



An Analysis of Mass Media Responsibility towards the Promotion of Menstrual Hygiene Practices among Adolescent Girls in Rural Communities of Bwari Area Council, Abuja, Nigeria

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Background: Menstrual hygiene is a critical health issue affecting over 1.8 billion of the girls who menstruate each month across globe and at least 37 million of them in Nigeria are confronted with different challenges that affect their effective menstrual hygiene management.

Objective: This study investigated mass media responsibility towards the promotion of menstrual hygiene management among adolescent girls in rural communities of Bwari Area Council, Abuja, Nigeria.

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Methodology: The study adopted descriptive survey research design with the questionnaire used as the research instrument for data collection. The population of the study comprised the adolescent girls of rural communities of Bwari Area Council of the Federal Capital Territory (FCT), Abuja, Nigeria which were estimated to be 291, 071. The sample size of the study was 384. Data collected was analysed using descriptive statistics.

Findings: Radio followed by the television were the mass media channels adolescent girls were more exposed to for information on menstrual hygiene practices as compared with the magazine and newspaper that were the least channels for the purpose. It further revealed that mass media have high level of positive influence on the menstrual hygiene practices among adolescent girls in rural communities but there was low level of adoption of such practices among the girls.

Conclusion: The conclusion was the mass media have high level of positive influence on the menstrual hygiene attitude of the adolescent girls but the level of involvement that guarantees desired success in the knowledge of and or adoption of sanitary menstrual hygiene practices among the adolescent girls is rather insufficient.

Recommendations: Prioritizing radio and television and increase in time, space and frequency in programmes on menstrual hygiene practices are some of the recommendations made in the study for achieving more success in menstrual hygiene management among adolescent girls and women.

Keywords: Mass media responsibility; menstrual hygiene practices; adolescent girls.

1. INTRODUCTION

Sexual and reproductive health issues are one of the rising problems around the globe. Among them, menstrual hygiene is a critical issue encountered by women and girls of the reproductive age, which negatively affects their health and empowerment [1-3]. The onset of menstruation denotes a landmark event in pubertal development of the adolescent girl [4,5] where over 1.8 billion of the girls menstruate each month across the globe, yet a major portion of this population lacks adequate knowledge as well as basic facilities to handle their menstruation in a noble and healthy way [6]. Inarguably, lack of adequate knowledge and good menstrual hygiene management can have far reaching consequences on the girl's wellbeing, dignity and reproductive health [7-9]. According to a finding, "girls' capacity to manage their periods is affected by lack of access to affordable hygienic sanitary materials disposal options for used materials, adequate water supply, clean toilets, hand washing facilities and access to changing rooms [10].

It is reported that period poverty is a serious issue that continues to impact millions of women and girls worldwide [11]. It has also expressed itself in an alarming situation in Nigeria, where at least 37 million girls and women are unable to afford menstrual hygiene products and must rely on unsanitary alternatives such as cloth rags, leaves, or newspaper, leaving them exposed to infections and limited social mobility. In addition to the material difficulties caused by period

poverty, there is also a stigma attached to menstruation, particularly in more conservative northern parts of Nigeria. In Nigeria, the issue of period poverty is exacerbated by a number of factors, which include a staggering spike in the prices of menstrual products. This price increase significantly impacts people with limited financial means and resources, especially those living in rural areas, limiting their access to sanitary menstrual products while compounding existing health, social, and economic challenges [11-14].

As strongly observed, menstruation is still deemed a taboo in several parts of the world and girls hesitate to discuss menstruation with their family members, friends, or schoolteachers, which creates hurdles when they attain their menarche. Girls residing in rural areas encounter more problems, since they lack proper resources and knowledge to manage their menstruation effectively [2]. Challenges faced by adolescent girls in low-and middle income countries in relation to effective menstrual hygiene management include lack of access to clean, effective absorbents; inadequate facilities to change, clean and dispose absorbents; lack of access to soap and water; and lack of privacy. In the absence of suitable and affordable menstrual care products, some women and girls resort to using unhygienic and inappropriate products such as newspapers, old rags, dried leaves, or socks to collect menstrual blood and manage their products [15,8,2,5,3]. This is an indication to the fact that menstrual hygiene is really a serious issue that requires concerted efforts from stakeholders to address it.

Therefore, knowledge about menstruation and menstrual hygiene is critical to the dignity and well-being of girls and women in general. Regardless of culture, age, and marital status, adolescents need basic, accurate and complete information as regards their body structure and functions, as well as other sexual and reproductive health issues. Poorly informed choices and practices have potential for long-term deep negative effects on their reproductive health. Conversely, accurate knowledge and hygienic practices during menstruation has impact on multiple areas across the sustainable development goals including health, education, gender equality, and water and sanitation. Evidence showed that poor personal hygiene and unsafe sanitary conditions have primarily resulted in gynecological problems among the adolescent girls [16,7,8,2].

Knowledge of access to menstrual hygiene materials, latrines and places to change, safe water and sanitation, and good hygiene practices like hand washing with soap have been said to be essential in achieving effective menstrual hygiene management. Also, knowledge of the menstrual cycle and awareness of the likely symptoms associated with it will help a woman be prepared for these periods and the people around her will understand that she is experiencing such changes and so not tag her as being hysterical or sick [15,17-27]. While the lack of timely information results in poor knowledge concerning menstrual health and poor menstrual hygiene practices. Awareness regarding the need for information about healthy menstrual practices is important not only for the women and girls, but men and boys also need to know the importance of this as colleagues, husbands, brothers, leaders, teachers and classmates to them [10,28,16,29,30].

Consequently, the mass media is an omnipresent and institutionalised framework inside contemporary society, capable of suggestively impacting health-related attitudes and behaviours. Numerous studies have demonstrated that adults acquire a significant portion of their health-related knowledge via mass media sources [31]. Empirical studies in health communication have shown that mass media channels play a crucial role in enhancing awareness and understanding regarding health-related matters, potentially surpassing the impact of interpersonal communication [32,31,33]. According to Ayesha, Meryem, Vaneeza & Anjum [34], the mass media has an imperative

role in today's world and it can provide a unified platform for all public health communications, comprehensive healthcare education guidelines, and robust social distancing strategies while still maintaining social connections.

Also, there is an increase in the demand for true, precise, germane, express and unbiased public health information by people, which in turn brings about a reliance on mass media as the main source of information. The public health practitioners and advocates usually look up to the media for support, attention and endorsement and are considered as a primary source of public health information, even for health professionals. On the other hand, they are also seen as an important tool to disseminate health information to the population. Behaviour plays an important role in people's health. It is evident that changing people's health-related behaviour can have a major impact on some of the largest causes of mortality and morbidity in the society. Change in behaviour have enormous potential to alter current patterns of disease [32]. Mass media campaigns essentially aim to change behaviours through improving knowledge, changing individual attitudes, or modifying degrees of social support for the behaviour, and have been proven successful in promoting healthy or safe behaviours as well as reducing unhealthy attitudes and behaviours [35-37]. In a study conducted, mass media campaigns were found to increase knowledge and awareness across several topics, and to influence intentions regarding physical activity and smoking [38]. A study by Irori, Igben & Oqwezi [39] revealed that "though all media channel, including the traditional and social media platform was found to be useful and effective, the television, with an outstanding score of 37 percent, followed by the radio that had 25 percent, was found to be more preferred, and effective".

1.1 Statement of the Problem

The impact of menstrual hygiene on the health and wellbeing of women, particularly the adolescents in the society is quite overwhelming as over 1.8 billion of the girls under menstruation period each month across the globe, yet a major portion of this population lacks adequate knowledge as well as basic facilities to handle their menstruation in a noble and healthy way [6]. Inarguably, lack of adequate knowledge and good menstrual hygiene management can have far reaching consequences on the girl's

wellbeing, dignity and reproductive health [7-9] and the mass media play essential role in providing information and knowledge about a variety of issues in the society. That means knowledge of health related issues such as menstrual health in the mass media can guarantee effective management such issues [36,37].

Consequently, there is evidence of the use of mass media in health awareness programmes, a lot of studies have indicated that there was poor knowledge of menstrual hygiene among women, particularly the girls in many parts of the country [32,40-45,39,46-48,31,49,50]. Particularly however, a dearth of empirical studies exists on exploration of the mass media responsibility in the promotion of menstrual hygiene practices among Adolescent Girls in Rural Communities of Bwari Area Council, Abuja, Nigeria; hence, this study is posed to close the gap.

1.2 Research Questions

- i. What particular mass media channel are the adolescent girls more exposed to for menstrual hygiene practices in Rural Communities of Bwari Area Council, Abuja, Nigeria?
- ii. What kind of menstrual hygiene practices are the adolescent girls exposed to through the mass media in Rural Communities of Bwari Area Council, Abuja, Nigeria?
- iii. What is the level of mass media involvement in awareness on menstrual hygiene practices among adolescent girls in Bwari communities of Abuja, Nigeria?
- iv. What kind of influence does the mass media have on menstrual hygiene attitude of adolescent girls in Rural Communities of Bwari Area Council, Abuja, Nigeria?

2. LITERATURE REVIEW

Menstruation is a universal and normal phenomenon during the reproductive age of females. The onset of menses takes place during adolescent period in which dominant physiological and emotional changes take place. Adolescence is an essential period where females are preparing and adjusting themselves to manage their menstrual bleeding in safe and clean way. This is also the ideal time that girls often join different environments including high schools and tried to plan for their next adulthood

life [51]. The period of menstruation in females is surrounded with a lot of challenges, myths and misconceptions which requires supports of different kinds, including adequate and proper information. For instance, most adolescent girls (girls with age ranges of 10 to 19 years old) enter to their puberty stage (maturity) without preparing themselves due to the shortage of adequate information. Most women are uncomfortable to discuss regarding “menses” as it is having a social taboo and adolescent girls could not have access to gain adequate information. Even the little information they receive most commonly from religious institutions, peers, family member is often selective and surrounded by misperceptions [8, 52-54, 51].

Although poor knowledge and unsafe menstrual hygiene practice have such considerable clinical implications for the girls themselves and their future off springs, knowledge of adolescent girls regarding menstruation is poor and their hygienic practices are not correct, particularly with lower socio-economic contexts. It has been reported that 40–45% of adolescent school girls have poor knowledge and unsafe hygienic practice of their menstrual bleeding. This might have a clinical implication to integrate the promotion of menstrual hygienic practice in the health care system and comprehensive efforts including policy implication are needed to improve girls’ knowledge and safe hygienic practices towards menstruation right from her adolescent period [55, 51].

A number of empirical studies conducted in the past have shown the nature of knowledge of menstrual hygiene among adolescents in different parts of Nigeria and beyond. In Jos, Plateau State, Nigeria, a study conducted by Idoko, Okafor & Victoria [14] has shown that there were misconceptions that can be dispelled using health education and enlightenment on proper menstrual health and hygiene. In Iragbiji, Osun State, a study involving the Female Secondary School Students by Oniyangi & Oyelami [56] revealed that female secondary school students in Iragbiji, Osun State did not have knowledge of menstruation, did not have knowledge of personal hygiene, did not practice use of pad/tissue paper/other materials during menstruation and did not practice proper disposal of materials used during menstruation. In Cross River State, Nigeria, a study by Edet, Bassey, Esienmoh & Ndep [16] in Urban and Rural Secondary Schools revealed that rural-based adolescent female students had a

significantly poor knowledge of menstruation and menstrual hygiene practices compared with their urban-based counterparts; majority in urban and rural schools obtained information about menstruation from their mothers. There is an urban-rural gap in knowledge of menstruation and menstrual hygiene. Parental role in menstrual hygiene education is critical [16].

Similarly, in Bhaktapur, Nepal a study which was carried out by Rajbhandari, Sagtani & Dhaubajar [57] among Adolescent School Girls revealed that most (93.5%) of the girls used commercially available sanitary pads. The primary source of information on menstruation was their mother however, 35.1% of them reported that they had no prior knowledge on menarche. The major reasons for school absenteeism were discomfort, lack of continuous water supply and shame or fear of staining [57]. According to a study by Preeti and Vinod [58] in Gurugram and Nuh districts of Haryana, India, it was revealed that the overall level of knowledge regarding menstruation was found to be poor. The education of respondents and their mother, occupation of respondent, socio-economic status, mass media exposure and religion etc. were highly significantly associated with level of knowledge regarding menstruation. It concluded that women still lacked proper knowledge about this crucial phenomenon of their body which leads to various unhygienic menstrual practices and misconceptions about menstruation. Knowledge of young women can be improved through education interventions on menstruation and its importance in their life [58].

Also. A study conducted by Sanobar, Neelam, Syeda, Sana & Rafat [2] in Ghizer, Gilgit, Pakistan has found that more than half of the participants had poor level of knowledge, practices, and negative attitude towards menstrual hygiene. This could be because of many cultural and social taboos attached to menstrual hygiene. Abioye-Kuteyi [59], in a study in Ile Ife, Nigeria found that although menstrual knowledge was higher in post-menarcheal girls, 10% of these were totally ignorant about menses and 84% were not psychologically prepared for the first menses. Girls' menstrual knowledge was positively associated with parental education. The major source of menstrual information was the family. Although more than half of the girls menstruated regularly, 66.3 %, used insanitary materials as menstrual absorbent. A study by Onubogu [60] among adolescent secondary school girls in rural Anambra communities

revealed that menstrual hygiene management was unsatisfactory among studied adolescents.

Idoko, Okafor, Ayegba, Bala & Evuka [7] in their study which was conducted in Jos, Plateau State, Nigeria revealed there was good knowledge and practice of menstruation and menstrual hygiene among young people. Knowledge influences practice and the perception of young people to sensitive concepts like menstrual health and hygiene management. Tomlinson [26], in a mixed methods assessment of menstrual hygiene management and school attendance among schoolgirls in Edo State, Nigeria. revealed that improving menstrual hygiene management requires a multi-faceted response that integrates structural changes, social movements, and early access to menstruation knowledge. In addition, this study has shown the clear impact that poor Menstrual Health Management (MHM) has on a girl's education, underpinning the need to act. According to a study by Awawu, Suraya & Nafisat [61] in Kaduna, Nigeria, although the adolescents knew the importance of accessing Sexual and Reproductive Health Services (SRHS), they were not inclined to utilize the services because of stigma. The stigma-related barriers to accessing Sexual and Reproductive Health Services were related to religion, community norms and the negative attitude of the community and health workers all resulting in adolescents feeling shy and ashamed to use Sexual and Reproductive Health Services. A study by Nnennaya, Atinge, Dogara & Ubandoma [8] in Taraba State, Nigeria revealed that knowledge of menstruation and hygienic practices during menstruation among the participants in the study was encouraging.

Relatedly, in Delta State, Nigeria, a study by Ekoko and Ikolo [62] among Secondary School Girls in Rural Areas revealed that most students didn't have any information about menstruation prior to menarche and those who had, got them from their friends. After the awareness campaign, students became aware of the source of menstrual blood, and showed more interest in using sanitary pads, take more baths when having their menstrual period, change their panties and properly dispose of their sanitary materials. Funmito, Akintunde, Ayodele, Ajibola, Olumuyiwa & Idowu [19], in their study among secondary high school girls in Ogbomoso, Oyo state, Nigeria has concluded that majority of the adolescents do not observe good hygienic practice during menstruation despite relatively

good knowledge of menstruation and menstrual hygiene. Angie, Igbino, Soola, Jonathan, Olujide & Odunayo [15] in a study conducted in Ota, Nigeria revealed that mass media exposure had a significant influence on maternal health awareness.

In a cross-sectional study by Zelalem and Birhanie [51] among adolescent school girls in Southern Ethiopia, finding revealed that majority of adolescent school girls had poor knowledge regarding menstruation and their hygienic practices are incorrect. This as noted in the study demonstrates a need to design acceptable awareness creation and advocacy programmes to improve the knowledge and promote safe hygienic practice of adolescent school girls during menstruation. A study by Uzoechi, Parsa, Mahmud, Alasqah & Kabir [63] among in-school adolescent girls in Nigeria revealed that most of the respondents in Nigeria were not adequately prepared for the onset of their first menstrual period. Knowledge and attitude levels were low regarding periods for adolescents. The only exception was their positive attitude towards using water and soap to wash their hands during menstruation.

Esan, Tola, Akingbade, Ariyo, Ogunniyi & Agbana [64], in their study among Female Undergraduates of a Private Tertiary Institution in Nigeria revealed that most respondents (72.3%) had poor knowledge of menstrual hygiene, while around half (49.2%) maintained good practices. The most common barriers to practicing menstrual hygiene among the respondents were reported as fatigue and limited water access in their dormitories. Wamika, Venkatesh & Rahul [65], conducted a study amongst school students in rural India and revealed that IEC and behaviour change communication were needed to spread awareness and empower females regarding menstruation and menstrual hygiene. This programme, as reported, should include girls, their families, peers, and the community. Fennie, Moletsane & Padmanabhanunni [66], in their study revealed that cultural perceptions and beliefs, economic and institutional resources and primary sources of information influenced the experience of menstruation and its management. menstruation remained shrouded in secrecy and shame for many girls, leading to absenteeism from school. These findings as reported, underscore the need to further explore cultural practices and beliefs about menstruation that influence school attendance and long-term educational prospects of adolescent girls. A

study conducted by Oliveira, Pena, Andrade & Felisbino-Mendes [67] in Latin America has shown that adolescents have difficulties in accessing toilets, water and absorbent materials, and lack of information about menstrual health, including in schools, leading to school absenteeism.

In Oyo state, Nigeria, a study by Ilori, Awodutire & Ilori [68] revealed that awareness of ARHSs was lower among rural respondents, leading to poor utilization of such service. It is, therefore, recommended that more youth-friendly environments should be made available and accessible to adolescents, especially in rural areas. Safieh, Schuster, McKinnon, Booth & Bergevin [48], in their study among low and middle-income countries found that there was a need for rigorous impact evaluation, including randomised controlled trials, of mass media interventions on knowledge and uptake of family planning in LMIC settings. While Adedini, Mobolaji, Alabi & Fatusi [69] in a survey study involving unmarried young people in Nigeria suggested that addressing the high and increasing level of risky SRH behaviours among young people in Nigeria is imperative to improve overall national health status and to ensure progress towards achieving SDG target 3.7 focusing on SRH.

Consequently, the use of mass media is associated with the knowledge and awareness of the people on different health matters, including menstrual hygiene. Asemah [42] contends that mass media campaigns are widely used to expose high proportions of large populations to messages through routine uses of existing media, such as television, radio and newspapers. Media as noted by Asemah, Edegoh & Nwammuo (2013) in Asemah [42] are capable of performing the following roles in preventing HIV/AIDS: i. A Channel for communication and Discussion; ii. A vehicle for Creating a supportive and enabling environment; iii. Facilitator for removing stigma and discrimination attached with the disease; iv. A tool for creating a knowledge base for HIV/AIDS related services; v. Education through entertainment; vi. Mainstreaming. Similarly, health communication via the mass media can:

... empower people to take control over their health, through promoting one or more of the following: health-enhancing behaviour change, the appropriate accessing of health-related services and support, the

development of health-enabling social capital, the facilitation of collective action to tackle obstacles to health and the development of health-related social policy (at the local, national and/or global levels of influence) [70].

It has been noted that of late, mass media have evolved from the usual traditional media, which is print and broadcast media, to a digitized platform where people can access information and be connected to any part of the world, within the speed of light. This has made the world to be referred to as a global room. In the light of this, people are sometime faced with the challenge of choosing from a variety of media channels, when the need to carry out campaigns and pass information arises [38]. David [71] explains that in deciding the right communication channel, the essential internal communication tools, best external communications methods for target audience, and how to use each communication channel must be effectively decided upon. Mass media channel can be divided into the print, broadcast and digital channel. The print media allows messages to reach customers in printed hard form, which are patterned according to their geographic space, language, or interest. It also helps to brand institution and organizations [39].

A number of studies have highlighted the role of mass media in health awareness and behavioral change from different scholars with varying degrees of results. For instance, a study conducted by Ufuophu-Biri & Bebenimibo [49] in Delta State, Nigeria has revealed that the people had frequent exposure to media messages on Covid-19; despite the regular exposure, they complied partially with the Covid-19 preventive measures; there was a significant relationship between exposure to media message on Covid-19 and compliance with its preventive measures. Furthermore, the respondents had a high rating for the media coverage of the pandemic. Another study which was carried out by Okim-Alobi and Okpara [46] in Nigeria revealed that the 2014 global Ebola outbreak received huge attention from the media as people were constantly informed. The Nigerian media was very active too, probably because billions were budgeted for the outbreak.

Similarly, a study conducted by Gever and Ezeah [45] revealed that that there were few stories about the virus before it was confirmed in Nigeria. But as soon as Nigeria recorded a confirmed case, the number of stories tripled.

According to the study the story format and recommendation on health behaviour were also closely linked to the COVID-19 status of Nigeria. it concluded that Nigerian media did not provide sufficient health warning messages on COVID-19 before its spread to the country. In Osogbo, Osun State, Nigeria, Olawunmi and Babatunde [47] have carried out a study and the result was that 60% of respondents are persuaded to comply with the COVID-19 safety protocols as a result of mass media messaging on the pandemic and that wearing of facemask is where the media placed emphasis. In Rural Communities of South-south Nigeria, Erubami, Ojoboh, Ohaja, Ezugwu & Akata [44] found in a study that the mass media exposure is positively related to Lassa fever risk perception but negatively associated with risk behaviours towards the zoonotic disease [72].

Similarly, a study by Buike and Nasiru [43] the mass media has always been saddled with informing and updating the masses on the latest development in their environment and far beyond. In times of disease outbreak like coronavirus, the mass media has it as a duty to inform and educate the masses on symptoms, prevention, and possible treatment to influence their knowledge, attitude, and practices. The new health behavior of hand washing, putting on facemasks in public places, social distancing, avoidance of crowded places, etc., were all learned due to exposure to the media. Local broadcast stations in Nigeria like Africa Magic and Radio Nigeria Enugu ran various campaigns to influence the masses' health behavior morning, afternoon, and night. These campaigns were in the form of advertorials, talk shows, phone-in programs, animations/animated short stories, etc [43]. In Delta State, Nigeria, a study by Irori, Igben & Oqwezi [39] revealed that though all media channel, including the traditional and social media platform was found to be useful and effective, the television, with an outstanding score of 37 percent, followed by the radio that had 25 percent, was found to be more preferred, and effective. Though the radio, with a score of 40 percent, was found to be the most cost effective channel, health workers in the state observe that the television is more accessible and commendable in the campaign for birth control in the State [39]. Another study involving Rural Dwellers still in Delta North, Nigeria by Efe [73] revealed that the preferred information sources on COVID-19 were family members/friends, mass media (Television, Radio, Newspapers, etc.),

Also, a study by Shivani and Manish [31] revealed that when media platforms help to develop a sense of togetherness and continuously distribute information to the larger population on healthcare requirements, mass media's role in promoting successful communication is of the utmost importance. Amadi, Martha & Wali [42] found in a study that four key themes: Language usage; the misconception of message content; expertise of Journalist and science journalism; and rural media participation influence participants' experiences of broadcast media awareness campaign on Ebola disease in rural communities. Adeyoyin and Oyewusi [40], in their study conducted in Abeokuta, Ogun State, Nigeria found that nutrition ranked highest, followed by water treatment, sanitation and diagnosed medical condition among the health information needs of the young adults. Young adults also need health information to avoid unwanted pregnancy, unsafe abortion and HIV/AIDS infection. Access to health information was mostly through textbooks and newspapers/magazines. In addition, the study finds that they also had access to electronic media like radio, television, Internet and GSM mobile phones [40].

A study by Aborisade, Bodunde, Adeoluwa & Loko [32] recognized that demands and needs for accurate, relevant, rapid and impartial public health information by people are increasing daily, which brings about a growing dependence on mass media as the main source of information. A study by Santosh and Rajesh [73] indicated that mass media are using communication strategies such as infotainment/edutainment and are using Sitcoms and Suspense thrillers in developing countries for creating health awareness and for attitudinal and behavioural changes. The study also indicated that television is a powerful tool for informing, influencing and motivating people towards achieving desired behaviour particularly in relation to HIV/AIDS and other health related issues which warrant attitudinal and behavioural changes. Asemah [42], in his study in Anyigba, Kogi State Nigeria and found that the students of Kogi State University are exposed to the campaigns on HIV/AIDS on a regular basis. Findings also revealed that the media have been very effective in their campaigns against HIV/AIDS and that the messages on HIV/AIDS have been able to give adequate information on the dangers of unprotected sex. The study concluded that the media have given enough attention to the issue of HIV/AIDS campaigns, but

the extent to which the campaigns influence the sexual behaviour of the students is low. In Ilorin, Utalor [50] found in a study that broadcast media is popularly used by women and is a major source of enlightenment on maternal health issues but radio was identified as more effective than television in disseminating maternal health messages.

Furthermore, from the literature reviewed, although empirical study which bothered on the role of mass media in health education and awareness were many, there was no single study on the "Exploration of the mass media responsibility in the promotion of menstrual hygiene practices among Adolescent Girls in Rural Communities of Bwari Area Council, Abuja, Nigeria", hence, a gap in previous literature that the current study is to bridge when completed.

3. THEORETICAL FRAMEWORK

The study is anchored on health belief model, theory of reasoned action and AIDS risk reduction and management model. Health belief model explains health behaviour; it is a psychological model that attempts to explain and predict health behaviour. This is done by focusing on the attitudes and beliefs of individuals. The HBM was first developed in the 1950s by social psychologists, Hochbaum, Rosenstock and Kegels, working in the U.S. Public Health Services. The health belief model is based on value expectancy theory [42], which assumes that individuals will take preventive actions (risk-reduction behaviour) when they are susceptible to a disease (self-perception of risk) and acknowledge the consequences as severe; they believe that taking preventive actions will be beneficial in reducing the threat of contracting the disease. The model was developed in response to the failure of a free tuberculosis (TB) health screening programme. Since then, the HBM has been adapted to explore a variety of long and short-term health behaviour, including sexual risk behaviour and the transmission of HIV/AIDS. The HBM was spelled out in terms of four constructs, representing the perceived threat and net benefits: perceived susceptibility, perceived severity, perceived benefits and perceived barriers. These concepts were proposed as accounting for people's readiness to act. An added concept, cues to action, would activate that readiness and stimulate overt behaviour. A recent addition to the HBM is the concept of self-efficacy or one's confidence in the ability to successfully perform an action. This concept was

added by Rosenstock and others in 1988 to help the HBM better fit the challenges of changing habitual unhealthy behaviour, such as being sedentary, smoking or overeating [42]. The theory is relevant to the study because it lays emphasis on how the media can be used to communicate health issues to the members of the public.

The theory of reasoned action [42] is an extension of HBM. This theory explains individual behaviour by examining attitudes, beliefs and behavioural intentions, as well as, observed and expressed acts. It is based on the idea that the most immediate determinant of a person's behaviour is his/her behavioural intention. One's actions can only be influenced by influencing one's intentions. Intention in turn, is a joint function on one's positive or negative feeling, leading to "perform or not to perform" that particular action. This theory highlights intentions by focusing on attitudes towards risk reduction, response to social norms and behavioural intentions vis-à-vis risky behaviour [42]. Thus, it is relevant to the study.

4. METHODOLOGY

4.1 Research Design

This study adopted descriptive survey research design due its advantages over other designs which include: (a) Survey is relatively inexpensive when considered in terms of the amount of information it generates; (b) using this research method, a large amount of information is gathered from different people with ease as compared with other research methods; (c) survey not limited by geographic constraints or boundaries and can be conducted anywhere; (d) it is reasonably accurate especially when the sampling is correct; (e) results gotten from surveys can be generalized because the sample population is large and very representative of the entire research population; (f) survey can be used to investigate problems in a realistic setting i.e. the problems can be examined where they exist or happen rather than in a laboratory or under an artificial condition [74]. Questionnaire was used as the research instrument for data collection under survey design.

4.2 Population of the Study

The population of the study comprised the entire adolescent girls of rural communities of Bwari Area Council of the Federal Capital Territory

(FCT), Abuja, Nigeria which according to an estimated population by the National Population Commission (2022), was 291, 071.

4.3 Sample Size

The sample size was 384 and it was determined using *Calculator.net* under the population size 291, 071, Confidence level of 95%, error margin of 5% and population proportion of 50% respectively (see the link: <https://www.calculator.net/sample-size-calculator.html?>).

4.4 Sample Selection Techniques

To sample respondents, multistage sampling technique was used. First, purposive simple random sampling was used to select four out of the ten council wards in Bwari Area Council of the FCT, Abuja. This was achieved when names of the council wards were individually written on pieces of the paper, folded, dropped in the same container, shuffled thoroughly and a research assistant was asked to pick four out of the ten pieces of the paper dropped in the container, where names of the council wards found on the papers picked were the council wards selected in the study. Consequently, Bwari Central, Kuduru, Kubwa, and Ushafa council wards were sampled in the study.

Next was selection of the communities in each of the council wards in the study. Here, purposive sampling technique was used to select four communities from each of the council wards in the study. The reason purposive sampling was used is that this technique guaranteed us to select only communities with more popular, have more population of adolescent girls and more mass media access. Consequently, sixteen communities were sampled in Bwari Area Council as follows: Barangoni, Bazango Bwari, Dutse Alhaji, Gidan Babachi, Igu, Jigo, Kaima, Kawu, Kogo, Kubwa, Kuduru, S/Fulani, Sabon Gari, Tudun Wada, Ushafa, Zango, and Zuma.

Furthermore, purposive sampling technique was again used to select 24 respondents from each of the 16 communities sampled in the study which brought the number of respondents sampled in the study to be 384. The reason purposive sampling was used to sample respondents is that the technique allowed us to sample only adolescent girls with access to print and electronic mass media channels.

4.5 Research Instrument and Administration

The research instrument used for data collection was the questionnaire and was administered on the respondents through face-to-face approach. The face-to-face method of administration of the instrument was to ensure high confidence rate in the administration of the instrument.

4.6 Methods of Data Analysis

Data collected was analysed using descriptive method where charts and percentages were used as statistical tools under descriptive method for analysis of the data. Microsoft Excel was used in the computation of the data to avoid inconsistencies that associate with the manual computation.

5. RESULTS

In this study, a total of 384 copies of the questionnaire were on the respondents upon which only 365, representing (95.05%) were filled and returned valid while 19 copies representing (4.95%) were not valid due to multiple completion and inability to retrieve some copies from the respondents. Therefore, since 365 or 95% valid copies of the questionnaire is significant enough to represent the data collected in this study, our

data analysis is based on the 365, while discarding the 19 or 5% copies that were invalid.

Fig. 1 which is concerned with the mass media channel which adolescent girls in rural communities of Bwari Area Council, Abuja were more exposed to for their information on menstrual hygiene practices revealed that nearly half (47.95) of the respondents in the study exposed more to radio, followed by the television which nearly 30% of the respondents were exposed to while magazine was the least mass media channel accessible by only nearly 10% of the respondents followed by the newspaper that was accessible by only nearly 20% of the respondents. This implies that radio is the mass media channel that the adolescent girls are exposed to for information on menstrual hygiene practices followed by the television while magazine followed by the newspaper are the least channels that they are exposed to for the purpose.

Fig. 2 which is concerned with the kind of menstrual hygiene practices in the mass media in which the adolescent girls in rural communities of Bwari Area Council, Abuja were exposed to revealed that majority (21.64%) out of the respondents in the study were exposed to Sanitary pad followed by 15.34% of the respondents who were exposed to bathing during

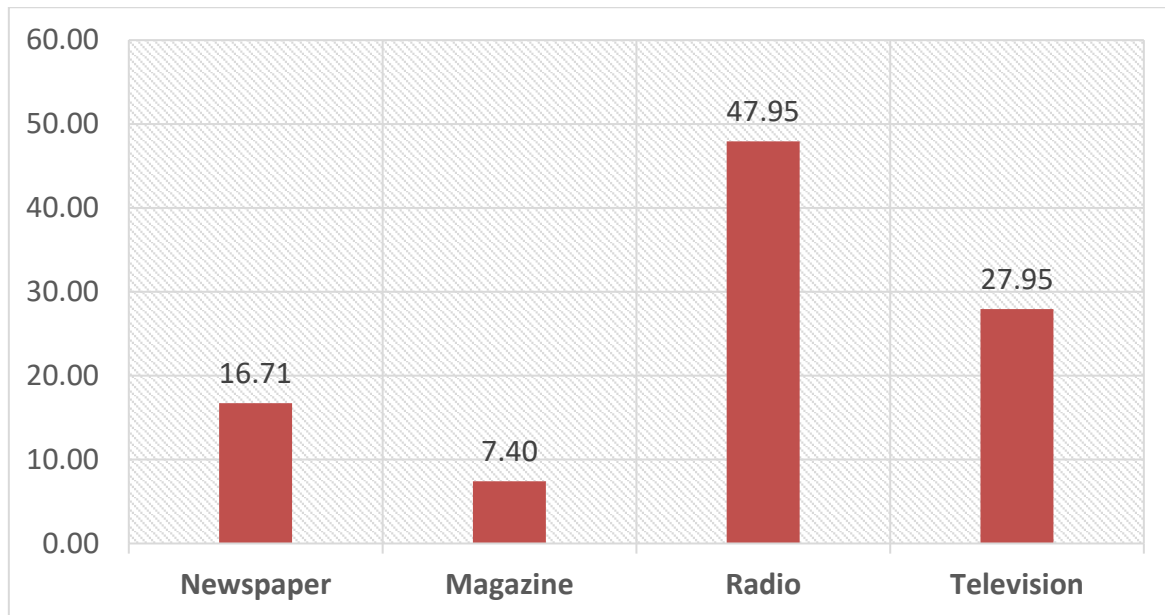


Fig. 1. Mass media channel more exposed to for menstrual hygiene practices among adolescent girls in rural communities of Bwari Area Council, Abuja, Nigeria

Source: Field survey, 2024

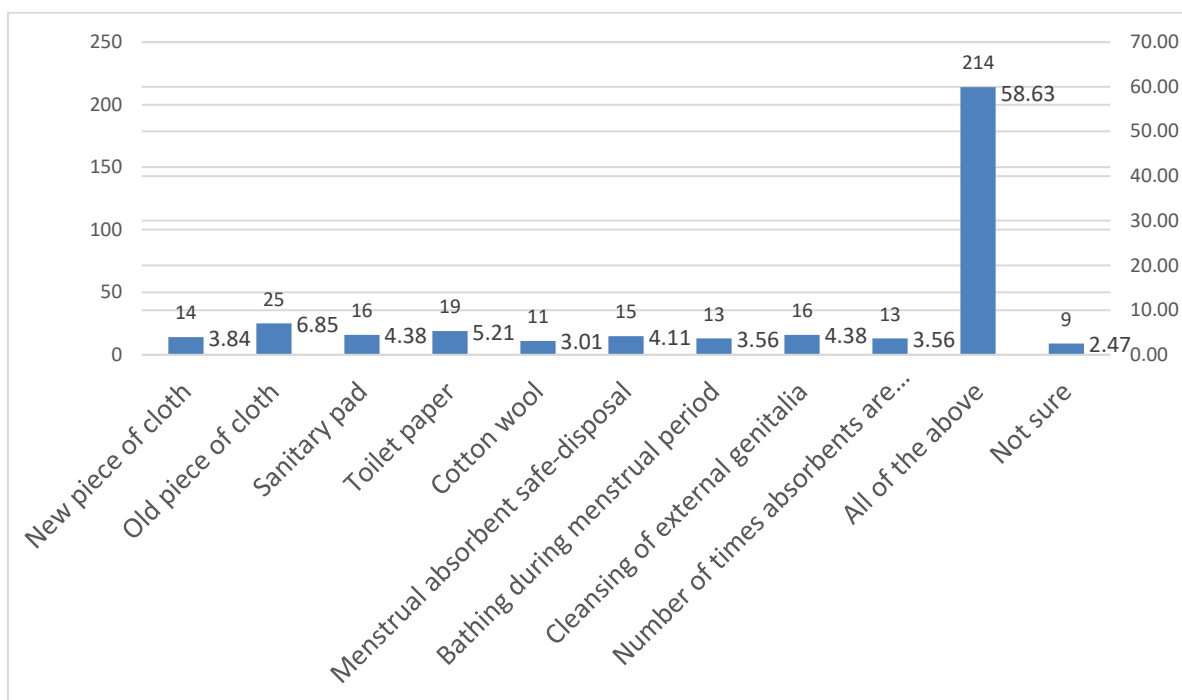


Fig. 2. Kind of menstrual hygiene practices exposed more in the mass media among adolescent girls in Rural Communities of Bwari Area Council, Abuja, Nigeria

Source: Field survey, 2024

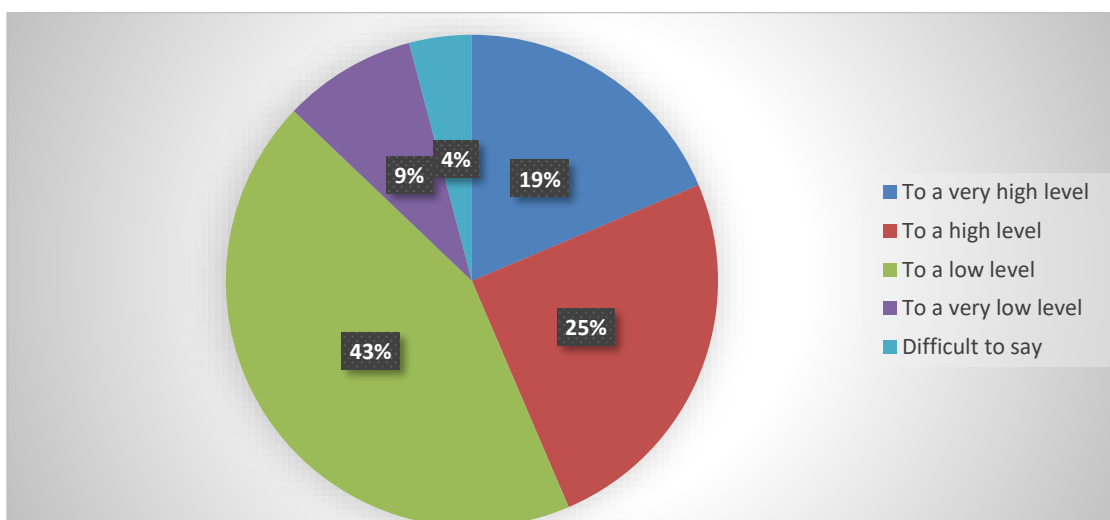


Fig. 3. Level of mass media involvement in awareness on menstrual hygiene practices among adolescent girls in Bwari communities of Abuja, Nigeria

Source: Field survey, 2024

their menstrual period, 12.05% of the respondents who were exposed to cleansing of external genitalia, and 11.23% who were exposed to menstrual absorbent safe-disposal more. While the least practices that respondents were exposed to in the mass media include: use of old piece of cloth (3.01%), use of new piece of cloth (5.75%), use of toilet paper

(9.59%), and use of cotton wool (9.86%). This implies that adolescent girls in Rural Communities of Bwari Area Council, Abuja are exposed to menstrual hygiene practices such as the use of Sanitary pad, bathing during their menstrual period, cleansing of external genitalia, and menstrual absorbent safe-disposal.

Fig. 3 which is concerned with level of mass media involvement in awareness on menstrual hygiene practices among adolescent girls in Bwari communities of Abuja, Nigeria revealed nearly half (43%) of the respondents in the study said it was to a low level that the mass media were involved in awareness on menstrual

hygiene practices as compared with 25% who said the involvement of the mass media was to a high extent, and to a very high extent (19%). This implies that the level of mass media involvement in menstrual hygiene awareness among adolescent girls in in Bwari communities of Abuja, Nigeria is low.

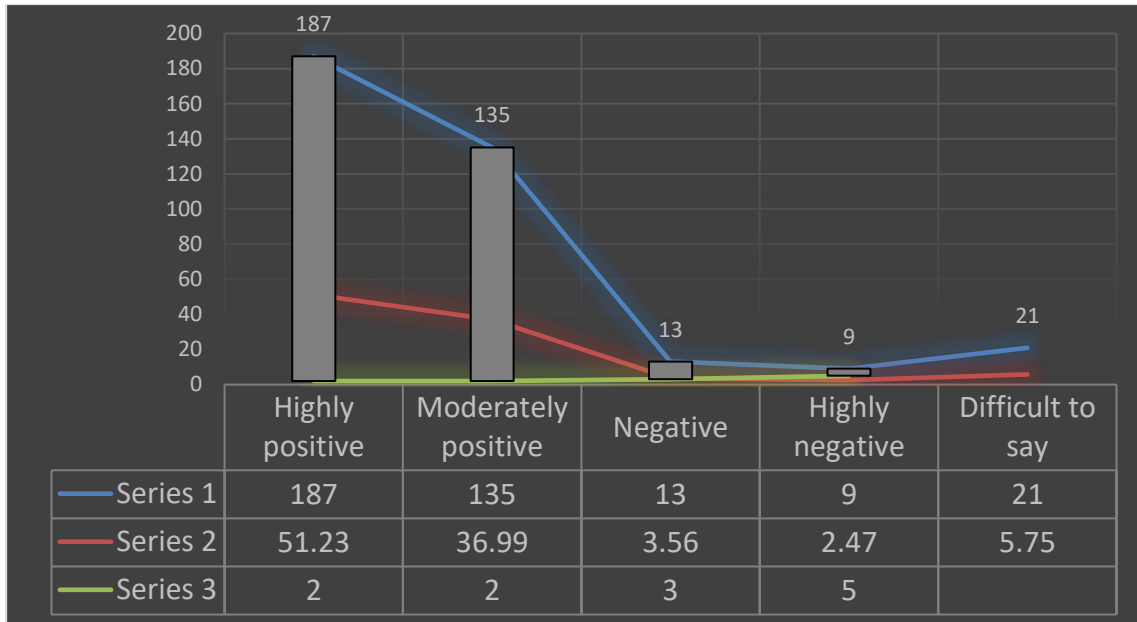


Fig. 4a. Kind of influence of the use of mass media on menstrual hygiene attitude of adolescent girls in Rural Communities of Bwari Area Council, Abuja, Nigeria

Source: Field survey, 2024

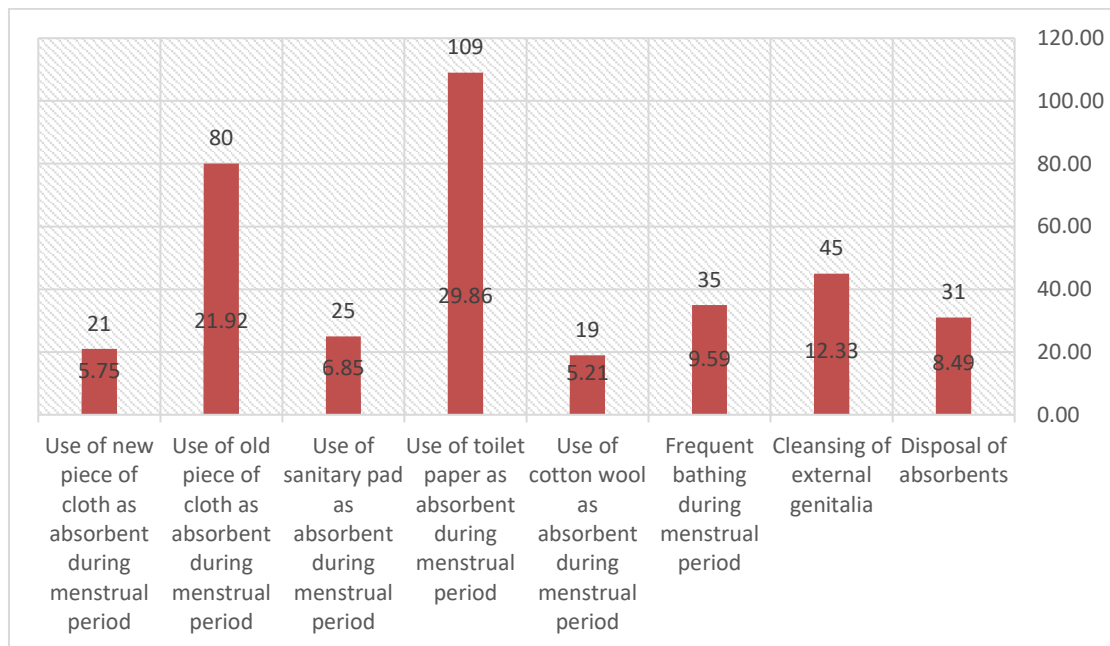


Fig. 4b. Kind of menstrual hygiene practice adolescent girls of rural communities in Bwari area council, Abuja Adopt More Due to Mass Media Usage

Source: Field survey, 2024

In Fig. 4a which is on the kind of influence of the use of mass media on menstrual hygiene attitude of adolescent girls in Rural Communities of Bwari Area Council, Abuja, Nigeria, data reveal by majority (51.23%) followed by another majority (36.99%) of the respondents that the mass media have positive influence on their attitude towards menstrual hygiene as compared with small proportion (3.56%) and (2.47%) of the respondents who said the mass media have negative influence on their attitude towards menstrual hygiene. This implies that the mass media have high level of positive influence on the menstrual hygiene practice among adolescent girls of rural communities in Bwari Area Council, Abuja.

Furthermore, in Fig. 4b which is on the kind of menstrual hygiene practice adolescent girls of rural communities in Bwari Area Council, Abuja adopt more due to mass media usage revealed that majority (29.85%) out of the respondents in the study make use of the toilet paper absorbent during their menstruation period, followed by 21.92% who said they use old piece of cloth as absorbent during their menstruation period while those who make use of the sanitary pad as absorbent during their menstruation period were less than 10% out of the adolescent girls sampled in the area. This implies that there is low adoption of proper menstrual hygiene practices among adolescent girls in rural communities of Bwari Area Council, Abuja as most of them make use of toilet paper and old cloth as absorbents during their menstruation period as compared to sanitary pad.

6. DISCUSSION

Based on the data analysed in this study, the following findings are discussed:

Radio is the mass media channel that the adolescent girls are more exposed to for information on menstrual hygiene practices followed by the television while magazine followed by the newspaper are the least channels that they are exposed to for the purpose. This is evident in Fig. 1 where nearly half (47.95) of the respondents were exposed more to the radio, followed by the television with nearly 30% respondents while magazine (10%) followed by the newspaper (20%) were the least channels they were exposed to. This finding agrees with findings in earlier reviewed in this study which indicated that radio was the most cost effective channel for health awareness

campaigns... [39]. According the finding from a study by Utalor [50], the broadcast media is popularly used by women and is a major source of enlightenment on reproductive health issues but radio was more effective than television in disseminating such health messages; and another which shows that though all media channels were found to be useful and effective, the television, followed by the radio were more preferred and effective for health awareness campaigns [39].

Another finding is that adolescent girls in Rural Communities of Bwari Area Council, Abuja are exposed to menstrual hygiene practices such as the use of Sanitary pad, bathing during their menstrual period, cleansing of external genitalia, and menstrual absorbent safe-disposal. This is evident in Fig. 2 where majority (21.64%) out of the respondents said they were exposed to sanitary pad followed by bathing during their menstrual period (15.34%), cleansing of external genitalia (12.05%), and menstrual absorbent safe-disposal (11.23%). This finding also agrees with some previous earlier reviewed in this study which revealed that the demands and needs for accurate, relevant, rapid and impartial public health information by people are increasing daily, which brings about a growing dependence on mass media as the main source of information [32]. Also, Santosh and Rajesh [73] revealed in their study how mass media are using communication strategies such as infotainment/edutainment ... in developing countries for creating health awareness and for attitudinal and behavioural changes. This finding also re-enforces the Health Belief Model (HBM) which encourages the communication of health related issues to members of the public for positive attitudinal change.

Also found in the study is that the level of mass media involvement in menstrual hygiene awareness among adolescent girls in in Bwari communities of Abuja, Nigeria is low. This is evident in Fig. 3 which revealed by nearly half (43%) of the respondents that it was to a low level that the mass media were involved in awareness on menstrual hygiene practices as compared with 25% who said it was to a high level, and to a very high level (19%). This corroborates with the finding in a study by Oliveira, Pena, Andrade & Felisbino-Mendes [67] that adolescents have difficulties in accessing toilets, water and absorbent materials, and lack of information about menstrual health, including in schools, leading to school absenteeism.

Furthermore, finding revealed that the mass media have high level of positive influence on the menstrual hygiene practice among adolescent girls of rural communities in Bwari Area Council, Abuja. However, there is low adoption of proper menstrual hygiene practices among adolescent girls in rural communities of Bwari Area Council, Abuja as most of them make use of toilet paper and old cloth as absorbents during their menstruation period as compared to sanitary pad. This is evident in Figs. 4a and 4b where majority (51.23%) followed by another majority (36.99%) of the respondents were of the opinion that the mass media have positive influence on their attitude towards menstrual hygiene as compared with small proportion (3.56%) and (2.47%) of the respondents who said the mass media have negative influence on their attitude towards menstrual hygiene; and majority (29.85%) out of the respondents who said they use toilet paper as absorbent during their menstruation period, followed by 21.92% who said they use old piece of cloth as absorbent during their menstruation period more as compared to less than 10% respondents who make use of the sanitary pad as absorbent during their menstruation period. Part of this finding aligns with that of Asemah's [42] finding that the mass media have been very effective in their campaigns against HIV/AIDS and that the messages on HIV/AIDS have been able to give adequate information on the dangers of unprotected sex and concluded that the media have given enough attention to the issue of HIV/AIDS campaigns, but the extent to which the campaigns influence the sexual behaviour of the students is low

7. CONCLUSION

In the course of mass media responsibility in promoting menstrual hygiene practices among adolescent girls in rural communities of Bwari Area Council, Abuja, Nigeria, it is concluded that radio remains the mass media channel that the adolescent girls are more exposed to for information on menstrual hygiene practices which follows by the television while magazine follows by the newspaper are the least channels that adolescent are exposed to for the purpose.

Adolescent girls are exposed to Menstrual hygiene practices through the mass media but most especially sanitary pad, bathing during their menstrual period, cleansing of external genitalia, and menstrual absorbent safe-disposal. However, compared to the magnitude of the

challenges associated with menstrual health/hygiene, the level of mass media involvement in menstrual hygiene awareness among adolescent girls is rather low.

Although, mass media have high level of positive influence on the menstrual hygiene practices among adolescent girls of rural communities but there is still low level of adoption of proper menstrual hygiene practices among them as most of the adolescent girls make use of toilet paper and old cloth as absorbents during their menstruation period as compared to sanitary pad.

Finally, the mass media have high level of positive influence on the menstrual hygiene attitude of the adolescent girls but the level of involvement that guarantees desired success in the knowledge of and or adoption of sanitary menstrual hygiene practices among the adolescent girls is rather insufficient.

8. RECOMMENDATIONS

1. The mass media should continue to be used as channels for menstrual hygiene awareness among adolescent girls but priority attention should be given to radio and television which are mass media channels that adolescent are more exposed.
2. The mass media should pay more attention to the issue of menstrual hygiene management by increasing the amount of time, space and frequency in the programmes meant to addressing the issue so that more success in adoption of the practices can be achieved.
3. Adolescent girls should leverage on the positive impact/role of the mass media to increase the adoption of menstrual hygiene practices to avoid the dangers associating with poor menstrual hygiene behaviour among girls in particular and society in general.
4. Furthermore, the mass media should encourage the governmental and non-governmental more in the funding of menstrual hygiene products to ensure affordability and more accessibility of such products for users.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models

(ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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