EXPERIMENTAL STUDY OF THE INFLUENCE OF THEATRE FOR DEVELOMENT (TFD) IN COMMUNICATING HUMAN PAPILLOMAVIRUS VACCINATION (HPV) AMONG SECONDARY SCHOOL GIRLS IN ANAMBRA STATE, NIGERIA

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ABSTRACT
This paper evaluated the experimental study of the influence of Theatre for Development (TFD) in communicating Health Preventive Menstrual Vaccination (HPMV) among junior secondary school students in Anambra state. This relatively new health practice has not been fully adopted by the people, hence the need for this study. The researchers aimed to determine whether TfD can effectively create awareness about HPMV, and to examine the correlation between TfD and development of positive attitudes towards the practice. This study was anchored on the Diffusion of Innovation theory. The study area is Anambra state, Nigeria, and the research design adopted was survey approach. The population of the study was 112,087 junior secondary school students in Anambra state, from which a sample size of 384 students was drawn. The students were exposed to theatrical performance on HPMV in their school environments. Thereafter, a questionnaire was administered as a research instrument to gather respondents' views on both HPMV and TfD. Data obtained from the study were presented in simple frequency distribution tables and subsequently analysed. The results revealed that TfD was affective in encouraging the students to adopt the therapeutic behavior associated with HPMV practice. The study recommended that government and None Governmental Organisations (NGOs) should scale up the use of TfD as a health communication strategy.
Keywords: *Theatre, Development, Communicating, HPMV, Practice*

Background to the Study
On 23rd October, 2023, Nigeria introduced the Human Papillomavirus (HPV) vaccine into its routine immunization system, aiming to reach 7.7 million girls – the largest number in a single round of HPV vaccination in the African region – in a vaccination drive against the virus that causes nearly all cases of cervical cancer World Health Organisation, WHO, 2023). According WHO(2023), girls aged 9–14 years will receive a single dose of the vaccine, which is highly efficacious in preventing infection with HPV types 16 and 18 that are known to cause at least 70% of cervical cancers. WHO (2023) informs that in Nigeria, cervical cancer is the third most common cancer and the second most frequent cause of cancer deaths among women aged between 15 and 44 years, adding that in 2020 – the latest year for which data is available – the country recorded 12 000 new cases and 8000 deaths from cervical cancer.

Until the year, 2023, not much was heard in Nigeria about Human Papillomavirus (Vaccination), as a therapeutic health behaviour. The Centre for Disease Control, CDC, (2024) affirmed the foregoing and further informed that vaccination was the easiest and simplest practices to mitigate cervical cancer among females. Given the relative novelty of the vaccination, there is the need for communication strategies to scale up the people's buy in.

Communication strategies are essential to ensure uptake of new vaccines. By providing information on the safety and efficacy of vaccines, communication strategies may increase vaccine uptake by minimizing perceived risks associated with vaccination and increasing perceived susceptibility and severity of vaccine-preventable diseases (Centre for Disease Control, CDC, 2024). While few studies have addressed information needs associated with vaccines in low- and middle-income countries (LMICs), there is limited evidence that providing information about vaccines and the diseases they prevent can increase uptake (WHO, 2024).

Comprehensive communication strategies may be particularly important for Human Papillomavirus (HPV) vaccination in Low Medium Income Countries due to limited knowledge of HPV, misunderstandings about the causes of cervical cancer, and concerns about vaccinating adolescent girls (United Nations Funds for Population Activities, UNFPA, 2024). With HPV vaccines set to be introduced in many LMICs, understanding the key community influencers and communication strategies that promote vaccine uptake is needed. The thrust of this paper is to evaluate experimental study of the use of Theatre for Development (TFD) in communicating the HPMV among junior secondary school students in Anambra state initial uptake of HPV vaccine. According to Nkrumah (2023), theatre has developed through time to become a vehicle for development communication. Theatre is used in what is known as Theatre for Development to aid in the process of altering outdated behaviors, attitudes, beliefs, and practices. It enables everyone to participate (participate) in an activity (solve an issue) that affects them (development) (Illah, 2019).

1.2: Statement of Research Problem

Every public health intervention programme requires that the target beneficiaries, not only have full knowledge about the intervention, but buy into it for successful implementation. This is because health promotion programmes are successful to the extent that the expected therapeutic behaviours are elicited from the target beneficiaries. It, therefore, becomes imperative that effective health literacy, health promotion and campaign must involve sufficient and adequate communication. The efficacy of communication strategy(or mixed strategies) to be adopted depends of its/their ability to elicit favourable attitudes and behaviours. This explains the reason why, in contemporary global society, engagement communication platforms are preferably used for public health campaigns. Thus, for the hand washing practice, even though traditional mediums have tried to address the issue of hand washing, it has failed to reach the hearts of majority of children and the grassroots as they are cut-off from mediums like the televisions, billboards and internet and radio advertisements due to underdevelopment. Most importantly majority of individuals especially young girls of all classes in the society have not imbibed the habit of going for vaccination against HPM. Therefore, this important knowledge is at an unfortunate low among the populace. Using theatre as a medium to communicate this practice (HPM Vaccination) will cut-across all parts of the society and can reach the grassroots children because it is participatory and is going to reach out to the kids so that they can participate. According to Aristotle, “tell me, I will know, show me, I will not forget, show me, I will remember, involve me I will understand”. The inherent potentials of TFD for health promotion and health literacy notwithstanding, the platform is not most of the times utilized by government and donor agencies. This is considered a gap that is intended to be filled by this study.

1.3 Objectives of the Study

The general objective of this research is to experiment the influence of theatre for development (TFD) in communicating HPV among junior secondary students in Anambra state, Nigeria. Specifically, the other objectives of this study were:

1 To find out if TfD helps female secondary students understand the Human Papillomavirus Vaccination Campaign.
2 To ascertain if TfD was capable of mobilizing the students to volunteer themselves for Human Papillomavirus Vaccination (HPV).
3 To find out the attitudes of the respondents towards HPV after being exposed to theatrical display on the intervention.
3. To find out if the students perceive TfD as an effective communication strategy for communicating HPV.

Theoretical Framework

The Diffusion of Innovation Theory (DOI) and The Reason Action theory were the theoretical underpinnings for the study.

The Diffusion of Innovation theory (DOI): Everett M. Rogers is the principal chronicler of the Diffusion of Innovation theory (McQuail, and Deuze, 2020), and the theory relates to the many attempts to harness mass media to campaigns for technical advance or for health and educational purposes(World Bank Group, 2018). DOI originated in communication to explain how, over time, an idea, a concept, a product, and a thought gains force and spreads (diffuses) through a target population/audience, or social system. The outcome of this process is that

the target audience/population, as part of a social system, adopts a new idea, behavior, or product. According to Greehaulgh, Robert, Macfariance, Bate, and Kyriakidax (2018), adoption in this context, means that the target population does something differently from what it has previously (that is, acquires and performs a new behavior or attitude). The World Bank Group (2018) however remarks that the key to adoption is that the adopter must perceive the idea, concept, behavior attitudes, or a product as new or innovative.

In their model of information diffusion, Rogers (1962), and Rogers and Shoemaker (1973), Cited in West and Turner (2022), envisaged four stages: information, persuasion, decision or adoption, and confirmation (Greenhaudgh *et al*, 2018). This implies that the stages by which a person adopts an innovation, and whereby diffusion is accomplished, include awareness of the need for innovation (information and persuasion), decision to adopt (or reject) the innovation, initial use of the innovation to test it, and continued use of the innovation.
Rogers (1962), in Littlejohn and Foss (2018), further explains that the adoption of a new idea, behavior or product does not happen simultaneously, but rather passes through certain categories of the target audience (Li, 2020). Rogers (1962), in Littlejohn and Foss (2018), identified five adopter categories as: innovators, early adopter, early majority, late majority and the laggards. **Innovators:** These are the people who want to be the first to try the innovation. They are venturesome and interested in new ideas. These people are very willing to take risks and often, very little needs to be done to appeal to this category of target population.

1. **Early Adopters:** These are people who represent the opinion leaders. They enjoy leadership roles, and embrace change opportunities. They are already aware of the need to change, and so are very comfortable adopting new ideas.
2. **Early Majority:** These people are rarely leaders, but they do adopt new ideas before the average persons. They typically need to see evidence that the innovation works before they are willing to adopt it.
3. **Late Majority:** These people are skeptical to change and will only adopt an innovation after it has been tried by the majority.
4. **Laggards:** These people are bound by tradition and very concervative. They are very skeptical of change and are the hardest group to bring on board.

In public health, diffusion of innovation theory is used to accelerate the adoption of important public health programmes that typically aim to change the behaviour of a social system. For example, the roll back malaria programme was an intervention which is promoted to the people with the goal of adoption of the attitude of regularly sleeping under the mosquito insecticide treated nets (ITNs). This is also the case with the Zip-up programme, which aimed at discouraging youths from sexual promiscuity and promoting protected sex through the use of condoms. The DOI is suitable for this study because social changes involve adoption of positive developments. DOI theory therefore provides some useful insights into the difficulty of achieving behaviour change in preventative initiatives. HPV may be classified as one of this initiative from a public health point of view. The relevance of the theory to the study refers to how HPV messages seek to communicate information that will promote uptake in vaccination.

The Theory of Reasoned Action: This study is also anchored on the Theory of Reasoned Action. This theory seeks answers to the fundamental question of why people or audience behave the way they do. The Theory of Reasoned Action TRA; was first developed by Martin Fishbein in the late 1960s (West and Turner, 2022), but was revised and updated by Fishbein and IcekAzjen in the decades that followed. The theory analyzes; a person's intention to act or behave in a particular way in specific situations. It also suggests that a person's behaviour is determined by his/her intention to perform, and such purpose is a function of his/her attitude towards the action. Similarly, the theory also focuses on a person's attitudes towards that behaviour and even the subjective norms of influential people and groups that could influence those attitudes. The method further elaborates how attitudes towards a particular action are influenced by a combination of two related factors: our beliefs and our evaluation of the potential outcome. They provide insight into why things happen in specific ways through certain structures with certain results (Nwabueze 2021).

The theory assumes that individuals will mostly act upon their intentions which comprise of two primary attributes: an individual's attitude towards behaviour and an individual's beliefs regarding social pressures to either perform or not. Attitude is a function of beliefs- that is beliefs that the behaviour will lead to certain expected outcomes as judged by the individual, (Des Wilson &Aniebo 2018). TRA has been used in many studies as a framework for examining specific kinds of behavior such as communication behavior, consumer behavior and health behavior. Many researchers use the theory to study behaviors that are associated with high risks and danger like unethical conduct as well as deviant behaviour. In contrast, some research has applied the theory to more normative and rational types of action like voting behavior. Researchers Davies, Foxall, and Pallister suggest that

TRA can be tested if "behavior is measured objectively without drawing a connection to prior intention". Most studies, however, look at intention because of its central role in the theory.

The relevance of the theory to the study aptly refers to how respondents perceive HPV messages; it could be as a result of their belief or exposures and consequently the evaluation of the potential outcome of their dispositions. Also, the more we comprehend the attitudes and norms that influence the intent, the more accurately interventions can be designed to affect the desired direction.

Conceptual Review

An Overview of HPV Infection

Alison and McBride (2017) posit that Human papillomavirus (HPV) is a common sexually transmitted infection, stating that almost all sexually active people will be infected at some point in their lives, usually without symptoms. According to the WHO (2022), Human papillomavirus infection (HPV infection) is caused by a DNA virus from the *Papillomaviridae* family. WHO (2022) adds that many HPV infections cause no symptoms and 90% resolve spontaneously within two years. The National Cancer Institute, NCI (2024) corroborates the foregoing and also explains that sometimes a HPV infection persists and results in warts or precancerous lesions. The NCI (2024) avers that all warts are caused by HPV, pointing out that these lesions, depending on the site affected, increase the risk of cancer of the cervix, vulva, vagina, penis, anus, mouth, tonsils or throat. The NCI (2024) further states that nearly all cervical cancer is due to HPV and two strains, HPV16 and HPV18, which account for 70% of all cases. According to the NCI (2024), HPV16 is responsible for almost 90% of HPV-positive oropharyngeal cancers. Between 60% and 90% of the other cancers listed above are also linked to HPV (NCI, 2024). HPV6 and HPV11 are common causes of genital warts and laryngeal papillomatosis (NCI, 2024).

WHO (2024) however, posits that over 200 types of HPV have been described, adding that an individual can become infected with more than one type of HPV and the disease is only known to affect humans. WHO (2024) explains that more than 40 types may be spread through sexual contact and infect the anus and genitals, stressing that risk factors for persistent infection by sexually transmitted types include early age of first sexual intercourse, multiple sexual partners, smoking and poor immune function. These types are typically spread by direct skin-to-skin contact, with vaginal and anal sex being the most common methods (WHO, 2024). HPV infection can spread from a mother to baby during pregnancy (WHO, 2024). There is limited evidence that HPV can spread indirectly, but some studies suggest it is theoretically possible to spread via contact with contaminated surfaces (WHO, 2024). HPV is not killed by common hand sanitizers or disinfectants, increasing the possibility of the virus being transferred via non-living infectious agents called fomites (WHO, 2024).

Lange, Son, Jensen, Medenblik, Sullivan, Basting (2024) explain that cervical cancer is, currently, the only HPV-caused cancer for which screening tests are available. Lange, et al (2024) add that screening tests are used to check for disease when there are no symptoms. According to Lange, et al (2024), the goal of screening for cervical cancer is to find precancerous cell changes before they become cancer and when treatment can prevent cancer from developing. Screening for cervical cancer is an important part of routine health care for people who have a cervix. This includes women and transgender men who still have a cervix.

Globally, it is estimated that 620 000 new cancer cases in women and 70 000 new cancer cases in men were caused by HPV in 2019 *(WHO, 2022)*. Cervical cancer was the fourth leading cause of cancer and cancer deaths in women in 2022, with some 660 000 new cases and around 350 000 deaths worldwide *(WHO, 2024)*. Cervical cancers account for over 90% of HPV-related cancers in women *(WHO, 2024)*. The highest rates of cervical cancer incidence and mortality are in low- and middle-income countries (NCI, 2024). This reflects major inequities driven by lack of access to national HPV vaccination, cervical screening and treatment services, and social and economic determinants.Some HPV infections cause small rough lumps (genital warts) that can appear on the vagina, penis or anus and rarely the throat. They may be painful, itchy or bleed or cause swollen glands.HPV infection that does not go away on its own can cause changes to cervical cells, which lead to pre-cancers that may become cervical cancer if left untreated. It usually takes 15–20 years for cervical cancer to develop after HPV infection.The early changes in cervical cells and pre-cancers mostly do not cause symptoms. Symptoms of cervical cancer may include bleeding between periods or after sexual intercourse or a foul-smelling vaginal discharge. These symptoms may be due to other diseases. People with these symptoms should speak to their healthcare provider.
Ellingson , Sheikha, Nyhan, Oliveira,& Niccolai (2023) aver that there is currently no treatment for HPV infection, adding that reatments exist for genital warts, cervical pre-cancers and cervical cancer. According to *Ellingson, et al (2023),* being vaccinated is the best way to prevent HPV infection, cervical cancer and other HPV-related cancers. Screening can detect cervical pre-cancers that can be treated before they develop into cancer. WHO (2024) informs that the vaccine does not contain any live virus or DNA from the virus so it cannot cause cancer or other HPV-related illnesses. The HPV vaccine is not used to treat HPV infections or diseases caused by HPV,

but instead to prevent the development of cancers (WHO, 2024).HPV vaccines should be given to all girls aged 9–14 years, before they become sexually active (WHO, 2024: NCI, 2024).The vaccine may be given as 1 or 2 doses. People with reduced immune systems should receive 2 or 3 doses. Check with your healthcare provider to determine what is best for you (WHO, 2024: NCI, 2024).

Giving the global public health burden of cervical cancer caused by HPV, the World Health Assembly (WHA, 2021) adopted the Global strategy to accelerate the elimination of cervical cancer as a public health problem with the following targets:

- 90% of girls fully vaccinated with HPV vaccine by age 15;
- 70% of women are screened with a high-performance test by 35, and again by 45 years of age; and
- 90% of women identified with cervical disease receive treatment (90% of women with pre-cancer treated; 90% of women with invasive cancer managed).

Prevention of HPV-associated precancer and cancer is also a key element of WHO's Global health sector strategy on, respectively, HIV, hepatitis and sexually transmitted infections, 2022–2030 and the resolution WHA (2021) on oral health includes actions on mouth/throat cancers.

Theatre for Development (TfD)

Okunoye (2017) posits that the exceptionally eclectic and complex nature of Theatre for Development makes it challenging, if not problematic to define. According to Okunoye (2017). a glut of nomenclatures, pointers, tags, even brands have been allotted to the endeavour by diverse reviewers, researchers, intellectuals, critics and even theatre practitioners. These nomenclatures include Theatre for Integrated Development, Community Theatre, Popular Theatre, Participatory Educational Theatre, Theatre in Education, Alternative Theatre, Campaign Theatre, Resistance Theatre, Revolutionary Theatre, Protest Theatre, Liberation Theatre, Oppositional Theatre, etc (Okunoye, 2017). Many efforts have grappled and tussled seriously with this subject. The phenomenon is generally a popular theatre form, aimed at conscientising and sensitising the society through research, performance and dialogue for positive action (Okunoye 2017). Despite the fact that the classification seems to fluctuate, the fundamental nature of all these variations remain the same, which is looking ahead to the idea of theatre whose focus and ideological position is strictly tied to the services it provides, which is social transformation, change, restructuring and above all, overhauling of the society (Okunoye 2017).

Corroborating the foregoing, Ogbuechi (2021) states that an informal examination of the pointers and demonstrations of the different variations, illustrations abound on this: the Kwanga project which was supported by Women in Nigeria (WIN), adopted by the Nigerian Popular Theatre Alliance (NPTA) NGO, and the Population Programme of the philanthropic MacArthur

Van Peer (2016)argues that Theatre-for-Development can be described as "modes of theatre whose objective is to disseminate messages, or to conscientise communities about their objective and social-political situation". Van Peer (2016, p67) sees the concept as Popular Theatre and expresses its purposes swiftly thus:

> It aims to make the people not only aware of but also active participants in the development process by expressing their viewpoints and acting to better their conditions. Popular theatre is intended to empower the common man with a critical consciousness crucial to the struggle against the forces responsible for his poverty.

It has become quite realistic that even the most untailored commitment with these definitions provided here divulges their frequent denominators as intensification and interactive audience participation and the expected resultant empowerment of those involved in the programme, which is the target audience.

Theatre for Development and Health Promotion

"Through arts and education, engage and inspire individuals and communities to make healthy choices." Kaiser Permanente (KP) has found a unique, health promotion strategy that complements the clinical messaging targeted to young people: the Educational Theatre Program (ETP). This program engages children in interactive productions to help them think about the choices they make that affect their health. During ETP performances, audiences watch schoolmates or professional actors act out scenes about tough topics many of these children face every day, including poor self-esteem, obesity, diabetes, sexually transmitted diseases, drug abuse, suicide, bullying, and others. Sometimes, the actors stop the action and ask the audience how they would handle a situation. Hands shoot up. The children's honest responses are astounding.

Begun in 1985, the award-winning ETP uses theatre to address critical issues children and families face today. Each production *shows* rather than *preach*es, through kinesthetic, aural, peer-to-peer learning, and lively interactive "talkback" opportunities during or after some performances. Scripts are informed by medical, educational, and theatre professionals; community members; parents; and—most important—the children themselves. In addition, each production is intentionally and intensively based on *The 40 Developmental Assets*

for Adolescents[1] from the Search Institute (Minneapolis, MN), which focuses on "concrete, common sense, positive experiences and qualities essential to raising successful young people."
In 2006, KP's eight regions invested almost $10.3 million in more than 2500 performances at 1883 schools to reach 539,000 children and 70,000 adults, including parents, teachers, principals, school counselors, and nurses. Through extensive media coverage, ETP also impacts communities. It is one of the largest children's educational theatre programs in the US.

The regional ETPs interact regularly, sharing research, scripts, set designs, talkback approaches, teacher study guides, and evaluation models. Each region creates or adapts scripts to address local health issues. Most regions operate in-house troupes. The Northwest region is unique in that it has partnered with a professional company, Oregon Children's Theatre, to deliver engaging, professional-quality shows, from script development and casting through evaluation. Some regions, such as Colorado and Northern California, use theatre as the focal point of broader health-intervention campaigns, which include meal programs, parenting classes, etc.

Why has KP made such a large investment in theatre? According to Phil Wu, MD, a KP Pediatrician who serves on the Northwest Region's ETP advisory team and co-authored this article, "We've discovered that we must supplement traditional clinical approaches with other health intervention tools. [Theatre] is an entirely different way for us to communicate with our community about what they can do to effect change. It's *motivational* instead of *prescriptive.* The latter approach never worked, and certainly doesn't now. You don't change behavior by telling people they *should* do something."

Empirical Review
In a paper, titled, "*Community theater outreach to increase HPV vaccine intention among parents of Latino adolescents: A pilot test ,"*Landa, V., Montealegre, J., and Jibaji-Weiss, M ((2018) revealed that although Latinos have higher HPV vaccination rates than non-Hispanic whites, coverage is far below the 80% Healthy People 2020 goal. Landa, V., Montealegre, J., and Jibaji-Weiss, M ((2018) also revealed that significant gaps in knowledge and awareness about HPV and the HPV vaccine persist, hence Community theater performances are an effective tool to communicate health messages to medically underserved minority populations. Audiences viewed a performance of the monologue and then participated in a question-and-answer session. After the intervention, they were asked questions about the performance and their comprehension of health messages. Feedback from the pilot audiences was compiled and incorporated into a revised monologue script. The monologue pilot performances were attended by 36 people. Community theater performances are an effective tool to communicate health messages to medically underserved minority populations. Here we describe the pilot test of a community theater-based intervention to increase HPV vaccination intention among Spanish-speaking parents of underserved Latino adolescents.

Galagan, R. J., Proma, P., Menezes, L., LaMontagne, S. D. (2020), in a study, "*Influences on parental acceptance of HPV vaccination in demonstration projects in Uganda and Vietnam,"*investigated the effect of communication strategies on human papillomavirus (HPV) vaccine uptake in HPV vaccine demonstration projects in Uganda and Vietnam. Secondary analysis was conducted on data from surveys of a representative sample of parents and guardians of girls eligible for HPV vaccine, measuring three-dose coverage achieved in demonstration projects in 2008–2010. Univariate and multivariate logistic regression analysis calculated the unadjusted and adjusted odds of receiving at least one dose of HPV vaccine depending on exposure to community influencers; information, education, and communication (IEC) channels; and demographic factors. This study found that exposure to community influencers was associated with HPV vaccine uptake in a multivariate model controlling for other factors. Exposure to non-interactive IEC channels was only marginally associated with HPV vaccine uptake. These results underscore the need of HPV vaccine programs in low- and middle-income countries to involve and utilize key community influencers and stakeholders to maximize HPV vaccine uptake.

Kim, Y., Lee, H., Park, J Yong-Chan, K. Kim, D. O., and Lee, Y. (2024). in a paper titled, "*eHealth Communication Intervention to Promote Human Papillomavirus Vaccination Among Middle-School Girls: Development and Usability Study* aimed at investigating the feasibility and usability of an eHealth communication intervention for HPV vaccination in middle-school girls aimed at the girls and their mothers. The eHealth communication intervention for HPV vaccination was developed using a 6-step intervention mapping process: needs assessments, setting program outcomes, selection of a theory-based method and practical strategies, development of the intervention, implementation plan, and testing the validity of the intervention. A review of 10 studies identified effective health communication messages, delivery methods, and theories for HPV vaccination among adolescents. Barriers including low knowledge, perceived threat, and the inconvenience of taking 2 doses of the vaccine were identified through focus groups, suggesting a need for youth-friendly and easy-to-understand information for adolescents delivered via mobile phones. The expected outcomes and the performance objectives

are specifically tailored to reflect the vaccination intention. Behavior change techniques were applied using trusted sources and a health belief model. Health messages delivered through a KakaoTalk chatbot improved awareness and self-efficacy. Quality control was ensured with the use of a log system. The experts' chatbot usability average score was 80.13 (SD 8.15) and the average score of girls was 84.06 (SD 7.61). Future studies need to verify the effectiveness of health communication strategies in promoting HPV vaccination and the effectiveness of scientific intervention using a chatbot as a delivery method for the intervention.

Research Design

The survey research method was adopted for this study because survey research allows the researchers to select from a sample of the entire population. The Survey enabled the researchers to ascertain the perceptions of the respondents on the theatrical displays on HPV. The area of the study is Anambra State, Nigeria, with a population of the study was one hundred and twenty-one thousand, and eighty-seven(121,087) junior secondary school students in schools from the three senatorial districts of Anambra State. A sample size of 384 secondary school students was determined for the survey. In determining the sample size, the Taro Yameni's formula was used. According to Nwodu (2018), the Taro Yameni's formula is as show below:

$$n = \frac{N}{N + e^2}$$

where n = sample size to be determined
N = population
e = margin of error (0.05)

The cluster sampling strategy was used for the purpose of this study. The cluster sampling strategy is suitable for this study because the population of the study is distributed in cluster and pockets of settlements. The population is geographically distributed, as well. The research therefore would make use of random sampling to select the sample subjects from each cluster/area. The research instrument for this study was the Likert Scale questionnaire. The questionnaire had two sections – section A and section B. while section A will bear the biographic data of the respondents, section B will bear the thematic questions. Copies of the questionnaire were delivered through hand delivery to the respondents with the assistance of the school heads. The researchers worked with students of Ado Girls Secondary School, Onitsha (for Anambra North Senatorial Zone), Amaenyi Girls Secondary School Awka (for South zone), and Girls' secondary School, Ukpor (for Central) where they were involved in games and exercises, role play, storytelling, songs and drama with emphasis on hand washing and its importance to them and their health. Below presents the whole range of activities that took place in the course of this field work. The researchers met with the various relevant authorities of the secondary schools to seek the permission to work with selected Junior Secondary Students. As a result of the busy schedules of the schools such as the teaching hours, and time table of the concerned classes, the two days and time selected for the researcher, fell during the break periods. The researchers, in collaboration with the Health Educators/ Social Mobilization Officers (SMOs) from Primary Health Care Development Agency, and National Orientation Agency, used some of the students to expose though the other students' theatrical displays on human papiloma virus vaccination. The data generated from the quantitative study were present in simple frequency tables while the explanation building technique would be used for the qualitative aspect of the study.

In carrying out the field work, the researchers went through a process to arrive at the result and responses gotten in this research. After exposing the pupils to theatrical display, their observations were sought on the experiences gained. The researchers made a total of 384 copies of the questionnaire and shared them according to the population strength of each schools under study

Table 1.0: Questionnaire Distribution and Retrieval

SN	State District	School	No. Distributed	No. Returned	Percentage
1	Anambra North	Ado Girls' Sch School, Onitsha	128	120	93
	South	Girls'Sec School, Nnewi	128	113	88
	Central	Amaenyi Girls' Sec Sch, Awka	128	102	80
	Total	384	384	335	

A total of 384 copies of the questionnaire were administered to the respondents, while 335 copies were retrieved and found usable. This represented 87% of the respondents. The analysis for the study was based on the 335 (87%) respondents who were considered significant enough to make an objective analysis.

Demographic Data Analysis

Age was another demographic data considered to be relevant to the study. The age brackets of the respondents were assessed from the nine secondary schools and presented in Table

Table 2.1: Respondents' Age Distribution

Age Range	Frequency	Percentage
9-10	14	3%
11-12	183	56%
13-14	138	41%
Total	**335**	**100%**

As indicated in the table, the dominant age range was between 11-12, representing 56% of the respondents, the age range of 13-14 represented 41% while between 9-10 age range represented 3%. The implication of the data on this table is that a significant proportion of the respondents was in JSS 1

Thematic Data: Answers to Research Questions

1 **Research Question One: How does TfD helps female secondary students understand the Human Papillomavirus Vaccination Campaign?**

Table 2.3: Students know about HPV before the experiment?

Variables	**Frequency**	**Percentage**%
SA	56	17%
A	60	18%
UD	88	26%
SD	45	13%
D	86	26%
Total	335	100%

Source: field survey, 2025

The implication of the data on the table above is a significant proportion of the respondents do not know about HPV before the experiment

Table 2.4: TFD helps students understand the HPV Campaign

Variables	**Frequency**	**Percentage**%
SA	130	39%
A	160	48%
UD	28	8%
SD	9	3%
D	8	2%
Total	335	100%

Source: field survey, 2025

The data on the table above implied that TFD is veritable platform for communication. This is because the students came to an understanding of the HPV campaign after being exposed to a theatrical display on the intervention.

Table 2.5: TFD helps students understand that HPV is a message of infectious control

Variables	**Frequency**	**Percentage**%
SA	110	33%
A	170	51%
UD	10	3%
SD	9	3%
D	36	11%
Total	335	100%

Source: field survey, 2025

The data on the table above implied that TFD helped the students understand the thrust of the HPV campaign. This is because the students came to an understanding of the fact that HPV was intended to guard the vaccinates against cervical cancer infection.

Research Question Two: How did theatrical display on HPV motivate students to volunteer themselves for vaccination?

Table 2.6: TFD helps students understand that HPV prevents cervical cancer among girls 9-14 years of age

Variables	**Frequency**	**Percentage**%
SA	122	36%
A	138	41%
UD	20	6%
SD	9	3%
D	36	11%
Total	335	100%

Source: field survey, 2025

The data on the table above implied that TFD helped the students understand the thrust of the HPV campaign. This is because the students came to an understanding of the fact that HPV was intended to guard the vaccinates against cervical cancer infection.

Table 2.7: Theatrical displays on the health hazards of Human Papillomavirus infection will motivate students to volunteer themselves for vaccination

Variables	**Frequency**	**Percentage**%
SA	110	33%
A	200	60%
UD	25	7%
SD	0	0%
D	0	0%
Total	335	100%

Source: field survey, 2025

The data on the table above implied that TFD helped the students understand the thrust of the HPV campaign. This is because the students came to an understanding of the fact that HPV was intended to guard the vaccinates against cervical cancer infection. The students were thus ready to volunteer themselves for vaccination.

Research Question Three: What is the attitude of the respondents towards HPV campaign after the theatrical experiment?

Table 2.7: Theatrical displays on the health hazards of Human Papillomavirus infection made the respondents develop a positive attitude towards HPV campaign.

Variables	**Frequency**	**Percentage**%
SA	130	39%
A	200	60%
UD	5	1%
SD	0	0%
D	0	0%
Total	335	100%

Source: field survey, 2025

The data on the table above implied that TFD helped the students to be inclined to the health intervention of HPV campaign. By so doing, the respondents will not only be ready to volunteer themselves for vaccination, but will engage in health literacy advocacy on the campaign.

Research Question Four: What is the perception of the respondents on the efficacy of TFD for HPV campaign after the theatrical experiment?

Table 4.2.8: Respondents perceived TFD as an effective platform for communicating Human Papillomavirus Vaccination. .

Variables	**Frequency**	**Percentage**%
SA	130	39%
A	200	60%
UD	5	1%
SD	0	0%
D	0	0%
Total	335	100%

Source: field survey, 2025

The data on the table above implied that TFD helped the students to be inclined to the health intervention of HPV campaign. By so doing, the respondents will not only be ready to volunteer themselves for vaccination, but will engage in health literacy advocacy on the campaign.

Discussion of Findings

The study was aimed at appraising the experimental study of TFD in communicating the HPV among female Junior secondary school students in Anambra state, Nigeria. The results of the demographic data of the respondents enabled the researchers to determine the eligibility of respondents in the study area. Experiential feedback collected at the end of the performances shows that 84.2% (1901/2258) of the participants were satisfied with the performances, 69.7% (1573/2258) reported the length of play to be adequate and about two-third (68.6%,1550/2258) of participants reported willingness to pay the equivalence of a bottle of soda to watch the play, while 16.7% (376/2258) of all attendees wanted future performances to happen at night. The majority (81%) of the engaged community members felt more accepting of vaccine for their children following the community theater intervention. At the plays, 391 persons were vaccinated among whom were 270 children. Out of the 270 children, 62 (23%) were zero-dose children—receiving vaccines for the first time during the play. Majority of the respondents were within the age range of 13-14 (84%). Therefore, the respondents are true representative of all the students in Anambra State. Research questions one and two sought to know about students' exposure to handwashing messages. Results showed adequate knowledge of handwashing messages with positive mean scores of 3 and above (3 as decision rule). This was evident in the number and frequency of the surveyed students from the study area that affirmed to the research questions one and two on exposure to handwashing messages. The findings from the study show the respondents were aware of handwashing messages. Also, the findings are in agreement with White et al. (2005) on "the impact of a health campaign on hand hygiene and upper respiratory illness among college students living in residence halls" and found that exposure to media campaign and the availability of gel hand sanitizer; increased students' knowledge of health campaign. Despite the acquired knowledge from the handwashing messages, the practice of handwashing has remained insignificant or low.

The responses from research question three showed that respondents do not practice nor advocate the handwashing messages. These findings are in agreement with the research findings of Azuogu et al. (2016) where the study found the extent of handwashing to be low among secondary school students in Ebonyi. Also, the study is in agreement with the findings of Junxiong et al. (2015) that a high knowledge and attitude of the respondents have not translated to good hygiene practices. Similarly, the study also agreed with Ikogho et al. (2013) and found few availability of handwashing facilities where utilization; was hindered by the maintenance of a few available ones.

The findings also supported Merenu et al. (2015) where it was discovered that majority of the respondents had adequate knowledge of the use of hand sanitizer; while few practised correct hand washing exercise. The findings also supported Mwachiro (2012) where it was observed that lack of provision of soap in schools, inadequate water and disappearance of soap and handwashing facilities as obstacles towards handwashing practice. Therefore, the study found that despite the knowledge acquired from handwashing messages, the practice still remains low.

In line with the diffusion of innovation theory which the study was anchored on, it was observed that the rate of diffusion was influenced by individual differences among potential adopters as well as the social system of the respondents. Though the respondents were exposed to handwashing messages through media information by the government and different agencies like UNICEF, the adoption of the practice of proper handwashing still has to do with individual differences. Also, the social system of the respondents has a lot to offer towards the realization; of the practice of handwashing messages. If the respondents were adequately exposed and have a favourable attitude to handwashing messages without a conducive environment, then the practice of the knowledge gained from these messages may not be realistic. Thus, irrespective of the acquired knowledge from handwashing messages, the practice of handwashing has remained insignificant or very low.

Conclusion, and Recommendations

The study examined the relevance of Theatre for Development in communicating HPMV among junior secondary school students in Anambra. The study is premised against the background that HPMV is an important health practice that needs to be practiced frequently. Given that Theatre for Development is a veritable communication strategy foe attitude change and learning, the study used the Junior secondary school students to investigate the assumptions. In essence, HPMV messages will have more impact when the respondents' practice and advocate for vaccination after exposure to HPMV theatre.

The finding from this research work confirms and shows that Theatre can be used as a tool for communication. From the practical field work analysis; The Theatre that was deployed in this research work includes: games and exercises as theatrical activities, and dance, storytelling, role-playing and above all the hand washing exercise. In

view of the use of Theatre as a tool and medium of communicating hand washing among primary school pupils, the importance and strength of Theatre to educate, and also entertain cannot be overemphasized.

Vaccine communication is a very important part of vaccine uptake introduction to the population. Communication needs to pass critical information about the vaccine and its benefits while also addressing the concerns of the community about the vaccine. This can take various forms, from face-to-face communication, to use of IEC materials and the media to reach a wider population. The communication also needs to be sustained throughout the campaign period to encourage the target population to be fully vaccinated. Additionally, the communication intervention needs to target the key members of the community including teachers, school management boards, community and religious leaders, and the parents. This ensures greater level of community ownership and ease of decision-making about the vaccine with better completion rates.

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