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The Perception and Reactions to Unsolicited Advertisements in Select Mobile Apps among Southeast, Nigeria Smart Phone Users

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Abstract

Background: Advertisers engage in various strategies to promote the sale of products and services. However, the prevalence of unsolicited advertisements, particularly within mobile applications, has raised concerns regarding consumer perception and behaviour.
Objective: This study investigated smartphone users' perceptions of and reactions to unsolicited in-app advertisements in Southeastern Nigeria. The Psychological Reactance Theory served as the theoretical framework for the study.
Methodology: The study employed a survey-based approach to collect data from 385 respondents. The questionnaire served as the instrument for data collection, and a respondent-driven sampling (RDS) chain referral technique was used for respondent selection.
Results: The findings revealed that smartphone users in Southeast Nigeria hold a negative perception of unsolicited in-app advertisements. The results also showed that such ads repulse these users, and their negative perceptions directly influence this adverse reaction.
Conclusion: Excessive exposure to unsolicited advertisements has led to a negative perception among smartphone users, which in turn contributes to their negative reactions toward these ads in mobile applications. This highlights the need for advertisers to reconsider their strategies to avoid alienating consumers.
Keywords: Perception and reactions, unsolicited advertisements, mobile apps, smartphone users

Introduction

In today's highly competitive digital environment, advertising has evolved into a sophisticated and essential strategy used by brands and businesses to effectively promote their products and services to a broad audience. The fundamental purpose of this communication is to inform and educate potential consumers about available goods and services, thereby empowering them to make informed choices that align with their specific needs and desires (Anyasor & Umeadi, 2017). As consumers are constantly seeking solutions to their problems and ways to satisfy their needs, they are naturally drawn to advertisements that appear to offer a solution. This reality has prompted advertisers to significantly intensify their efforts, particularly on digital platforms, with the strategic intent of capturing the attention of a vast and diverse prospective customer base to drive sales and market penetration.

In light of this strategic shift, mobile advertising has emerged as a cornerstone of modern marketing. Oladipo and Temitayo (2017) highlighted that to execute mobile marketing activities with maximum efficacy, marketers are increasingly concentrating their resources on mobile advertising, recognizing it as an indispensable tool in the current market landscape. This trend is a direct result of the dramatic global proliferation of mobile phone usage. As observed by Adeyi (2023), smartphone usage has soared to over 6.5 billion active users worldwide, with Nigeria experiencing a particularly rapid and extensive increase in mobile phone adoption. According to the Nigerian Communications Commission (NCC), the nation's telecommunications sector recorded a staggering 222.5 million telephone customers at the close of 2022, with more than 215 million active mobile phone subscriptions. The profound implication of these statistics is that a growing population of people is spending more of their time engaging with their mobile devices, and in doing so, they are inevitably exposed to a continuous stream of mobile advertisements, many of which are delivered without their consent or request. Within the specific context of this study, unsolicited advertisements are defined as intrusive messages or promotional content that appear on mobile apps and are not initiated or requested by the smartphone user; yet, they are strategically designed to create product awareness or induce a consumer purchase, regardless of the user's immediate disposition or preference.

The rapid development of mobile technology has fundamentally altered the dynamics of both interpersonal communication and traditional marketing channels (Enwereuzorr, 2017; Ezugwu et al., 2025). As a result, mobile-based advertising is now recognised as one of the most significant and rapidly evolving trends in the field of mobile communication (Gao & Zang, 2016; Wang et al., 2019). Leading scholars in the field agree that mobile advertising represents an exceptionally effective method for driving consumer engagement and increasing sales (Aslam et al., 2016; Makudza et al., 2020; Megdadi & Hammouri, 2016; Murillo-Zegarra et al., 2020). From its early days as simple banner ads, mobile advertising has undergone a transformative evolution. As contemporary businesses formulate increasingly complex and sophisticated strategies to interact with customers, influence their purchasing decisions, and even complete transactions directly through mobile devices, mobile advertising has become an indispensable component of the marketing mix for brands and app publishers of all sizes (Oladipo & Temitayo, 2017).

However, this aggressive push to persuade individuals has led to a major point of contention for users. Smartphone users today are frequently subjected to a high volume of unsolicited

advertisements the moment they open their apps. A common frustration is that many of these ads are configured to run in their entirety, without any option for a user to skip or close them prematurely. This forces users to watch the full advertisement before they can access the desired content, a practice that frequently leads to feelings of irritation and annoyance. This observation aligns with existing research, which has documented that non-permitted messages can be perceived as highly annoying, intrusive, and a violation of consumer privacy (Gao & Zang, 2016). Consequently, there is a well-documented negative correlation between a consumer's attitude and their exposure to such intrusive and aggravating advertising messages (Hadi & Aslam, 2023; Liu et al., 2015; Romano & Han, 2022).

Despite the well-established growth of mobile advertising and the recognized issue of unsolicited ads, a significant gap remains in the academic literature concerning how users in specific regional contexts, such as Southeast Nigeria, perceive and react to this phenomenon. This study is designed to bridge this critical gap by conducting a thorough investigation into the perceptions and behavioral reactions of smartphone users in this region when confronted with unsolicited advertisements within their mobile apps. To provide a focused and relevant analysis, the researchers have selected a specific set of commonly used apps, including WhatsApp Status Saver, Collage Maker, Naija Whot, WPS Office, and Music Player, which have been observed to frequently display these intrusive advertisements. The rationale for selecting these particular apps is founded on preliminary observations by the researchers regarding their widespread popularity and frequent usage among the smartphone user population in Southeast Nigeria. Based on the foregoing, this study's primary objective is to meticulously examine how smartphone users perceive and react to unsolicited advertisements in their mobile apps. The specific objectives are as follows:

1. To determine the extent to which smartphone users in Southeast Nigeria are exposed to unsolicited advertisements in select mobile apps.
2. To ascertain the perception of smartphone users in Southeast Nigeria regarding unsolicited advertisements in select mobile apps.
3. To examine the reactions of smartphone users in Southeast Nigeria to unsolicited advertisements in select mobile apps.

Theoretical framework

This study is underpinned by Psychological Reactance Theory, which was originally proposed by Jack Brehm in 1966. The theory was later expanded to focus on how individuals perceive and respond to threats to their freedoms. It posits that when a person's freedom to choose or act is eliminated or threatened, they will experience a state of psychological reactance. This is a motivational state aimed at restoring the threatened freedom. In the context of this study, smartphone users may perceive unsolicited mobile advertisements as a threat to their freedom of choice and personal space. This perceived threat can lead them to resist by taking actions like muting the ad's volume or turning off their mobile data.

The theory hinges on the concept of perceived freedoms—the belief that an individual possesses certain inherent freedoms. In their daily lives, people engage in free behaviours, such as the freedom to choose what to purchase without being coerced. According to the theory, when this

perceived freedom is threatened by an external source, such as an aggressive advertiser, the individual will react in an opposite direction as a way of reasserting control.

Steindl et al. (2015) assert that individuals experiencing such a threat may respond with direct restoration, which involves a direct effort to regain the specific threatened freedom. For example, a user might actively seek to close an ad or change their app settings to block future ads. Alternatively, they may engage in indirect restoration, which involves a corresponding behaviour that restores a sense of freedom, such as complaining about the ad to others. They may also exhibit hostile or aggressive behaviours simply to vent their frustrations.

In the context of this study, the theory suggests that when users receive unwanted mobile advertisements, they become aware that advertisers are intrusively encroaching on their personal space and choices without permission. This obtrusive communication can make the consumer feel a sense of powerlessness, which in turn motivates them to regain control. As a result, users may engage in behaviours like muting an ad or closing it immediately, thereby directly restoring their control over their mobile experience. The relevance of this theory is its ability to provide a robust framework for understanding and explaining the behavioural reactions of smartphone users when they are exposed to unsolicited advertisements on their mobile apps.

Methodology

The investigation adopted a descriptive survey research design. The motivation for using this approach was to create an accurate and recognisable representation of the people who would be part of the sample. As a result, survey is considered the best tool for doing research because they allow for the gathering of respondents' viewpoints and ideas regarding the subject under investigation (Etumnu & Ndukwu, 2025). Due to the unavailability of data on the specific population of smartphone users in Southeast Nigeria, the researchers employed a simple random procedure to select 385 respondents for the study. Therefore, the researchers made use of the 385 respondents as the sample size because the figure can be managed. The respondents for this study were chosen using the respondent-driven sampling (RDS) chain referral technique. Because it permitted the researchers to include only those necessary for the study. The researchers conducted the RDS procedure by sampling earlier participants, referred to as ‘seeds’, who possessed the desired characteristics. The seeds for this study were smartphone users residing in each of the Southeastern states. The seeds were selected with a snowball technique from the researchers’ social networks. The first seeds found using the snowball technique contacted other smartphone users in their social network by referral. Progressively, successive sets of participants were then recruited smartphone users from their social networks for participation using the snowball technique. This exercise continued until the researchers gathered the required number (N = 385) of respondents between September and October, 2024. A self-created survey was employed as the data collection tool. The questionnaire consists of 16 items and is formatted in both dichotomous and Likert scale formats, utilising a 4-point scale (1-4). Therefore, the benchmark set for the decision was 2.5. If the result is 2.5 or above, the decision is to accept, and if the result is 2.4 or below, the decision is to reject. This was the basis upon which decisions were made. Some of the developed questions on perception were “The ads are irritating and annoying, I see it as disturbance” “Trying to force products or/and services on phone users” Then for reaction, the questions were “When I see the advertisement I quickly turn off the volume” “Once I see it I delete it or close my app” The researchers were able to rephrase the instrument to remove grammatical

flaws and ambiguity after it was face validated by communication specialists and corrected accordingly. Within six (6) weeks, the questionnaire was disseminated as a data gathering tool via links published on WhatsApp statuses, groups, direct messages, and respondents' Facebook handles. Within this time frame, replies began to flow after persistent persuading. The researchers employed descriptive statistics to analyse the data.

Results

This section focuses on data presentation and analysis. Out of the 385 sample size, we received 371 responses from respondents within the data collection window period. The response rate stood at 371(96%) with a shortfall of 14(4%). The analysis was conducted with 371 responses from the respondents, instead of the 385 initially expected. The data showed that among the respondents used in the study, there were more males than females, as males amounted to 75%. The findings also showed that a higher proportion of respondents were aged 28-32 years. Regarding the educational attainment of respondents in the study, there were more HND/BA/BSc holders. Holders at 69%. The responses received revealed that the study had a higher proportion of self-employed respondents.

Table 1: Respondents' views on whether they have a smartphone

Items	Frequency	Percentage
Yes	371	100%
No	-	-
Can't say	-	-
Total	**371**	**100**

The data presented in Table 1 above revealed that 100% of respondents confirmed owning a smartphone. By implication, this finding suggests that all respondents own smartphones.

Table 2: Respondents' views on whether they see advertisements when they open their mobile apps like Whatsapp Status saver, Collage Maker picture editor, Naija Whot, WPS Office, Music Player

Items	Frequency	Percentage
Yes	371	100%
No	-	-
Can't say	-	-
Total	**371**	**100**

The data presented in Table 2 above revealed that 100% of respondents confirmed seeing advertisements when they open their mobile apps, including WhatsApp Status Saver, Collage Maker picture editor, Naija Whot, WPS Office, and Music Player. This means that all respondents indicated they see advertisements when they open their mobile apps.

Table 3: Respondents' views on the extent they see these advertisements on their mobile apps when they open them.

Items	Frequency	Percentage
Very high extent	178	48%
High extent	130	35%

Moderate	48	13%
Low extent	15	4%
Total	**371**	**100**

Analysis of data from the above table 3 48% of the respondents confirmed that to a very large extent they see advertisements on their mobile apps when they open it. By implication, it means that to a very high extent, respondents indicated that they see advertisements on their mobile apps when they open them.

Table 4: Respondents' responses on the perception of smartphone users in Southeast Nigeria to unsolicited advertisements in select mobile apps

S/N	Item Statement	$\bar{X}$	Std. Dev.	Decision
1.	The ads are irritating and annoying, I see it as a disturbance	3.0	.89	Accept
2.	Excessive display of advertisements	3.2	.89	Accept
3.	Absence of permission before playing	3.2	.81	Accept
4.	Trying to force products or/and services on phone users	3.0	.90	Accept
	Grand mean and standard deviation	**3.1**	**0.87**	

The results, as presented in Table 4 above, indicate that respondents agreed with all items on the table, with a mean range of 3.0 to 3.2. The grand mean rating in Table 4 is 3.1, which is agreeable and implies that the highlighted items on the table represent the perception of smartphone users in Southeast Nigeria regarding unsolicited advertisements in select mobile apps. The standard deviation ranged from 0.81 to 0.90, indicating that the respondents were not far from each other in their responses regarding their perceptions of smartphone users in Southeast Nigeria and unsolicited advertisements in select mobile apps.

Table 5: Respondents' responses on how smartphone users in Southeast Nigeria react to unsolicited advertisements in select mobile apps

S/N	Item Statement	$\bar{X}$	Std. Dev.	Decision
1.	When I see the advertisement, I quickly turn off the volume	2.9	.88	Accept
2.	Once I see it I delete it or close my app	3.2	.88	Accept
3.	I usually turn off my data so the advertisement will stop playing	3.1	.83	Accept
4.	If I can't do anything about it, I ignore the advertisement	3.1	.90	Accept
	Grand mean and standard deviation	**3.0**	**0.87**	

The results in Table 5 above indicate that respondents agreed with all items, with a mean range of 2.9 to 3.2. The grand mean rating in Table 5 is 3.0, which is agreeable and suggests that the highlighted items are among the ways smartphone users in Southeast Nigeria respond to unsolicited advertisements in select mobile apps. The standard deviation ranged from 0.83 to 0.90, indicating that the respondents were not far from each other in their responses regarding how smartphone users in Southeast Nigeria react to unsolicited advertisements in select mobile apps.

Discussion of Findings

The results showed that, on average, 74% of respondents are exposed to unsolicited advertisements to a very large extent in select mobile apps. This could perhaps be attributed to the aggressiveness advertisers used to reach as many prospective customers as possible. Their motivating factor can be linked to the huge number of people who have smartphones. Because they may believe that once you have a smartphone, the tendency to see their advertisements will be there. The result aligns with research by Joo et al. (2021), which found that participants reported a high awareness level of the mHealth app's intrusive advertisements. In their study, Murillo-Zegarra et al. (2020) also noted that mobile advertising allows users to view advertisements at their convenience. Customers have three options when they get mobile advertising messages: read them, delete them, or do nothing with them. Based on this finding, the truth is that smartphone users are likely to continue seeing unsolicited advertisements unless restrictions are implemented.

The results of the data analysis showed that, at a mean of 3.1 (N = 371), respondents expressed a negative perception, as shown in Table 4. The items raised for the research question were intended to ascertain the perception of smartphone users regarding unsolicited advertisements in select mobile apps. Their agreement to the items implies that they do not have a good perception regarding the unsolicited advertisements in the mobile apps used in this study. Their perception could be attributed to the way advertisers approach advertisements on these mobile apps. This finding aligns with that of Oladipo and Temitayo (2017), who revealed that the majority of the respondents they studied do not find unsolicited mobile advertisements very appealing and that the appeals of these advertisements are unproductive. Concurrently, research by Hammami and Sahli (2023) found that people's attitudes towards ads are negatively affected by mobile ads, and that consumers whose consent was not sought after show a decline in their propensity to purchase after being exposed to such ads. Also in consonance with this is the study by Anyasor (2018), which found that unsolicited SMS messages are deceptive and lack permission control. In line with the theory this study was anchored on, smartphone users who have a negative perception of unsolicited advertisements will always act in a negative way towards the advertisement, in order to show that the advertisement cannot take away their freedom of choice.

The results showed that, at a mean of 3.0 (N = 371), respondents agreed with all the items in Table 5, indicating how they react to unsolicited advertisements in select mobile apps. The finding clearly shows that smartphone users in Southeastern Nigeria are repulsed by their reaction towards unsolicited advertisements in select mobile apps. Perhaps this is not unrelated to the way and manner they do it, showing a high level of desperation in order to influence smartphone users towards the advertised products and/or services. This result is consistent with that of Alwreikat and Rjoub (2020), who found that wearout of mobile advertisements is a significant predictor of higher felt intrusiveness and annoyance among consumers. Higher levels of customer loyalty and lower levels of consumer involvement are the outcomes of intrusiveness. Additionally, the study of Hammami and Sahli (2023) supports the conclusion that people's views of advertisements are negatively impacted by mobile advertising. Customers' buying intent declines when they receive mobile advertising without their consent. Anyasor (2018) found that a greater percentage of the respondents studied showed unfavourable disposition to unsolicited SMS advertisements because they irritate audiences. This finding aligns with the theoretical postulation of the psychological reactance theory on which this study was framed.

Conclusion and Recommendations

Based on the findings, it is therefore concluded that smartphone users in southeast Nigeria are primarily exposed to unsolicited advertisements on mobile apps. A significant number of people likely have smartphones that support these apps. Additionally, their excessive exposure to these unsolicited advertisements has led to a negative perception, which in turn has contributed to the reactions smartphone users in southeast Nigeria have to unsolicited advertisements on mobile apps. This study will be of immense benefit to advertisers, as it will provide them with valuable insights into how people react to their advertisements, particularly on mobile apps. The insights will serve as a guide in helping them plan their advertising strategy and campaigns. The information in the study will benefit policymakers because it will provide them with insight into how people feel about incessant unsolicited advertisements. Such a discovery will inform their policy-making process and guide advertising practices. Additionally, this study will make a significant contribution to the literature on advertising studies in Nigeria and serve as a valuable reference for researchers interested in investigating unsolicited advertisements. A limitation of this study was the researchers' inability to obtain the number of smartphone users in Southeast Nigeria, as there was no available data on the number of smartphone users in this region. However, the researchers employed a simple random procedure to determine the number of respondents required for the study, which may not accurately reflect the actual number of smartphone users in Southeast Nigeria, given the method used in the study. In accordance with the results, the study has the following recommendations:

1. Smart phone users who are irritated by the excessive exposure to unsolicited advertisements should get ad blockers on mobile phones, if possible, to restrict excessive exposure to these unsolicited advertisements.
2. Advertisers should liaise with app developers to design their advertisement in these apps in a way that seeks the permission of smartphone users before it can play. Additionally, app developers should provide clearer opt-in/opt-out settings for advertisements within their apps to counteract unsolicited ads.
3. Regulators of advertisement should check the ways advertisers advertise their products and services on some of the mobile app platforms so that they do not intrude into smartphone users’ privacy or, in some cases, mislead them.

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