



AWARENESS OF TELEVISION ADVERTISEMENTS ON SANITARY PAD AMONG UNDERGRADUATE FEMALE STUDENTS OF SALEM UNIVERSITY, LOKOJA

¹AWULU, Eleojo Blessing

²OMONOWA, Augustine

^{1,2}Mass Communication Department, Salem University, Lokoja

Corresponding Author: AWULU, Eleojo Blessing; blessingawulu@gmail.com

ABSTRACT

This study investigates the awareness of television advertisements on sanitary pads among students of Salem University, Lokoja. The study used descriptive survey research and data was collected through a structured questionnaire distributed to a sample of 350 female students. The Health Belief Model was adopted as the theoretical framework for this study. Analysis was done using frequency and percentage scores and presented in tabular form. The findings revealed that 68.6% of respondent revealed that they were aware of television advertisements promoting sanitary pads and 61.4% of the respondents revealed that they were able to recall the content of the advertisements. In addition, 51.4% of the respondents revealed that the television advertisements influenced their choice of sanitary pad. Finally, the findings from the study revealed that visual appeal and message clarity were the most influential factors generating a positive response with 66.7% and 61.1% respectively while repetition frequency had the least positive effect with 33.3% responding positively and an equal proportion responding negatively. The study concludes that television advertising plays a significant role awareness creation in respect of sanitary pad; however, the level of awareness varies based on factors such as age and access to media. Hence, limited exposure to media shows that students without access to television might miss traditional TV advertisements. Therefore, the study recommends that advertisers should consider alternative platforms and methods to reach students, such as social media, school-based campaigns, and community outreach programs.

Key words: Television, Advertisement, Awareness, Sanitary Pad, Female students.

Introduction

Advertising has traditionally focused on promoting products through various communication platforms such as radio, television, cinema, newspapers, magazines, billboards, posters, and more recently, the internet. Television remains a powerful medium for advertising sanitary pads, especially among students. In Nigeria, where a variety of sanitary pad brands compete vigorously, broadcast media significantly influence students' buying behaviors through persuasive messaging and visual appeal.

Sanitary pads are among the most commonly used menstrual products globally, and their advertisement plays a significant role in shaping public perceptions, consumer behavior, and awareness around menstruation. In many societies, however, menstruation remains a taboo topic, and advertising strategies often reflect or reinforce societal discomfort with openly discussing menstrual health (Sinha & Sharma, 2020).

Sanitary pad advertisements typically use euphemisms, abstract visuals, and symbolic language rather than directly addressing the biological reality of menstruation. These advertisements often focus on themes like “freedom,” “confidence,” and “freshness,” subtly implying that menstruation is something to

be concealed (Johnston-Robledo & Chrisler, 2013). While such strategies may appeal to broader audiences, they may also perpetuate stigma and misinformation.

In recent years, some companies have attempted to challenge these norms with more open and realistic portrayals of menstruation in their advertising. These shifts raise important questions about consumer reception, cultural appropriateness, and the potential for advertisements to influence attitudes toward menstrual health.

Understanding the strategies used in sanitary pad advertisements and their reception by different demographic groups is essential for designing health communication that promotes menstrual equity and breaks harmful taboos.

Statement of the Problem

Today, there is different advertisement of sanitary pads which is a commodity that is widely used by women in many societies including Nigeria. Sanitary pad advertisement is common and the brand that is overwhelmingly stands out in advertising especially on television is “Always”. It is one of the prominent and widely recognized sanitary pad brands in Nigeria and this is due to its impactful television advertising campaigns and strong brand recall (Leman, 2014).

Despite the increasing availability of sanitary pad and their promotion through media channels, many in-school adolescent girls in Nigeria report gap in menstrual hygiene knowledge, attitudes, safe practices- suggesting that availability or advertising of products does not necessarily translate comprehensive awareness (Ene et al., 2024).

The lack of awareness can lead to inadequate menstrual hygiene practices, which may affect student’s health and wellbeing. Therefore, this study aims to investigate the level of awareness among undergraduate students of Salem University Lokoja regarding sanitary pad advertisements on television, identifying the factors influencing their awareness.

Objectives of the Study

The study is guided by the following research objectives:

1. To assess the level of awareness among students regarding sanitary pad advertisement on television
2. To determine the factors that affect students attentions and response to sanitary pad advertisement on television
3. To examine the influence of television advertisements on students knowledge on sanitary pad.

Literature Review

Advertising

Advertising is a central pillar of modern marketing communication and plays a critical role in shaping consumer perceptions and behavior. According to Kotler and Armstrong (2021), advertising is “any paid form of non-personal presentation and promotion of ideas, goods, or services by an identified sponsor.” This classic definition emphasizes the transactional nature of advertising as a paid, strategic communication effort by brands seeking to influence consumer decision-making.

However, recent scholarship has extended this understanding. Kerb and Richards (2020) offer a more comprehensive view, defining advertising as a form of mediated communication from an identifiable source, aimed at persuading an audience to take specific actions either immediately or in the future.

Their study highlights five essential components of advertising: it must be paid, mediated, source-identified, persuasive, and action-oriented. Together, these perspectives provide a robust conceptual foundation for examining advertising in contemporary marketing, where evolving media channels and consumer expectations demand both clarity and authenticity in brand messaging.

Advertising is a strategic form of communication characterised by paid, mediated messages from identifiable sponsors, aimed at persuading recipients to take action, whether immediately or in the future (Kerb & Richards, 2020). Kotler and Armstrong (2021) define advertising as “any paid form of nonpersonal presentation and promotion of ideas, goods or services by an identified sponsor.”

Advertising is one of the marketing tools used by businessmen and women to promote their goods and services. The media uses advertising as a vehicle for persuasion as well as a powerful force for shaping attitudes and behaviour of people in today’s world (Emetumah et al., 2022).

Empirical Review

Agha (2022) conducted a descriptive survey among 300 female students at Adeleke University in Osun State, Nigeria. The study found that new media (82%) and broadcast media (72%) are the primary channels through which students encounter sanitary pad advertisements. Importantly, the respondents reported that the advertisement messages highlight absorbency, skin-friendliness, and stain prevention.

The findings from the study showed that the advertisements significantly shaped their buying preferences. Statistical analysis revealed a strong, significant relationship between exposure to advertising and students’ buying behavior ($p = 0.001$), indicating that advertising messages are influential in guiding consumer decisions. However, the study’s limitation lies in its focus on a single institution, which may not represent the broader student population across Nigeria.

In addition, Abdul and Bamigboye (2023) explored the role of music in “Always” sanitary pad advertisements and its effect on teenagers’ buying behavior in Ikeja, Lagos. The study found that music in advertisements makes them more engaging and positively influences purchasing decisions. However, the study acknowledged that other factors such as price, availability, and product quality also play significant roles. A limitation of this study is its focus on a specific demographic in an urban setting, which may not reflect the experiences of students in rural areas.

A similar study conducted by Kofoworaola, (2021), examines the influence of television advertisements specific to the “Always” brand in Ado Ekiti. The study used both quantitative surveys and qualitative interviews, framing its analysis through media dependency and social responsibility theories. The study concludes that students’ preference for Always products is largely driven by TV advertising, which also reveals the need to increase product availability and affordability. A limitation of this study is its focus on a specific geographic area, which may not reflect the experiences of students in other regions.

Akin-Odukoya (2023) examined the perceptions of female students at Caleb University regarding their choice of sanitary towels. The study revealed that factors such as product quality, brand reputation, and advertisement messages significantly influence students’ purchasing decisions. However, the study acknowledged that personal preferences and peer influence also play crucial roles. A limitation of this study is its focus on a single institution, which may not be representative of the broader student population.

Furthermore, Saka (2024) analyzed how young Nigerian women are portrayed in advertisements for feminine products, including sanitary pads. The study utilized multimodal content analysis and focus group discussions to assess the representation of young women in these advertisements.

The findings suggest that advertisements often depict women in stereotypical roles, which may influence societal perceptions and consumer behavior. A limitation of this study is its reliance on content analysis, which may not fully capture the impact of these representations on actual consumer behavior.

Tsebee & Kusugh (2024) carried out a study on the 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. The study explored the role of mass media (television and radio) in raising awareness and shaping attitudes toward menstrual hygiene among adolescent girls in rural Abuja.

Findings indicate significant exposure to radio followed by television, and a high positive influence on menstrual hygiene attitudes, though actual adoption of sanitary hygiene practices remained low. The findings demonstrated that although TV (and radio) advertisements positively influence attitudes toward menstrual hygiene, actual behavioral adoption remains limited which suggest a gap between awareness and meaningful practice.



Snapshots of samples of sanitary pad advertisement

Theoretical Framework

The study adopted the Health Belief Model as the theoretical framework for this study.

Health Belief Model (HBM)

Health Belief Model (HBM) is a foundational framework in health behavior research. It was conceptualized in the 1950s to help understand preventative health behavior by social psychologists working in the United States Public Health Service (USPHS), specifically "the widespread failure of people to accept disease preventatives or screening tests for the early detection of asymptomatic disease."

The model focuses on how individuals perceive health threats and decide to act based on the value individuals place on a particular goal and the likelihood that actions taken toward that goal will be successful in achieving the goal. It consists of 6 primary cognitive constructs, or "dimensions" that influence

behavior: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, self-efficacy, and cues to action.

This model is highly relevant to the present study on students' awareness of TV advertisements of sanitary pads, as it provides a lens through which one can understand how such advertisements influence knowledge, attitudes, and health behavior.

Television advertisements often imply the potential physical and social consequences of poor menstrual hygiene, such as discomfort, leakage, odor, or embarrassment. These messages increase students' awareness of their susceptibility to menstrual hygiene issues and the severity of the consequences if appropriate sanitary products are not used. For instance, Agha (2022) found that students were influenced by advertisement content focusing on the prevention of stains and the product's skin-friendliness, highlighting the health and social risks of not using quality sanitary pads.

In addition, sanitary pad advertisements frequently emphasize benefits such as high absorbency, comfort, confidence, and long-lasting protection. These benefits align with the Health Belief Model's construct that individuals are more likely to adopt a health behavior if they believe it will reduce the risk of a negative outcome. Eleboda et al. (2020) reported that students' buying behavior was influenced by their perception of the advertised benefits, such as effectiveness and comfort.

While most advertisements highlight benefits, they often overlook the potential barriers students might face, such as cost, cultural taboos, or lack of access to sanitary pads. In Abdul and Bamigboye (2023) study, although music enhanced the appeal of the advertisements, other underlying factors like availability and affordability still influenced actual purchase behavior.

Furthermore, television advertisements serve as external cues to action. They prompt students to think about menstrual hygiene and encourage them to try or switch to the advertised brand. As Eleboda et al. (2020) noted, repeated exposure to sanitary pad advertisement significantly influenced awareness and eventually buying decisions.

Methodology

Research Design

The study adopted a descriptive survey research design to assess the level of awareness of television advertisements on sanitary pads among Salem University students. This design is suitable as it aims to describe the current status of awareness.

Population of the study

The population of the study includes all students who are currently enrolled in Salem University, Lokoja. Therefore, the population of the study is 3935 students as obtained from the registry unit of Salem University, Lokoja (<http://salemuniversity.edu.ng>).

Sample Size and Sampling Techniques

The sample size for the study is 363 students. This was gotten using the Taro Yamane formula with a margin of error of 5% and confidence level of 95%. (<https://www.classgist.com>). This study employed a multistage sampling technique to select a representative sample of female students from Salem University. Multistage sampling was deemed appropriate due to the diverse population and structure of the university, which

consists of multiple colleges, departments, and levels of study. The sampling procedure was carried out in the first stage was the stratification by colleges.

Salem University is comprised of several colleges, including but not limited to the College of Law, college of Management and Social Sciences, College of Information and Communication Technology, and College of Education. In the first stage, the university population was stratified based on these Colleges to ensure fair representation across academic disciplines.

The second stage adopted the random selection of departments. Two departments were randomly selected using simple random sampling from each college. This helped reduce bias and ensured that different academic programs were included in the study. The third stage involved the selection by level of study. From each selected department, students were further grouped according to their level of study (e.g., 100, 200, 300, and 400 levels). One or more levels were randomly selected from each department to reflect different age groups and exposure levels.

Finally, the fourth stage used the selection of female students. The study focuses on female students; only female students were considered at this stage. A list of female students from the selected departments and levels was obtained (or constructed), and systematic random sampling was used to select participants from this list. The sampling interval was determined by dividing the total number of female students in the selected group by the required sample size.

Instrument of Data Collection

Questionnaire was the instrument used for data collection.

Method of Data Collection

Questionnaire was distributed to students in Salem University, Lokoja using face to face method with the aid of a research assistant. A total of 365 questionnaires were distributed to the selected respondents. Out of these, 350 questionnaires were successfully retrieved. However, 13 questionnaires were not returned and were considered missing. The retrieved questionnaires were subsequently used for data analysis.

Data Analysis

Collected data was analysed using frequency count distribution, percentages and tabulation to measure the awareness level.

Data Presentation, Analysis and Interpretation

Table 1: Table showing the Awareness of TV Advertisement on Sanitary Pads

Academic Level	No of Respondents	Aware	Aware (%)	Not Aware	Not Aware (%)	Total (%) of respondents
100 Level	90	60	66.7%	30	33.3%	25.7%
200 Level	90	70	77.8%	20	22.2%	25.7%
300 Level	80	60	75.0%	20	25.0%	22.9%
400 Level	90	50	55.6%	40	44.4%	25.7%
Total	350	240	68.6%	110	31.4%	100%

In a survey conducted among 350 students, 240 respondents (69%) indicated that they were aware of TV advertisements for sanitary pads, while 110 students (31%) reported a lack of awareness. This data reflects a generally positive level of awareness, but the 31% unawareness rate is significant and merits closer examination due to its broader social and educational implications. This gap may stem from social, cultural, or technological barriers and can have serious consequences for health, dignity, and gender equality. Addressing it requires multi-pronged efforts from advertisers, educators, public health advocates, and communities alike.

Table 2:

Table showing the Recall of TV Advertisement Content on Sanitary Pad.

Academic Level	Recall Content (Yes)	Percentage (%)	Recall Content (No)	Percentage
100 1	50	55.6	40	44.4
200 1	65	72.2	25	27.8
300 1	55	68.8	25	31.2
400 1	45	50.0	45	50.0
Total	215	61.4	135	38.6

A total 61.4% of the respondents revealed that they were able to recall the content of the advertisement, including product names, features and usage messages. This suggests that the advertisements are not only reaching students but are also memorable and engaging. The 400 level respondents have the lowest recall rate, with only 50% remembering the advertisement content.

Table 3:

Table showing the Influence of TV Advertisements on choice of Sanitary Pads

Academic Level	Influenced (Yes)	Percentage (%)	Not Influenced (No)	Percentage (%)
100 level	40	44.4	50	55.6
200 level	55	61.1	35	38.9
300 level	50	62.5	30	37.5
400 level	35	38.9	55	61.1
Total	180	51.4	170	48.6

The findings from the table revealed that 51.4% of the respondents revealed that the television advertisement influenced their choice of sanitary pad. This indicates that television advertisements influenced their choice of sanitary pad brands and improve their understanding of proper menstrual hygiene. This shows the persuasive impact of television advertisement on students' health related decision.

Table 4:

Table showing the Factors Affecting Respondents Attention

Factors affecting Attention	Positive (%)	Neutral (%)	Negative	Total
Visual appeal	60 (66.7%)	20 (22.2%)	10 (11.1%)	90 (25.7%)
Message clarity	55 (61.1%)	25(27.8%)	10 (11.1%)	90 (25.7%)
Brand familiarity	40 (57.1%)	20 (28.6%)	10 (11.1%)	70 (20.0%)
Relevance of content	35 (58.3%)	15 (25.0%)	10 (11.1%)	60 (17.1%)
Repetition frequency	20 (33.3%)	20 (33.3%)	20 (33.3%)	60 (17.1%)
Total	210 (60.0%)	100 (28.6%)	60 (17.1%)	350 (100%)

The study revealed that majority of the respondents (66.7%) gave a positive response to TV advertisement on sanitary pads. The high positive response to visual appeal aligns with contemporary advertising strategies that emphasize engaging visuals to capture attention. Research indicates that compelling visual storytelling enhances brand personality and emotional connection, suggesting that students are more likely to engage with advertisements that offer compelling narratives.

Also, 55 (61.1%) of students rating message clarity positively, it is evident that clear and straightforward communication enhances advertisement effectiveness. This supports the notion that advertisements with clear messages are more memorable and impactful.

The positive response to brand familiarity (57.1%) indicates that students are more likely to pay attention to advertisements from brands they recognize. While repetition frequency had the least positive effect with 33.3% responding positively and an equal proportion responding negatively. This aligns with the concept of advertising frequency, where increased exposure can enhance brand recall, but excessive repetition may lead to wear-out effects.

Discussion of Findings

Table 1 shows the awareness of Television advertisement on sanitary pad. The findings from the study reveal that majority of the respondents (68.6%) are aware of sanitary pad advertisements on television, but awareness levels vary according to age, gender and access to television.

Students who regularly watched television during specific time slots were more likely to be aware of the advertisements compared to those with limited TV access or preference for other media platforms. While the majority demonstrated exposure to this form of menstrual health messaging, the fact that nearly one-third of respondents (31.4%) lacked awareness suggests a significant gap in the reach of menstrual hygiene education via mass media. This non-exposure holds important implications for menstrual health outcomes among adolescents.

Television advertisements often play a crucial role in informing young people about the availability, usage, and importance of sanitary products (Dasgupta & Sarkar, 2008). For many adolescents, especially those in conservative or rural settings, TV advertisement may serve as one of the few accessible sources of menstrual health information due to persistent taboos and lack of open communication (Sommer et al., 2015). Therefore, the 31.4% who were unaware of these advertisements may also be less informed

about proper menstrual hygiene practices, potentially increasing their vulnerability to reproductive tract infections (RTIs), school absenteeism, and psychological stress (Sumpter & Torondel, 2013).

Furthermore, lack of awareness about sanitary pad options can result in continued reliance on unhygienic alternatives such as cloth or tissue paper, which are often not properly sanitized or changed frequently (Garg et al., 2012). This can contribute to health complications, including urinary tract infections and skin irritations. The implications are especially concerning in the context of developing countries, where access to accurate menstrual health education is already limited.

Non-exposure to menstrual health messaging also affects broader aspects of adolescent well-being. It may reinforce stigma, shame, and misinformation surrounding menstruation, thus impeding girls' confidence and participation in social and academic activities (Chandra-Mouli & Patel, 2017). Studies have shown that when adolescent girls are exposed to clear and accurate menstrual information, including through TV advertisements, their attitudes, practices, and health outcomes significantly improve (Van Eijk et al., 2016).

Given these findings, there is a clear need to expand the reach of menstrual hygiene campaigns beyond television alone. Integrating menstrual health education in schools, leveraging social media platforms, and engaging community health workers can help ensure that information reaches even those who are not exposed to traditional media formats.

Table 2 shows the recall of Television advertisement content on sanitary pad. The findings from the study revealed that 61.4% of the respondents could recall key features and messages from the advertisement such as product benefits and usage instructions, though detailed knowledge was limited in some cases.

Students perceived advertisements featuring relatable scenarios, clear information, and trustworthy endorsers as more effective in increasing awareness and influencing behaviour. These visuals and emotional appeal in these advertisements helped to reinforce brand recall. Brands like Always, Stayfree and Whisper were repeatedly mentioned as examples with high recall due to consistent television presence.

This is in line with the study by Asgarian, Jetha, & Jeon (2025) shows that factors like video pacing, scene complexity, and emotional resonance strongly predict ad memorability. Applying such insights could help refine sanitary pad advertisement to further improve recall among student audiences.

Table 3 shows the Influence of Television Advertisements on the choice of Sanitary Pads. The findings reveal that 51.4% of the respondents indicated that the advertisement influenced their choice of sanitary pad as well as shaped their perceptions about the product quality, comfort and reliability.

This shows that television remains a powerful medium for advertising, capable of reaching a broad audience and influencing consumer perceptions. A study by Agha (2022) on female students at Adeleke University found that new and broadcast media are prominent channels through which student's access sanitary pad advertising messages, highlighting the continued relevance of television in shaping consumer behaviour.

Similarly, research by Vas and Munjal (2025) emphasizes that media advertising significantly influences consumer behavior towards sanitary pads, with television being a key platform for disseminating information and shaping brand perceptions.

In addition, television advertisements often employ emotional and psychological appeals to connect with consumers. According to Oladeji and Adeola (2022), advertisements for menstrual hygiene products frequently depict themes of confidence, freshness, and modern femininity, which resonate with young female consumers navigating self-image and social norms. Furthermore, Egwuonwu and Ezeife (2021) note that hygiene products are marketed in ways that appeal to young women's emotional and psychological needs, emphasizing comfort and empowerment.

In Nigeria, cultural taboos surrounding menstruation necessitate sensitive advertising strategies should be balanced. Ojong and Amadi (2020) argue that advertising strategies for female hygiene products must balance promoting product benefits with navigating cultural taboos, often resulting in stylized representations that limit consumer education. Therefore, advertising strategies should be culturally sensitive, balancing product promotion with respect for societal norms and taboos surrounding menstruation.

Table 4 above reveals that majority of the respondents (60%) reported a positive response to TV adverts on sanitary pads. This suggests that such advertisements are generally effective in engaging the university student demographic (ages 15–25). However, 28.6% were neutral, and 17.1% expressed negative responses, indicating room for improvement in the appeal and effectiveness of these adverts. In addition, among the five identified influencing factors: Visual appeal had the highest impact, with 66.7% of students exposed to visually appealing adverts giving a positive response.

The high positive response (60%) to visual appeal underscores the importance of engaging and aesthetically pleasing advertisements. This aligns with findings from Ibadan, Nigeria, where advertisements with memorable music, clear messages, and beautiful scenes were more likely to be recalled by viewers. Message clarity followed closely, with a 61.1% positive response rate.

For a product category that involves personal hygiene, clarity in messaging is essential for building trust and ensuring comprehension. The positive perception of message clarity underscores the importance of straightforward communication in advertisements. Clear messaging aids in reducing cognitive load, making it easier for viewers to process information and form favorable attitudes towards the brand.

Furthermore, Brand familiarity influenced 57.1% of students positively. The moderate positive response to brand familiarity suggests that students are more attentive to advertisements from brands they recognize. Familiarity can reduce cognitive effort in processing advertisements, leading to more favorable opinions and increased purchase intentions.

Relevance of content also showed a strong impact, with 58.3% of those who found the advertisement content relatable reporting a positive response. These results affirm the importance of brand identity and the ability of advertisers to connect with the specific concerns or lifestyle of the target audience. Brands that tailor their message to reflect student values, concerns (e.g., affordability, comfort), and language may increase engagement. The mixed responses to content relevance indicate that students may be selective about advertisements that align with their interests or needs. Advertisements that resonate with the audience's personal experiences or aspirations are more likely to capture and retain attention.

However, repetition frequency had the mixed impact. The findings from the study revealed that 33.3% of respondents responded positively and negatively respectively. This indicates that excessive repetition of adverts may lead to irritation or advert fatigue, particularly in a demographic that is often media-savvy and bombarded with marketing messages. The varied responses to repetition frequency highlight the delicate balance advertisers must maintain. While repetition can enhance brand recognition and message retention, excessive exposure may lead to advertisements fatigue and diminished effectiveness.

Conclusion and Recommendations

The study reveals that television advertisements play a significant role in raising awareness about sanitary pads among students of Salem University, Lokoja. However, the level of awareness varies based on factors such as age, access to media and cultural background. While many students recognize the products and messages conveyed through this advertisement there are gaps in understanding the full benefits and correct usage of sanitary pads.

Therefore, the study recommend that health educators and school authorities (Salem University, Lokoja) should collaborate with media agencies to reinforce messages in advertisements through school health programs, workshops and peer education initiatives. In addition, advertisers should consider alternative platforms and methods to reach students, such as social media, school-based campaigns, and community outreach programs.

References

- Abdul, O. F., & Bamigboye, D. L. (2023). Music and teens in advertising: Influence of music in Always sanitary pad television advertisement among teens in Ikeja, Nigeria. *RhyceKerex*.
- Agha, R. O. (2022). Sanitary pads advertising messages and buying behaviour of female students of Adeleke University, Ede, Osun State (Master's thesis). Lead City University, Nigeria. Retrieved from repository.lcu.edu.ng
- Akin-Odukoya, A. (2023). Perception of the buying choice of sanitary towels among female students of Caleb University, Lagos. *BIRCI-Journal*.
- Asgarian, S., Jetha, Q., & Jeon, J. (2025). MindMem: Multimodal for predicting advertisement memorability using LLMs and deep learning.
- Chandra-Mouli, V., & Patel, S. V. (2017). Mapping the knowledge and understanding of menarche, menstrual hygiene and menstrual health among adolescent girls in low- and middle-income countries. *Reproductive Health*, 14(1), 30. <https://doi.org/10.1186/s12978-017-0293-6>
- Dasgupta, A., & Sarkar, M. (2008). Menstrual hygiene: How hygienic is the adolescent girl? *Indian Journal of Community Medicine*, 33(2), 77–80. <https://doi.org/10.4103/0970-0218.40872>
- Egwuonwu, M. I., & Ezeife, A. O. (2021). The Role of Media Advertising in Female Hygiene Product Purchases at LASU. Lagos State University.
- Eleboda, S. S., Bako, & Funke, Z. (2020). Targeting sanitary towel at female polytechnic students: Exploring television advertising as an intrusive communication tool. *Journal of Marketing and Consumer Research*, (69), 1–8. <https://doi.org/10.7176/JMCR/69-04>
- Emetumah, I.F., Okorie, A.G., Duru, N., Macaulay S.U., Nnosike E. N & Etumnu, E.W. (2022). When the digital media do the magic of effective advertising of health supplements in Owerri metropolis. *Asian Journal of Advanced Research and Reports*, 16(4), 41-49. <https://doi.org/doi:10.9734/AJARR/2022/v16i430467>.
- Ene, N., Bolarinwa, O. A., Adedigba, C., et al. (2024). “If I use pad, I feel comfortable and safe”: A mixed-method analysis of knowledge, attitude, and practice of menstrual hygiene management among in-school adolescent girls in a Nigerian city. *BMC Public Health*, 24, Article 1721.
- Ene, N., Bolarinwa, O.A., Adedigba, C. (2024). “If I use pad, I feel comfortable and safe”. A mixed method analysis of knowledge, attitude and practice... *BMC Public Health*, 24, article 1721. <https://doi.org/10.1186/s12889-024-19256-5>
- Garg, S., Sharma, N., & Sahay, R. (2012). Socio-cultural aspects of menstruation in an urban slum in Delhi, India. *Reproductive Health Matters*, 9(17), 16–25 [https://doi.org/10.1016/S0968-8080\(01\)90004-7](https://doi.org/10.1016/S0968-8080(01)90004-7)
- Johnston-Robledo, I., & Chrisler, J. C. (2013). The Menstrual Mark: Menstruation as Social Stigma. *Sex Roles*, 68(1–2), 9–18. <https://doi.org/10.1007/s11199-011-0052-z>

- Kerb, G., & Richards, J. (2020). Redefining advertising in research and practice. *International Journal of advertising*, 40 (2), 175-198.
- Kofoworaola, A. E. (2021). Influence of television advertisement on the buying choice of sanitary pad by students in Ado Ekiti, Ekiti State. *Afribary*. Retrieved from <https://afribary.com/works/influence-of-television-advertisement-on-the-buying-choice-of-sanitary-pad-by-students-in-ado-ekiti-ekiti-state>
- Kotler, P., & Armstrong, G. (2021). *Principles of marketing* (18th ed.). Pearson Education.
- Leman, (2014). Influence of Always sanitary pad advertising on product buying behaviour of female undergraduates of Babcock University [unpublished undergraduate dissertation]. Naira project
- Ojong, N. A., & Amadi, M. (2020). Exploring Menstrual T.V. Advertisements: Unravelling Media's Role in Perpetuating Women Victimization. *ResearchGate*.
- Oladeji, O. A., & Adeola, O. (2022). The Role of Media Advertising in Female Hygiene Product Purchases at LASU. Lagos State University.
- Saka, O. M. (2024). Representation of young Nigerian women in selected female product advertisements. University of Ibadan.
- Sinha, S., & Sharma, P. (2020). Changing Narratives of Menstruation in Indian Advertising: A Study of Sanitary Pad Advertisements. *Journal of Gender Studies*, 29(7), 775–787. <https://doi.org/10.1080/09589236.2020.1717959>
- Sommer, M., Hirsch, J. S., Nathanson, C., & Parker, R. G. (2015). Comfortably, safely, and without shame: Defining menstrual hygiene management as a public health issue. *American Journal of Public Health*, 105(7), 1302–1311. <https://doi.org/10.2105/AJPH.2014.302525>
- Sumpter, C., & Torondel, B. (2013). A systematic review of the health and social effects of menstrual hygiene management. *PLoS ONE*, 8(4), e62004. <https://doi.org/10.1371/journal.pone.0062004>
- Tsebee, K. A., & Kusugh, T. (2024). 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. *Asian Journal of Advanced Research and Reports*, 18(8), 92–110. <https://doi.org/10.9734/ajarr/2024/v18i8712>
- Van Eijk, A. M., Sivakami, M., Thakkar, M. B., Bauman, A., Laserson, K. F., Coates, S., & Phillips-Howard, P. A. (2016). Menstrual hygiene management among adolescent girls in India: A systematic review and meta-analysis. *BMJ Open*, 6(3), e010290. <https://doi.org/10.1136/bmjopen-2015-010290>
- Vas, M., & Munjal, K. (2025). Understanding Consumer Behavior Towards Sanitary Pads: A Comprehensive Study. *African Journal of Biomedical Research*, 28(1S).