

The Research of How Perceived Ads Intrusiveness of Newsfeed Ads Affects Advertising Avoidance Behavior

Yuxiao Chen *

Department of Communication, Tongji University, Shanghai, China

* Corresponding Author Email: wht19881203@tzc.edu.cn

Abstract. This study surveyed 266 RED users and analyzed the data to explore advertising avoidance behavior on this platform. It focused on examining how the perceived ads intrusiveness of newsfeed ads indirectly influences user advertising avoidance behavior through psychological reactance. The research results show that although the direct positive correlation between users' perceived ad intrusiveness and advertising avoidance behavior is not significant, perceived intrusiveness influences users' anger and negative cognition. These mediating variables, indirectly drive advertising avoidance behavior, with negative cognition playing a more important role in promoting ad avoidance than anger.

Keywords: Advertising Avoidance, Perceived Ads Intrusiveness, Newsfeed Ads, Psychological Reactance.

1. Introduction

In the research of traditional media, advertising avoidance has been extensively studied. However, researchers have gradually shifted their focus toward advertising avoidance in online advertising [1-4].

Newsfeed ads refer to personalized advertisements displayed on social media platforms, tailored to users' preferences and characteristics, and seamlessly integrated into their newsfeeds [5]. Newsfeed ads first appeared on Facebook in 2006 and were later adopted by platforms such as Twitter, Instagram, Vine, and Chinese social media platforms like Weibo and RED. Current research shows that the consumers' perceived intrusiveness will be decreased under the influence of personalization and informativeness of advertisement, thereby influencing their advertising avoidance behavior. However, excessive personalization may raise privacy concerns [6]. As a type of personalized advertising, newsfeed ads are often intertwined with users' status updates and change based on the content they post and browse [7]. These ads exhibit both strong personalization and a high degree of customization and informativeness. Therefore, conducting empirical research with newsfeed ads as the subject is meaningful and worthwhile.

Current research on advertising avoidance in newsfeed ads mostly focuses on them on Facebook, the founding platform [5], but in fact, newsfeed ads are also being more and more widely used in other software and social platforms, such as the Chinese social media 'RED'. Therefore, studying users' ad avoidance behavior on the RED platform in the Chinese context can provide a new research perspective and enrich the research samples in related fields. Meanwhile, psychological resistance is frequently identified as a key variable in current advertising avoidance research [8, 9, 10]. Consequently, it is appropriate for this study to adopt the psychological resistance theory as a mediator variable in this research.

2. Literature Review

2.1. Psychological Reactance

It states that individuals aim to maintain their freedom of action in psychological reactance theory [11]. Consequently, when people think external information reduces their freedom to make their own choices, they may experience negative cognition or angry feelings, entering a state called

psychological reactance [12]. Since 1966, this theory has been widely used in the research of communication, social psychology, and marketing. Advertising, as a persuasive medium, often triggers psychological reactance, making its study in advertising avoidance crucial.

With the development of psychological reactance within the field of communication, two key dimensions for measuring psychological reactance have been proposed: anger and negative cognition [13]. Many scholars have conducted empirical studies on it from these two dimensions.

Anger refers to an individual's emotional response when perceiving a threat to their freedom, characterized by frustration, annoyance, and resentment toward the source of the threat [12]. Some argue that as the message receiver's sense of the threat to freedom increases, emotional responses of anger become more sensitive to persuasive information than negative cognition [14].

Negative cognition refers to the cognitive processes and thoughts experienced by individuals when perceiving a threat to their freedom, including resistance, defiance, and opposition to persuasive messages [12]. Research shows that negative cognition emerges when individuals question the content of the information, leading to debates, criticisms, or doubts regarding information that threatens their freedom [13].

The researches above show that media studies measure psychological reactance via negative cognition and anger. This study will analyze these two elements' mediating role between ad intrusiveness and avoidance behavior.

2.2. Perceived Ads Intrusiveness

Intrusiveness is a perceived psychological outcome that arises when an audience's cognitive process is interrupted. Therefore, by definition, advertisements within television programs or media content are not inherently invasive; they are only considered invasive when they disrupt or interrupt the audience's goals on a perceptual level [15]. In this study, perceived ad intrusiveness refers to the discomfort or disruption experienced by viewers when newsfeed advertisements interrupt their cognitive processes while browsing social network content.

Previous research on perceived ad intrusiveness has primarily focused on advertisements from traditional media platforms, such as magazine and television ads. However, as times have changed, research has gradually shifted toward online advertising, including pop-up ads, banner ads, video ads, and information stream ads originating from Facebook [1, 16]. While perceived intrusiveness varies from different forms of advertising, the degree to which they infringe on consumer privacy or interrupt viewing varies, resulting in differing perceptions of Intrusiveness across advertising formats [4].

Perceived ad intrusiveness is an important predictor of advertising avoidance behavior. Studies have shown that when users feel advertisements are overly intrusive, they are more likely to make advertising avoidance behaviors, such as skipping ads, or even leaving the website altogether [15, 17]. Internet users tend to avoid advertising content primarily due to perceived advertising disruption, clutter, and past negative experiences [1]. Advertising intrusiveness is linked to a series of emotional and cognitive elements that are linked to advertising avoidance [7].

2.3. Advertising Avoidance on the Internet

Advertising avoidance is an action applied by consumers to avoid advertisements and reduce their interaction with advertising content [17]. Research on advertising avoidance is considered a subsidiary study of advertising effectiveness, involving considered decisions or habitual responses [4].

Current studies categorize consumer advertising avoidance strategies into three levels: behavioral, cognitive, and emotional [18]. Factors such as the amount of information in advertisements, the degree of personalization, the level of interest, and the perceived risks can influence consumers' advertising avoidance behaviors, serving as moderators to some extent [16, 19, 20].

In this study, advertising avoidance primarily refers to the behavioral level of users' avoidance, with a focus on newsfeed ads on RED. Therefore, the dependent variable in this research can be defined as the ad avoidance behaviors used by users when faced with newsfeed ads on the internet.

Existing research explores the relationship between the two dimensions of psychological reactance and audience attitudes and behaviors. For instance, Dillard and Shen (2005) suggest that negative cognition and anger associated with psychological reactance mediate the influence of perceived threats to freedom on audience attitudes [13]. Luo et al. (2022) argue that anger emotions and negative cognition can not only mediate the impact of perceived intrusiveness on advertising avoidance but can also play a chain mediation role in this process [21]. From this, it can be inferred that the two dimensions of psychological reactance—anger and negative cognition—can influence consumers during the reception of advertising information, triggering advertising avoidance behaviors.

3. Methodology

3.1. Questionnaire

The main method conducted in this study is a questionnaire survey. Using stratified random sampling based on gender and age ratios from the RED platform, participants will be randomly selected for the questionnaire. The survey will be created on an online platform—Wenjuanxing—and the link will be distributed through social media channels, primarily focusing on RED, as well as Weibo and WeChat Moments for recruitment.

The questionnaire will include a simple illustration of the study and participation instructions, outlining the research purpose, explanations of any technical terms, and assurances of data privacy.

3.1.1. Perceived Ads Intrusiveness

Perceived ad intrusiveness was measured by using 5 items adapted from the scales by Li et al. (2002) and Youn and Shin (2019). Participants read the prompt, "When I see ads in my RED newsfeed, I think it is...", and evaluated the following items from 1 (strongly disagree) to 5 (strongly agree): (a) Distracting; (b) Forced; (c) Disturbing; (d) Intrusive; (e) Interfering. The scores for these items will be averaged to create a composite index, with higher scores indicating a greater perception of advertising intrusiveness.

3.1.2. Anger

Anger was measured on 4 dimensions adapted from the scales by Wang et al. (2022) and Dillard and Shen (2005). Participants read the prompt, "I feel that the newsfeed ads on RED make me...", and evaluated the following items from 1 (strongly disagree) to 5 (strongly agree): (a) Irritated; (b) Angry; (c) Annoyed; (d) Aggressive. The scores for these items will be averaged to create a composite index, with higher scores indicating stronger feelings of anger.

3.1.3. Negative Cognition

The scale of negative cognition was adapted to the scale by Luo et al. (2002). Participants evaluated the following items from 1 (strongly disagree) to 5 (strongly agree): (a) I disagree with the information in the newsfeed ads on RED; (b) I do not comply with the advocacy of the newsfeed ads on RED; (c) I do not trust the information in the newsfeed ads on RED; (d) I try to resist the influence of the newsfeed ads on RED. The scores for these items will be averaged to create a composite index, with higher scores indicating stronger negative cognition.

3.1.4. Advertising Avoidance Behavior

The scale of advertising avoidance behavior was adapted from the scales by Cho and Cheon (2004), Youn and Shin (2019), and Li et al. (2023). Participants evaluated the following items from 1 (strongly disagree) to 5 (strongly agree): (a) I scroll down the screen to avoid newsfeed ads; (b) I do any action to avoid newsfeed ads on the screen; (c) I delete the newsfeed ads if possible; (d) I block the newsfeed ads if possible; (e) I click away from a post if it displays ads without other contents; (f)

I intentionally do not click on any newsfeed ads on RED, even if the ads draw my attention. The scores for these items will be averaged to create a composite index, with higher scores indicating stronger advertising avoidance behavior.

3.2. Participants

A total of 317 questionnaires were distributed in this study, out of which the total number of usable samples was 266. Table 1 provides information on the demographic characteristics of the respondents is summarized in table 1.

Table 1. Demographic characteristics.

Items	Categories	N	Percent (%)
Gender	Male	72	27.07
	Female	194	72.93
	Below 18	4	1.50
Age	18~25	90	33.83
	26~30	102	38.35
	31~40	49	18.42
	41~50	12	4.51
	51~60	8	3.01
	Over 60	1	0.38
Total		266	100.0

In terms of the length of daily use, 16.5 percent of the total number of respondents (n=266) indicated that they used RED for a period of no more than one hour. 54.5 percent of respondents used RED for a period of one to two hours, 27 percent used it for a period of three to five hours, and 2 percent of respondents used it for five hours or more.

4. Result

4.1. Reliability and Validity

In this study, the SPSSAU online platform was employed to test the reliability and validity. As illustrated in Table 2, Cronbach's α values for all variables exceed 0.7, indicating that the scale employed in this study exhibits satisfactory reliability. The scales employed in this study are based on well-established scales from previous research, with modifications made to apply them to the specific research items and objectives of this study. They demonstrate good validity is summarized in table 2.

Table 2. The summary of reliability and validity

Variables	Items	Cronbach's α
Perceived Ads Intrusiveness	5	0.765
Anger	4	0.775
Negative Cognition	4	0.727
Advertising Avoidance Behavior	6	0.816

4.2. Path Verification

As demonstrated in Table 3, the results of the path verification indicated that perceived ad intrusiveness had a notable positive impact on both anger and negative cognition. However, the direct effect on advertising avoidance behavior was not statistically significant. The result can be analyzed in the following ways:

Perceived ad intrusiveness significantly affects anger. The standardized path coefficient was 0.696 ($z = 15.798$, $p < 0.01$), which implies that when users perceive ads to be more intrusive, anger is

significantly increased. This result suggests that the sense of intrusiveness and discomfort caused by advertisements to users triggers strong emotional responses, further supporting the idea that intrusive advertisements tend to stimulate negative emotions.

Meanwhile, perceived ad intrusiveness has a significant effect on the formation of negative cognition. The standardized path coefficient is 0.725 ($z = 17.149$, $p < 0.01$), indicating that users are prone to negative cognition such as distrust and resistance when ads are too intrusive. Excessive personalization and compulsion of advertisements increase users' questioning of their authenticity and purpose, thus deepening negative cognition.

The impact of anger on advertising avoidance behavior was also notable. The standardized path coefficient was 0.181 ($z = 3.580$, $p < 0.01$), indicating that users were more likely to engage in advertising avoidance behavior after experiencing anger emotions. As a highly activated negative emotion, anger motivates users to actively avoid continued contact with intrusive advertisements.

On the other hand, Negative cognition had the most significant effect on advertising avoidance behavior, with a standardized path coefficient of 0.644 ($z = 12.226$, $p < 0.01$). This result shows that users' negative cognition is an important driver of advertising avoidance. Advertising avoidance behavior becomes significantly increased when users exhibit suspicion, resentment, or even resistance to the content of the advertisements. This reflects the important role of negative cognition in the formation of advertising avoidance behavior.

Nevertheless, it is notable that the direct impact of perceived ad intrusiveness on advertising avoidance behavior is not statistically significant ($z = 1.050$, $p = 0.294 > 0.05$). This indicates that perceived ad intrusiveness does not directly result in users avoiding ads. Although intrusive advertisements can trigger user dissatisfaction, the intrusiveness of the advertisement alone may not be enough to drive users to take immediate avoidance action. This suggests that other factors may play a more important role in ad avoidance behavior.

In conclusion, the results suggest that although perceived ad intrusiveness does not directly influence advertising avoidance behavior, it does indirectly contribute to advertising avoidance through the mediating effects of anger and negative cognition. This finding emphasizes the important mediating role of psychological resistance in advertising avoidance behavior, with negative cognition exerting a particularly pronounced influence is summarized in table 3.

Table 3. The result of path verification.

X	→	Y	Unstandardized path coefficient	SE	z (CR)	p	Standardized path coefficient
Perceived Ads Intrusiveness	→	Anger	0.803	0.051	15.798	0.000	0.696
Perceived Ads Intrusiveness	→	Negative Cognition	0.723	0.042	17.149	0.000	0.725
Anger	→	Advertising Avoidance Behavior	0.149	0.042	3.580	0.000	0.181
Negative Cognition	→	Advertising Avoidance Behavior	0.613	0.050	12.226	0.000	0.644
Perceived Ads Intrusiveness	→	Advertising Avoidance Behavior	0.063	0.060	1.050	0.294	0.067

Notes: → denotes path influence relationships

5. Discussion

The findings of this study highlight the central role of negative cognition in advertising avoidance behavior. Negative cognition is a stronger predictor of advertising avoidance behavior than anger, suggesting that consumers' internal negative evaluations and cognitive biases are key factors driving them to take avoidance action when confronted with intrusive advertisements. Although previous studies have shown that anger is more sensitive to persuasive messages than negative cognition when

the perceived threat to freedom increases [14], the present study arrives at a different finding than past studies. One potential explanation for this is that the high degree of personalization and integration of the ads with the newsfeed on RED attenuates users' intense immediate emotional responses to the advertisements, but the negative cognition remains largely unaffected.

The present study also found that perceived ad intrusiveness, although positively related, did not have a significant direct effect on advertising avoidance behavior. This further demonstrates the important mediating role of anger and negative cognition, i.e., psychological resistance, in advertising avoidance behavior. This finding challenges the traditional direct-action model in advertising effectiveness research and highlights the non-negligible nature of psychological processes in the assessment of advertising effectiveness.

At the same time, as an empirical study conducted entirely on Chinese local social software, this study is also valuable in enriching the research sample. The newsfeed advertisements on RED, as an emerging form of advertising, have user perceptions, emotional responses, and behavioral patterns that differ from those observed on Western social platforms. By focusing on RED, this research revealed the distinctive interaction mechanism of users to the perceived ads' intrusiveness in specific cultural contexts, providing a new perspective for cross-cultural advertising effectiveness research.

The above theoretical findings can work at the practical level and provide insights for Internet advertisers. When designing newsfeed advertisements on social media platforms, advertisers should care more about the reasonableness and acceptability of the advertisement, avoiding the use of information that may cause consumers to be disgusted or misunderstood, to reduce the formation of negative cognition, and thus relieve the advertisement avoidance behavior of users.

Moreover, when designing advertising strategies, advertisers should pay more attention to the emotional experiences of consumers, particularly the potential triggers of anger. Although this study shows that the direct impact of anger on advertising avoidance behavior is weaker than that of negative cognition, the accumulation of anger might still lead to long-term negative impressions of the brand. Thus, it is recommended that advertisers should strive to foster a positive and friendly advertising environment by reducing ad intrusiveness and avoiding using elements that are irritating to users, such as sudden pop-up advertisements or promotions unrelated to the content. This approach can help reduce the psychological reactance of users and ultimately reduce advertising avoidance behaviors.

In the context of the Internet, the implementation of personalized advertising strategies significantly enhanced and will continuously increase the user experience and improve the effectiveness of advertising. The big data analytics on the RED platform show a high level of technological sophistication in Chinese social media. Furthermore, the newsfeed advertisements presented on the platform exhibit certain personalized features, with less intrusive advertisements compared to other Chinese social media platforms. Advertisers are in a position to further leverage big data and AI technologies to accurately analyze users' interests and behavioral patterns, thereby enabling the provision of customized advertising content for different user groups. However, the over-high level of personalization may lead to users feeling that their privacy is threatened, thereby increasing the perceived ad intrusiveness [6] and then influencing ad avoidance behavior. Therefore, advertisers should learn to balance the relationship between the utilization of big data technology, the personalization of advertisements, and the protection of user privacy to minimize the psychological resistance of users.

6. Conclusion

The main question of this study is how the perceived ads intrusiveness of newsfeed ads on the RED platform indirectly affects users' advertising avoidance behaviors through the two psychological mechanisms of anger and negative cognition. Through the questionnaire survey and data analysis, the results were obtained, namely, that the two dimensions of psychological resistance, anger, and

negative cognition, play a mediating role between perceived ad intrusiveness and users' advertising avoidance behaviors. The mediating role of negative cognition is more significant.

This finding not only enhances the theoretical framework and research sample of advertising research but also provides practical guidance for advertisers to improve their advertising strategies and reduce negative consumer reactions. The limitation of this study is that cross-cultural research should be added to the sample size. Furthermore, the researchers lacked experience in quantitative research, which resulted in insufficiently thorough and logical data processing and analysis. The research in the future should pay more attention to cross-cultural comparisons, providing a global perspective for advertising avoidance research and reference and assistance to advertisers in developing more culturally relevant advertising strategies.

References

- [1] Cho, C.H., Cheon, H.J., {2004}. Why do people avoid advertising on the Internet? *Journal of Advertising*, 33 (4), 89-97.
- [2] Ha, L. & McCann, K. (2008). An integrated model of advertising clutter in offline and online media. *International Journal of Advertising: The Review of Marketing Communications*, 27(4), 569-592.
- [3] Kelly, L., Kerr, G. and Drennan, J. (2010). Avoidance of Advertising in Social Networking Sites. *Journal of Interactive Advertising*, 10(2), pp.16-27.
- [4] Baek, T. and Morimoto, M. (2012). Stay Away from Me. *Journal of Advertising*, 41(1), pp.59-76.
- [5] Youn, S., & Shin, W. (2019). Teens' responses to Facebook newsfeed advertising: The effects of cognitive appraisal and social influence on privacy concerns and coping strategies. *Telematics Informatics*, 38, 30-45.
- [6] Tucker, C. E. Social networks, personalized advertising, and privacy controls[J]. *Journal of Marketing Research*, 2014, 51(5).
- [7] Li, X., Liu, Z., Chen, Y., & Ren, A. (2023). Consumer avoidance toward message stream advertising on mobile social media: a stimulus-organism-response perspective. *Information Technology & People*.
- [8] Bleier, A., & Eisenbeiss, M. (2015). The Importance of Trust for Personalized Online Advertising. *Journal of Retailing*, 91(3), 390–409. doi: 10.1016/j.jretai.2015.04.001.
- [9] Edwards, S. M., Li, H., & Lee, J. H. (2002). Forced Exposure and Psychological Reactance: Antecedents and Consequences of the Perceived Intrusiveness of Pop-Up Ads. *Journal of Advertising*, 31(3), 83–95. <https://doi.org/10.1080/00913367.2002.10673678>.
- [10] Chen, Q., Feng, Y., Liu, L., & Tian, X. (2019). Understanding consumers' reactance of online personalized advertising: a new scheme of rational choice from a perspective of negative effects. *International Journal of Information Management*, 44(FEB.), 53-64.
- [11] Rosenberg, B. D., & Siegel, J. T. (2018). A 50-year review of psychological reactance theory: Do not read this article. *Motivation Science*, 4(4), 281–300. <https://doi.org/10.1037/mot0000091>.
- [12] Steindl, C., Jonas, E., Sittenthaler, S., Traut-Mattausch, E., & Greenberg, J. (2015). Understanding Psychological Reactance: New Developments and Findings. *Zeitschrift fur Psychologie*, 223(4), 205–214. <https://doi.org/10.1027/2151-26>
- [13] Dillard, J. P., & Shen, L. (2005). On the Nature of Reactance and its Role in Persuasive Health Communication. *Communication Monographs*, 72(2), 144–168. <https://doi.org/10.1080/03637750500111815>
- [14] Rains, S. A. (2013). The nature of psychological reactance revisited: A meta-analytic review. *Human Communication Research*, 39(1), 47-73.
- [15] Li, H., Edwards, S. M., & Lee, J. H. (2002). Measuring the Intrusiveness of Advertisements: Scale Development and Validation. *Journal of Advertising*, 31(2), 37–47. <https://doi.org/10.1080/00913367.2002.10673665>
- [16] Goodrich, K., Schiller, S.Z., & Galletta, D.F. (2015). Consumer Reactions to Intrusiveness of Online-Video Advertisements. *Journal of Advertising Research*, 55, 37 - 50.

- [17] Speck, P.S. and Elliott, M.T. (1997), "Predictors of advertising avoidance in print and broadcast media", *Journal of Advertising*, Vol. 26 No. 3, pp. 61-76.
- [18] Cho, C.H., Cheon, H.J., (2000). Why do people avoid advertising on the Internet? *Journal of Advertising*. 33 (4), 89-97.
- [19] Ducoffe, R.H. (1995). How Consumers Assess the Value of Advertising. *Journal of current issues and research in advertising*, 17, 1-18.
- [20] Pasadeos, Y. (1990). Perceived Informativeness of and Irritation with Local Advertising. *Journalism Quarterly*, 67(1), 35-39. <https://doi.org/10.1177/107769909006700107>
- [21] Luo, J., Fan, T.R., Miao, M. (2022). A Study of the Mechanisms of Personalised Social Media Advertising on Consumer Ad Avoidance. *Journal of Information Systems*, 16(1):62-80.