nigeria. Stigmatising and discriminating attitudes discourage TB patients from actively seeking medical care, which often leads to attitude where they hide their disease status, and discontinue treatment (Sagili et al., 2016). It is expected that appropriate knowledge regarding TB should remove stigmatising and discriminatory attitudes (Sagili et al., 2016).

The need to address gaps in awareness and knowledge of TB in Nigeria led to the development of the first national unified TB Social and Behaviour Change (SBC) campaign, tagged "*Check Am O!*" (Breakthrough ACTION, n.d.). "*Check Am O!*" is a campaign that specifically aims to create awareness and proactive TB consciousness among residents. It raises concerns on the need for residents to be alert to any slight symptoms of TB for emergency health response instead of having to wait till full manifestation of TB before concerted action is taken. According to Breakthrough ACTION (n.d., pp. 5-6):

The campaign was designed to be relatable to the priority audience of peri-urban dwellers based on an intensive human-centered design approach (see Development Documentary) encouraging anyone with a cough lasting more than 2 weeks to seek TB testing and for their friends, family and associates to support them to do so… The campaign's mass media and social media approach included animated videos on television and social media and radio spots in five languages. The community mobilisation activities included motorised campaigns in TB hotspots in partnership with service delivery partners, and engagement of patent medicine vendors, market associations and religious leaders to refer suspected TB cases among their clients and congregants…The motorised campaigns

and community activities started in November 2020 and the media campaign went on air in December 2020 and was formally launched by the Honourable Minister of Health during World TB Day in March 2021.

Over the years, the organisers of the campaign have aired 57, 297 radio and TV spots; aired 825 TB programmes in 7 States; 80% reported TB message exposure; over three hundred and eighty thousand dollars ($380,000) in airing cost share; built capacity of over 700 media persons; reached over five million persons in 2021, 84,917 people accessed information on location of nearest TB testing site in their area; 2,384 motorised campaigns conducted; over one million and seven hundred thousand persons reached in TB Hotspots; over one hundred and seventy thousand presumptive TB cases referred for testing; and over eighty-two thousand directly referred TB cases tested (Breakthrough ACTION, n.d., p.7).

The NGO made the revelation that:

While comprehensive investment across the spectrum of care for Tuberculosis is important, SBC has helped to increase case notification in Nigeria through: co-development of interventions with targeted beneficiaries using the human centered design approach; provision of actionable information that can connect people to services within their own areas; ensuring the actionable information is available to the people through mass and interactive media; and deploying the community SBC approaches in collaboration with service delivery partners for seamless testing of presumptive cases (Breakthrough ACTION, n.d., p.8).

Empirical Review

Naseri et al. (2020) conducted a study on post evaluation of a tuberculosis awareness campaign in Afghanistan to analyse process indicators that helped in interpreting and evaluating the impact of the awareness campaigns in terms of knowledge provision and TB cases notification rate as were implemented in 10 provinces in the country. The results of the study indicate that the campaign had no impact in the implemented provinces. Consequently, the TB awareness campaigns showed no impact in the implemented provinces in the country.

In a study conducted by Choi (2019), the researcher's major objective was to analyse the effective message strategy for the TB prevention campaign in order to ascertain the differences in the perceived susceptibility, perceived severity, and behaviour intention

according to the message orientation (individual-social) and the message presentation style (statistical-narrative). The results showed that individual message was more effective than social message in terms of perceived susceptibility and perceived severity. In the case of individual message, narrative messages were more effective than statistical messages.

Similarly, in Gerace's (2014) study whose major objective was to quantitatively investigate the effectiveness of using social media to deliver a TB health communication campaign targeting 18- to 24-year-old millennial college students in order to assess their preferences for sharing health information. The results of the study indicate that social media had clear advantage over traditional media for affecting self-efficacy and the likelihood of sharing health information. Furthermore, participants consistently indicated a strong preference for social media over other types of media for receiving and sharing information.

Consequently, Nglazi et al. (2014) conducted a systematic review on the impact of mass media interventions on tuberculosis awareness, health-seeking behaviour, and health service utilisation. The inference in the study was that the use of mass media is one of the important strategies in communicating behavioural change in relation to TB prevention and the treatment. It was further inferred that mass media interventions have proven effectiveness in changing individuals' behaviour and healthcare utilisation, reducing stigma, and raising awareness of the signs and symptoms of other diseases. With respect to TB, mass media interventions were found to have the potential to assist in generating knowledge about TB, promoting awareness on the services that exist for TB diagnosis, prevention and treatment to assist with early diagnosis, treatment compliance, and stigma reduction.

In a study conducted by Turk et al. (2013) to examine the efficacy of TB Advocacy, Communication, and Social Mobilisation (ACSM) activities in Pakistan using a cross-sectional design, TB interventive programme was evaluated by surveying a stratified random sample of 2,400 participants across 57 districts of Pakistan. Participants were categorised into one of three groups: aware of both media and community ACSM activities (Aware Media & Community), aware of ACSM media activities only (Aware Media), or unaware of any ACSM activities (Unaware Media & Community). Independent measures ANCOVA revealed complex differences in knowledge, attitudes, and intended behaviours towards TB between the three groups. In general, Unaware Media & Community cases had

a poorer understanding of TB and its treatment, whilst awareness of ACSM activities was highest among literate and urban dwelling Pakistanis.

Contrastingly, Junaid et al. (2021) carried out a study to assess TB stigma in light of knowledge, attitudes, and preventive practices among individuals in an urban community in Lagos State. Results of the study showed that approximately 9 out of every 10 respondents (91.8%) were aware of TB. Overall, only 2.4% of respondents had good knowledge of TB, more than half (59.1%) had positive attitudes toward TB, about one-third (37.1%) had good preventive practices and 22.7% of respondents expressed TB stigma, etc. The inferences drawn in the study were that most participants were aware of TB, although knowledge, attitude, and practice levels were poor. Knowledge was found to reduce TB stigma, reinforcing the need for improved community literacy regarding TB.

In Balogun's et al. (2019) cross-sectional study conducted to assess the predictors of tuberculosis knowledge, attitudes and practices in urban slums in Nigeria. Results of the study showed that the mean KAP scores were relatively low: 9.8 ± 7.1 for knowledge (out of a maximum 34), 5.3 ± 3.4 for attitude (maximum = 10), and 5.2 ± 1.5 for practice (maximum = 7). The predictors of good knowledge were increasing age, post-secondary education and professional occupation. The predictors of positive attitude were post-secondary education and good TB knowledge. Good knowledge was found to a key predictor of good practice.

Ohiengbomwan et al. (2022) assessed the level of community TB-KAP among residents of two communities affected by the TB scourge in Osun State in order to reinforce the need for a more robust awareness campaign for better TB health service utilization. The following KAP scores were obtained: overall good knowledge of TB: 60% (Iwo- 54.7% and Ikire-65.2%), overall good attitude towards TB: 50% (Iwo- 53.3% and Ikire- 46.7%) and overall good TB preventive practices 65.2% (Iwo- 66.6% and Ikire-63.8%). Ikire respondents were significantly more knowledgeable than Iwo respondents ($p = .002$), while Iwo respondents had better TB attitudes than Ikire respondents ($p = .03$). Predictors of good KAP scores were accommodation type, education, age, and main source of income of respondents.

Moreover, in Vericat-Ferrer's et al. (2022) aimed to identify the factors associated to TB-related knowledge, attitudes, and stigma in order to design community intervention strategies that could improve TB diagnostic and treatment adherence in Equatorial Guinea.

This study found that a high percentage of caregivers in Equatorial Guinea lack important knowledge about TB disease and have bad attitudes and high TB-related stigma.

In a related study conducted by Sagili et al. (2016) to examine cross-sectional knowledge, attitude, and practice survey in 30 districts of India in January-March 2011, it was found that of the 4562 interviewed, 3823 were eligible for the current analysis. Of these, 73% (95% CI 71.4-74.2) had stigmatising and 98% (95% CI 97.4-98.3) had discriminating attitude towards TB patients. Only 17% (95% CI 15.6-18.0) of the respondents had appropriate knowledge regarding TB with even lower levels observed amongst females, rural areas and respondents from low income groups. Surprisingly stigmatising (adjusted OR 1.31 (0.78-2.18) and discriminating (adjusted OR 0.79 (0.43-1.44) attitudes were independent of knowledge regarding TB.

Considerably, Asuquo et al. (2015) conducted a study to assess the effectiveness of public-private partnership intervention campaigns to reduce tuberculosis burden in Akwa Ibom State, Nigeria. Results of the study indicate that 65.3% (549/841) respondents correctly identified that TB is airborne, and 86% (749/871) were aware that TB could be cured by anti-TB medication. Responses to care-seeking attitudes were provided by 123 respondents. Of this number, fear of stigmatization was the reason for 31% (38) seeking care in unorthodox facilities, while 43.1% (53) did not believe that orthodox medicine could cure their symptoms.

Conclusively, Tolossa's et al. (2014) study was undertaken in Shinile town with the objective of assessing communities' knowledge, attitude and practices towards TB. Inferences drawn from the study were that the communities in Shinile town have basic awareness about TB which is not translated into the knowledge about the cause of the disease.

Theoretical Framework

The Knowledge, Attitude, and Practice (KAP) Theory

This theory, an offshoot of knowledge-attitude-practice model, was developed by Schwartz in 1979. The theory borrowing inputs from Schwartz's (1979) model, specified the psychological processes and socio-demographic characteristics that encapsulate residents' reception of health information (message) through intervention campaigns and how the received information impact health consciousness or awareness (knowledge) to the extent that attitudes are affected, moulded or shaped and behaviours, altered, modified or

changed. The KAP theory is a theoretical framework that is purely based on the cognitive (knowledge), affective (attitude), and behaviour (practice) conceptual and theoretical foundations in social psychology (Obong, 2024).

At its basic, the theory suggests that an increase in knowledge gained through health campaigns affects residents' attitude and consequently changes their behaviour (Bano et al., 2013). The theory places emphasis on what is known (knowledge), believed (attitude), and done (practiced) within the confined context of health topic of interest or concern (Andrade et al., 2020). It is a theory that is succinctly applicable within the domains of public health, especially, in context where evaluation of people's interaction, understanding, awareness, and compliance with health information or messages specified in intervention campaigns is pertinent (Obong, 2024).

The KAP theory divides the process of human behaviour change psychology into three composite processes: acquiring knowledge, generating attitudes/beliefs, and exhibiting practices, through which human health behaviours can also be effectively changed (Wang et al., 2020; Maroof et al., 2021). According to KAP theory, "knowledge about a phenomenon leads to an attitude which results in different practices" (Maroof et al., 2021, p. 435). The theory stresses that knowledge is the foundation of an improved health behaviour and helps form attitudes and practices that drive behaviour change.

In the light of KAP theory, it is assumed that the spread of TB would certainly be affected by the behavioural practices of Nasarawa State residents which are consequent upon the availability of quantitative and qualitative health-based knowledge and information at their disposal (Obong, 2024). Quality knowledge about the disease are pertinent psychological empowerment tool for action. It is expected that the quality and quantity of knowledge available to Nasarawa State residents on the repercussions of precautionary measures and guidelines specified in the '*Check Am O!*' TB campaign messages will influence the residents' attitude towards the disease as well as compel them to take considerate actions to safeguard their health. Gaining insights into how the knowledge gained through the TB campaign influence residents' attitude and adoption of specified health behaviours justifies the relevance of setting the KAP theory as a theoretical framework to this study. Hence, the theory provides explications on the relationships between the variables of knowledge, attitude, and adoption by providing the basis for understanding how each of the variables affect one another.

METHODOLOGY

The survey research design was adopted for this study with the questionnaire as the data collection instrument. In ensuring that the data collection instrument was valid in measuring the knowledge, attitudes, and behaviours of the respondents with consistent accuracy, the researchers employed face validity and content checks. On the other hand, a reliability test of the research instrument was obtained by using the "Test-Retest Method" with an interval of two weeks and the correlation coefficient computed to gauge the strength of relationship yielded a value of .84. The value, according to research authorities, indicates a strong positive association (Wimmer & Dominick, 2011; Ary et al., 2014; Batta, 2019; Obong, 2021).

The population of this study comprised all the 1,869,377 residents of Nasarawa State (National Population Commission, 2010). The population was projected to 2,946,138 in 2024. Using Yamene's (1967) formula, a sample size of 400 was determined.

To ensure representativeness of the sample, the residents in Nasarawa State were selected from the three senatorial districts in the State by employing the multi-stage sampling technique. By using the purposive sampling technique, Keffi Local Government Area (LGA) was chosen to represent residents in Nasarawa West Senatorial District; Akwanga LGA was chosen to represent residents in Nasarawa North Senatorial District; and Lafia LGA was chosen to represent residents in Nasarawa South Senatorial District. All the LGAs chosen formed the sub-population of the study. The proportionate sampling technique was then employed to draw up percentages of each of the sub-populations in order to select a representative sample to be administered the instrument. After the computations were done, the researchers arrived at the following percentages and representative sample for each of the senatorial districts: Nasarawa West Senatorial District (69 [17%]); Nasarawa North Senatorial District (83 [21%]); and Nasarawa South Senatorial District (248 [62%]). The researchers administered the instrument on the respondents that were available during the data collection exercise in the three senatorial districts selected.

The retrieved copies of the instrument duly completed were analysed using simple percentage calculation on frequency tables. The hypothetical constructs and variables of the study were tested using the Pearson Product-Moment Correlation of Co-efficient (PPMCC) statistical method commonly symbolised as *r*. In accepting or rejecting the hypothesis, the decision rule was that if the calculated *r* is greater than or equal to the

tabled (critical) *r*, the hypothesis would be rejected and the unstated alternate hypothesis accepted. Critical *r* is put at 0.05 level of significance for a Two-tailed test, with degree of freedom ("df") = N-2 is 0.8783. The scaling for Likert's 5-points scale was as follows: Strongly agree = 5; Agree = 4; Undecided = 3; Disagree = 2; Strongly disagree = 1. The mean of the aggregate weighting = 5 + 4 + 3 + 2 + 1 =15/5 =3. The decision rule was that "if the computed value of the 5-point scale is up to or above the mean aggregate weighting, the statement would be held in affirmative, but if it is below the mean aggregate, the statement would be held in the negation" (Senam, 2020, p. 48).

RESULTS

Out of the 400 copies of the questionnaire administered on the respondents in their various senatorial districts, 383 copies were retrieved and found fit for the analysis of data for this study. This represented 95.7% response rate of the sample of the study.

Table 1: Weighted mean analysis on frequency of exposure to Breakthrough Action's *"Check Am O!"* campaign messages on tuberculosis

Item	Nature of Responses						WMS	Decision
	SA (5)	**A** (4)	**U** (3)	**D** (2)	**SD** (1)	**Total** (15)		
I am frequently exposed to Breakthrough Action's *"Check Am O!"* campaign messages on tuberculosis.	199	96	37	36	15	383	4.11	Accept
	995	384	111	72	15	1,577		

[Source: Field data (2025)

With the data displayed in Table 1, where the computed value (4.11) of the weighted mean score is greater than the mean of the aggregate weighting (3.0), it is inferred that Nasarawa State residents were frequently exposed to Breakthrough Action's *"Check Am O!"* campaign messages on tuberculosis.

Table 2: Weighted mean analysis on whether respondents' extent of exposure to Breakthrough Action's *"Check Am O!"* campaign messages on TB means they are knowledgeable about the repercussion of the disease as specified in the campaign

Item	Nature of Responses						WMS	Decision
	SA (5)	A (4)	U (3)	D (2)	SD (1)	Total (15)		
The extent of my exposure to Breakthrough Action's *"Check Am O!"* campaign messages on tuberculosis means that I am knowledgeable about the repercussion of tuberculosis specified on the campaign.	205	151	16	10	1	383	4.43	Accept
	1025	604	48	20	1	1,698		

Source: Field data (2025)

Since the computed value (4.43) of the weighted mean score is greater than the mean of the aggregate weighting (3.0); it invariably implies that exposure to Breakthrough Action's *"Check Am O!"* campaign messages on tuberculosis made Nasarawa State residents knowledgeable about the repercussion of tuberculosis specified on the campaign.

Table 3: Weighted mean analysis on whether respondents' attitude towards Breakthrough Action's *"Check Am O!"* campaign messages on TB influenced their attitude toward the health precautions in the campaign messages

Item	Nature of Responses						WMS	Decision
	SA (5)	A (4)	U (3)	D (2)	SD (1)	Total (15)		
My attitude towards Breakthrough Action's *"Check Am O!"* campaign messages influences' my attitude toward the health precautions specified in the campaign messages.	170	198	10	4	1	383	4.39	Accept
	850	792	30	8	1	1,681		

Source: Field data (2025)

Since the computed value (4.39) of the weighted mean score is greater than the mean of the aggregate weighting (3.0); it invariably implies that the attitude towards Breakthrough Action's *"Check Am O!"* campaign messages by Nasarawa State residents influenced their attitude toward the health precaution specified in the campaign messages.

Table 4: Respondents' attitude towards *"Check Am O!"* campaign on TB

Attitude towards the campaign	Frequency	Percentage
Feeling of anxiety about the possibility of contracting tuberculosis.	68	18
Panic about the devastating impact of tuberculosis.	100	26

Attitude towards the campaign	Frequency	Percentage
Fear of being a victim of tuberculosis.	74	19
Apprehension about the credibility of tuberculosis messages.	20	5
Dissonance as a result of violating the specified guidelines.	9	2
Emotional disturbance about the possibility of being a victim of meeting the index case description of tuberculosis.	64	17
Repulsion from risky behaviour.	14	4
Reliance on the campaign messages an improved health behaviour.	24	6
None of the above.	10	3
Total	383	100

Source: Field data (2025)

The analysis of data in Table 4 indicates that significant percentages of the respondents affirmed that panic about the devastating impact of TB (26%); fear of being a victim of TB (19%); and feeling of anxiety about the possibility of contracting TB (18%) were the attitude Breakthrough Action's *"Check Am O!"* campaign on TB provoked due to exposure to the specified health precautionary messages in the campaign.

Table 5: Weighted mean analysis on whether respondents have adopted, complied with or implemented the health precautionary measures specified in the Breakthrough Action's *"Check Am O!"* campaign messages

Item	Nature of Responses						WMS	Decision
	SA (5)	**A** (4)	**U** (3)	**D** (2)	**SD** (1)	**Total** (15)		
I have, in some way, adopted, complied with or implemented the health precautionary measures specified in the Breakthrough Action's *"Check Am O!"* campaign messages.	171	187	9	10	6	383	4.32	Accept
	855	748	27	20	6	1,656		

Source: Field data (2025)

Since the computed value (4.32) of the weighted mean score is greater than the mean of the aggregate weighting (3.0); it is implied that Nasarawa State resident have adopted, complied with or implemented the health precautionary measures specified in Breakthrough Action's *"Check Am O!"* campaign messages.

Table 6: Weighted mean analysis on whether respondents' attitude towards the health precautionary measures in the Breakthrough Action's *"Check Am O!"* campaign influenced their adoption of or compliance with the health messages

Item	Nature of Responses						WMS	Decision
	SA (5)	**A** (4)	**U** (3)	**D** (2)	**SD** (1)	**Total** (15)		
My attitude towards the health precautionary measures in Breakthrough Action's *"Check Am O!"* campaign messages influences' my adoption of or compliance with the health messages.	172	191	13	6	1	383	4.38	Accept
	860	764	39	12	1	1,676		

Source: Field data (2025)

Based on the computed value (4.42) of the weighted mean score which is greater than the mean of the aggregate weighting (3.0); it is inferred that Nasarawa State residents' attitude towards the health precautionary measures in Breakthrough Action's *"Check Am O!"* campaign messages influenced their adoption of or compliance with the health messages.

Table 7: Weighted mean analysis on whether respondents have adopted the health precautionary measures specified in the Breakthrough Action's *"Check Am O!"* campaign messages

Item	Nature of Responses						WMS	Decision
	SA (5)	**A** (4)	**U** (3)	**D** (2)	**SD** (1)	**Total** (15)		
I have adopted the health precautionary measures specified in the Breakthrough Action's *"Check Am O!"* campaign messages.	172	170	6	23	12	383	4.22	Accept
	860	680	18	46	12	1,616		

Source: Field data (2025)

Since the computed value (4.22) of the weighted mean score is greater than the mean of the aggregate weighting (3.0); it is implied that Nasarawa State residents have adopted the health precautionary measures specified in the Breakthrough Action's *"Check Am O!"* campaign messages.

Testing the Research Hypotheses

$H0_1$: There is no relationship between Nasarawa State residents' extent of exposure to Breakthrough Action's *"Check Am O!"* campaign on tuberculosis and their knowledge of the repercussion of tuberculosis as specified in the campaign.

The Pearson Product Moment Correlation Coefficient parametric test was used for testing the hypothesis of this study. The calculation was based on 3 degrees of freedom at 0.05 level of significance. In line with the requirements of the test, data computed and analysed in Tables 1 and 2 were used to enable the testing of this hypothesis. Data analysis on frequent exposure to Breakthrough Action's *"Check Am O!"* campaign messages on TB is calibrated "X" while analysis of responses on whether respondents' are knowledgeable about the repercussion of TB as specified on the campaign is calibrated "Y". The computation is presented in the table below:

Table 8: Pearson Product Moment Correlation Coefficient of the relationship between Nasarawa State residents' extent of exposure to Breakthrough Action's *"Check Am O!"* campaign and their knowledge of the repercussions of TB as specified in the campaign.

X	X^2	Y	Y^2	XY
199	39601	205	42025	40795
96	9216	151	22801	14496
37	1369	16	256	592
36	1296	10	100	360
15	225	1	1	15
383	51707	383	65183	56258

Source: Tables 1 and 2

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N(\sum X^2) - (\sum X)^2\}\{N(\sum Y^2) - (\sum Y)^2\}}} \qquad r = \frac{5(56258) - (383*383)}{\sqrt{(5*51707) - (383)^2(5*65183) - (383)^2}}$$

$$r = \frac{281290 - 146689}{\sqrt{(258535 - 146689)(325915 - 146689)}} \qquad r = \frac{134601}{\sqrt{111846*179226}}$$

$$r = \frac{134601}{\sqrt{20045711196}} \qquad r = \frac{134601}{141582} \qquad r = 0.95$$

Decision: The calculated "*r*" is 0.95; it is greater than the value of critical "*r*" 0.8783 at 0.05 level of significance for a two-tailed test, with degree of freedom (df) = 3. Therefore, the tested null hypothesis of this study that there is no relationship between

Nasarawa State residents' extent of exposure to Breakthrough Action's *"Check Am O!"* campaign on TB and their knowledge of the repercussions of TB as specified in the campaign is rejected. Therefore, the stated alternate hypothesis that there is a relationship between Nasarawa State residents' extent of exposure to Breakthrough Action's *"Check Am O!"* campaign on TB and their knowledge of the repercussions of TB as specified in the campaign is upheld.

$H0_2$: There is no relationship between Nasarawa State residents' knowledge of the repercussions of TB as specified in the Breakthrough Action's *"Check Am O!"* campaign and their attitude towards the precautionary measures on TB as specified in the campaign.

The Pearson Product Moment Correlation Coefficient parametric test was used for testing the hypothesis of this study. The calculation was based on 3 degrees of freedom at 0.05 level of significance. In line with the requirements of the test, data computed and analysed in Tables 2 and 3 were used to enable the testing of this hypothesis. Analysis of responses on whether respondents are knowledgeable about the repercussion of TB specified as specified in the campaign is calibrated as "X" whereas data on whether respondents' attitude towards the campaign messages influenced their attitude toward health precautions in the campaign messages is calibrated as "Y". The computation is presented in the table below:

Table 9: Pearson Product Moment Correlation Coefficient of the relationship between Nasarawa State residents' knowledge of the repercussions of TB as specified in the Breakthrough Action's *"Check Am O!"* campaign and their attitude towards the precautionary measures on TB as specified in the campaign.

X	X^2	Y	Y^2	XY
205	42025	170	28900	34850
151	22801	198	39204	29898
16	256	10	100	160
10	100	4	16	40
1	1	1	1	1
383	65183	383	68221	64949

Source: Tables 2 and 3

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N(\sum X^2) - (\sum X)^2\}\{N(\sum Y^2) - (\sum Y)^2\}}} \qquad r = \frac{5(64949) - (383*383)}{\sqrt{(5*65183) - (383)^2(5*68221) - (383)^2}}$$

$$r = \frac{324745 - 146689}{\sqrt{(325916 - 146689)(341105 - 146689)}} \qquad r = \frac{178056}{\sqrt{179227*194416}}$$

$$r = \frac{178056}{\sqrt{34844596432}} \qquad r = \frac{178056}{186667} \qquad r = 0.95$$

Decision: The calculated "*r*" is 0.95; it is greater than the value of critical "*r*" 0.8783 at 0.05 level of significance for a two-tailed test, with degree of freedom (df) = 3. Therefore, the tested null hypothesis that there is no relationship between Nasarawa State residents' knowledge of the repercussions of TB as specified in the Breakthrough Action's *"Check Am O!"* campaign and their attitude towards the precautionary measures on TB as specified in the campaign is rejected. Therefore, the stated alternate hypothesis that there is a relationship between Nasarawa State residents' knowledge of the repercussions of TB as specified in the Breakthrough Action's *"Check Am O!"* campaign and their attitude towards the precautionary measures on TB as specified in the campaign is upheld.

$H0_3$: There is no relationship between Nasarawa State residents' attitude towards the precautionary measures on TB specified in the Breakthrough Action's *"Check Am O!"* campaign and their adoption of the precautionary measures on TB as specified in the campaign.

The Pearson Product Moment Correlation Coefficient parametric test was used for testing the hypothesis of this study. The calculation was based on 3 degrees of freedom at 0.05 level of significance. In line with the requirements of the test, data computed and analysed in Tables 3 and 6 were used to enable the testing of this hypothesis. Data on whether respondents' attitude towards the campaign messages influenced their attitude toward health precautions in the campaign messages is calibrated as "X" whereas analysis of response on whether respondents' attitude towards the health precautionary measures in the campaign influenced their adoption of the health messages is calibrated as "Y". The computation is presented in the table below:

Table 10: Pearson Product Moment Correlation Coefficient of the relationship between Nasarawa State residents' attitude towards the precautionary measures on TB as specified in the Breakthrough Action's "*Check Am O!*" campaign and their adoption of the precautionary measures on TB as specified in the campaign.

X	X^2	Y	Y^2	XY
170	28900	172	29584	29240
198	39204	191	36481	37818
10	100	13	169	130
4	16	6	36	24
1	1	1	1	1
383	68221	383	66271	67213

Source: Tables 3 and 6

$$r = \frac{N\sum XY - (\sum X)(\sum Y)}{\sqrt{\{N(\sum X^2) - (\sum X)^2\}\{N(\sum Y^2) - (\sum Y)^2\}}} \qquad r = \frac{5(67213) - (383*383)}{\sqrt{(5*68221) - (383)^2(5*66271) - (383)^2}}$$

$$r = \frac{336065 - 146689}{\sqrt{(341105 - 146689)(331355 - 146689)}} \qquad r = \frac{189376}{\sqrt{194416*184666}}$$

$$r = \frac{189376}{\sqrt{35902025056}} \qquad r = \frac{189376}{189478} \qquad r = 0.99$$

Decision: The calculated "r" is 0.99; it is greater than the value of critical "r" 0.8783 at 0.05 level of significance for a two-tailed test, with degree of freedom (df) = 3. Therefore, the tested null hypothesis of this study that there is norelationship between Nasarawa State residents' attitude towards the precautionary measures on TB as specified in the Breakthrough Action's *"Check Am O!"* campaign and their adoption of the precautionary measures on TB as specified in the campaign is rejected. Therefore, the stated alternate hypothesis that there is a significant relationship between Nasarawa State residents' attitude towards the precautionary measures on TB specified in the Breakthrough Action's *"Check Am O!"* campaign and their adoption of the precautionary measures on TB as specified in the campaign is upheld.

DISCUSSION

The analysis of data in Table 1 indicated a weighted mean score (WMS) of 4.11 which inferred that Nasarawa State residents were frequently exposed to Breakthrough

Action's "*Check Am O!*" campaign messages on TB. The weighted mean value address the question bordering on the extent to which Nasarawa State residents were exposed to Breakthrough Action's "*Check Am O!*" campaign on TB. The analysis of data in Table 2 reveal a weighted mean score of 4.43 which inferred that exposure to Breakthrough Action's "*Check Am O!*" campaign messages on TB have made Nasarawa State residents knowledgeable about the repercussion of TB as specified in the campaign. These data-centric insights lend credence to Ruben's (2015) submission of health communication encompassing the process of exchanging information and messages related to health and healthcare between individuals, groups, or organisations with the aim of creating knowledge necessary to improving health outcomes and promoting healthy behaviours. The shreds of empirical inferences from that analysis of data in the tables corroborates with the findings of Nglazi et al. (2014) who found that mass media interventions have proven effectiveness in generating knowledge about TB, promoting awareness on the services that exist for TB diagnosis, prevention and treatment to assist with early diagnosis, treatment compliance, and stigma reduction. This justifies why Naseri et al. (2020) maintains that lack of awareness about TB symptoms, stigmatisation, and discrimination against TB patients are the significant threats in controlling TB prevalence in Nigeria.

Interestingly, in Table 3, the computed value (4.39) of the weighted mean score, suggests that the attitudinal disposition and inclinations of Nasarawa State residents towards Breakthrough Action's "*Check Am O!*" campaign messages influenced their attitude toward the TB health precaution specified in the campaign messages. Corroboratively, in Table 4, the data related to the attitude of Nasarawa State residents were analysed. The analysis revealed that significant percentages of the residents acquiesced that panic about the devastating impact of TB (26%), fear of being a victim of TB (19%), and feeling of anxiety about the possibility contracting TB (18%), were among the top attitudinal reflexes that Breakthrough Action's "*Check Am O!*" campaign provoked in them as a result of their exposure to the TB health precautionary messages in the campaign. This goes to show that the residents' attitude towards health communication campaigns is more of a psychological or/and emotional process than it is a physical activity (Obong, 2024). It is a process that sits comfortably within residents' cognitive and affective domains (Obong, 2024). By buttressing the foregoing, Luo et al. (2022, p. 2) say that "attitude is an individual's general and persistent assessment of an object, and this assessment is multidimensional, which is usually divided into two aspects: cognitive and affective." By resonating the place of

attitude in a given health intervention campaign, scholars maintain that mere knowledge about the symptoms and treatment of diseases is ineffective unless right attitude regarding disease awareness is implemented (Luo et al., 2022; Obong, 2024).

Moreover, in Table 5, that analysis of data revealed that the computed value (4.32) of the weighted mean score is greater than the mean of the aggregate weighting which presupposes that Nasarawa State residents have, in some way, adopted the TB precautionary measures specified in the Breakthrough Action's "*Check Am O!*" campaign messages. Table 6 indicated that the computed value (4.38) of the weighted mean score is greater than the mean of the aggregate weighting, thus, implying that Nasarawa State residents' attitude towards the TB precautionary measures in Breakthrough Action's "*Check Am O!*" campaign messages influenced their adoption of or compliance with the TB-related health messages in the campaign. Also, the analysis of data in Table 7 reveal that the computed value (4.22) of the weighted mean score is greater than the mean of the aggregate weighting, implying that Nasarawa State residents have adopted the TB health precautionary measures specified in the Breakthrough Action's "*Check Am O!*" campaign messages.

In the light of the foregoing finding, Kaliyaperumal (2004) notes that adoption of health campaign messages specifies the way that residents who have been exposed to health interventions demonstrate their knowledge and attitude of the health precautions advocated in the intervention campaign messages. Adoption is a key variable in the KAP theory that is concerned with the veracity as to whether the quality or quantity of knowledge needed to shape attitude has actually led to a change in approve behaviours and actions that are in consonance with the specifications, cues, instructions, appeals, persuasions, warnings and precautions inherent in the acquisition of informational knowledge (Obong, 2024). Hence, knowledge that cannot modify attitude and lead to a change in behaviour is as good as nothing (Obong, 2024).

The findings of this study reinforces the core assumptions of the KAP theory which proposes the psychological processes and socio-demographic characteristics that encapsulate residents' reception of health information (message) through intervention campaigns and how the received information impact health consciousness or awareness (knowledge) to the extent that attitudes are affected, moulded or shaped and behaviours, altered, modified or changed. At its basic, the theory suggests that an increase in knowledge

gained through health campaigns affects residents' attitude and consequently changes their behaviour (Bano et al., 2013). The theory has reinforced the findings of this study by explicating what is known (knowledge), believed (attitude), and done (practiced) within the confined context of health topic of interest or concern such as TB (Andrade et al., 2020). As succinctly applicable within the domains of public health, especially, in context where evaluation of residents' understanding, awareness, and compliance with health information or messages specified in intervention campaigns is pertinent (Obong, 2023; Obong, 2024), the theory has provided canonical underpinning upon which the findings of this study are anchored.

CONCLUSION

From the findings obtained in the study, it was concluded that Nasarawa State residents are knowledgeable of the repercussions of TB as specified in the Breakthrough Action's '*Check Am O!*' campaign. This is inferred on the grounds that Nasarawa residents' level of knowledge about the campaign influenced their attitude towards the health messages. The foregoing proposition is in tandem with the stated tripartite hypotheses of the study that relationships exist between residents' knowledge of the repercussions of TB, attitude towards the precautionary measures on TB, and the adoption of the precautionary measures on TB as specified in the health intervention. So, knowledge moulds the desired attitude that culminate in behaviour change. It is therefore recommended that Breakthrough Action organisation should integrate diverse folk media platforms and indigenous communication channels to ensure that people residing in the peri-urban and rural areas of Nasarawa State are adequately exposed to the campaign just the same way their urban counterparts are.

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