

Personality and Psychological Predictors of Instagram Personalized Ad Avoidance

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ABSTRACT

The purpose of this paper is to apply the meta-theoretical model of motivation and personality (3M) of Mowen to study consumers' ad avoidance in the context of online personalized advertisements on Instagram. The current study developed a theoretical framework that links personality traits with reactance arousal and ad avoidance behaviours. Based on the data analysis, it was found that consumers with higher general self-efficacy tend to have more reactance arousal (situational level trait) compared to ad irritation, ad skepticism (surface traits), and ad avoidance behaviours towards personalized advertising on Instagram. The findings will help advertisers and marketers in segmenting the market better based on young users' efficacy levels, navigational habits, personality traits, functional motives, and demographic variables to effectively reach the targeted consumers.

KEYWORDS

3M Model, Ad Avoidance, Instagram Personalized Advertising, Personality Traits, Reactance Arousal

INTRODUCTION

The emerging digital technologies and various web applications have paved a way for the various social media sites that have intensely changed the manner that individuals communicate with each other (Ham et al., 2022; Petrescu & Korgaonkar, 2011). In the present e-tailing scenario, marketers associate various behavioral tracking software with SNS such as Instagram, YouTube, Google and Twitter SNS to design customised ads (Jamil et al., 2022; Lee et al., 2022; Jung *et al.*, 2016; Clark & Çallı, 2014; Bleier & Eisenbeiss, 2015). Online marketers are focusing on these platforms to publish their ads, because the total time spent on advertisements by adults (18+) averaging 12 hours, 9 minutes per day globally (Statista, 2020). Statista (2021) has found Instagram to be the biggest SNS with 2.8 billion active monthly users that's almost a third of the world's population. There are 340 million Instagram active users in India, which was considered to be the leading country. There are around 65 million businesses and more than seven million advertisers using Facebook Pages for promotions (Statista, 2020). Furthermore, personalized ads are often used for pulling than for persuading the customers to buy products and brands (Chen & Liu, 2022; Chung et al., 2015). As

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consumers are conscious of marketers' strategies they react or avoid ads (Fransen et al., 2015; Huo et al., 2021; Back et al., 2010; Luna Cortés et al., 2013; Malhotra et al., 2021). Where several studies implicitly assumed reactance as situation-specific towards a certain disconfirming stimulus that is not in line with their thought process.

Reactance and Ad Avoidance

Many of the reactance pieces of literature have claimed that there is a clear sign that individuals respond in different ways based on their personalities (Lee et al., 2015a; Quick et al., 2011; Dinsmore et al., 2017). Furthermore, Bleier & Eisenbeiss (2015) and Moore and Fitzsimons (2014) have suggested that the effects of personality traits, feelings, and attitude on consumer reactance. Finally, the literature have explained that ad reactance has a significant association with consumer attitudes, personality traits ad irritation (Ham et al., 2022; Akestam et al., 2017, Quick et al., 201; Wang & Zuo, 2017; Johnson, 2013). Beak & Morimoto (2012) have recommended exploring the effect of consumer reactance with ad skepticism and have stressed exploring consumers' ad irritation, skepticism and avoidance in the context of personalized advertising. Due to the advancement in technology, marketers can track the user's searching and browsing behaviour to provide more personalized ads. Many research studies on reactance implicitly assume that the concept of reactance is situation-specific and it happens in response towards specific disconfirming stimuli or an event which is not according to the individual's thought process (Sharma et al., 2022; Jinyoung et al., 2023; Fransen et al., 2015).

Personality Traits and Ad Avoidance

Characteristics and Ad Avoidance

There are very few studies on the relationship between personality characteristics and consumer behaviour. The study of femvertising and ad reactance by Akestam et al. (2017) included a proposal to look at individual personality qualities that could affect and limit consumer reactance. Additionally, there is now a huge opportunity to target potential customers with tailored advertisements thanks to a radical shift in online advertising patterns. Advertising first started off as a "one-size-fits-all strategy" (Estrada- Jiménez et al., 2017). Consumers respond to marketing approaches by "avoiding, contesting, and empowering" (Gritckevich et al., 2022; Fransen et al., 2015) in order to avoid, challenge, and empower advertising and suggestions. In their study, Akesta et al. (2017) suggested examining the specific personality qualities that might impact and restrained customer response.

Ad Irritation, Ad Skepticism, and Ad Avoidance

As a result, the role of ad irritation in this study may be taken into consideration as a study variable and surface characteristic. According to Khuhro et al. (2017), investigating and researching ad scepticism, which causes customer reaction, is advised. In addition to the prior study, Lobus (2014) suggested examining consumer hostility, perceived ad intrusion, and reactance arousal in relation to personalised advertising in an SNS setting. In their research, Beak and Morimoto (2012), Morimoto and Chang (2006), and Edwards et al. (2002) placed a strong emphasis on examining how personalised advertising affects consumers' ad annoyance, scepticism, and avoidance. The most frequent users of Instagram, Snapchat, and Instagram are found to be Millennials and Generation Z, who are more interested in The sharing of images and videos (Pradhan et al., 202; Whiting and Williams, 2013) is widespread. The present study thus sought to address these gaps in the literature using the hypotheses and suggestions from the prior research study. By completely embracing the 3M meta-theoretic model of motivation and personality created by John Mowen (2000), the current study investigated the fusion of numerous concepts such as personality characteristics, consumer reactance, and ad avoidance behaviours. In keeping with the previous research, we attempted to tie concepts like consumer reactance (reactance arousal), individual personality characteristics, and ad avoidance to Facebook tailored adverts in the current study in order to close the gaps that were identified. We provide a route model connecting

the different levels of personality characteristics and their impact on the result (avoidance of ads) and the dependent variables. The new study adds to the literature on personality and internet advertising. The domains of digital and social media marketing have undergone a significant transition, as both marketing professionals and academics have seen (Lamberton and Stephen, 2016).

LITERATURE REVIEW

Theoretical Background

Consumer Reactance in Today's Marketplace

An imaginative online platform is Instagram, a picture-sharing application that is, a social network that is built on creative visual content that keeps users occupied and can be updated quickly (Sharma et al., 2022; Voorveld et al., 2018). As an image-based social network, Instagram is an apt SNS for personalized advertising (Table 3). Marketers and advertisers are becoming increasingly interested in video-sharing and image-sharing-based advertising in social networks (Chen & Zhou, 2023; Kim et al., 2017; De Keyzer et al., 2022; Mittal et al., 2017). Users of Instagram SNS follow affiliate advertising and social advertising under the supposition that these customised ads with individuals will endorse products and post content that promotes products. Consumers react when they believe that various marketing promotions, such as loyalty programs, user-generated content, social media advertising, forced exposure of online pop-up ads and assertive ads, personalized online recommendations, and online privacy concerns, are influencing their freedom of choice and decision-making rights. Consumers react when they believe that various marketing promotions, such as loyalty programs, user-generated content, social media advertising, forced exposure of online pop-up ads and assertive ads, personalized online recommendations, and online privacy concerns, are influencing their freedom of choice and decision-making rights. (Bertini & Aydinli, 2020; Shapiro et al., 2020; Schneider, 2021; Bjørlo et al., 2021; Weber et al., 2021; Huo et al., 2020; Shoenberger et al., 2021, Malhotra et al., 2023; Rosenberg & Siegel, 2021; Kwon & Chung, 2010; Bleier & Eisenbeiss, 2015; Zemack-Rugar et al., 2017).

Hypotheses and Model Development

By taking into account the four levels of personality traits, the trait hierarchy method aids researchers in comprehending the connections between consumer personality traits and their behavioural reactions. The 3M model of motivation and personality has been put to the test by Mowen in a variety of consumer behaviour scenarios. Through the use of the time and outcome valuation model and reactance theory, Mowen (1992) investigated the idea of consumers making risky choices and their decision-making. Later, Mowen examined the notion of the hierarchical personality characteristic in a variety of scenarios, including print advertisements (Mowen et al., 2004), food goods (Mowen & Carlson, 2003), and word-of-mouth advertising (Mowen et al., 2007). Sun and Wu (2016) studied impulsive online purchasing. Personality qualities including neuroticism, extroversion, conscientiousness, and openness to experience are relevant to online Instagram personalised advertising. Inherited propensities and early learning capacities are used to explain elemental features (Bosnjak et al., 2007; Mowen & Spears, 1999).

The study looked at five characteristics, and they are according to Mowen (2000) and John & Srivastava (1999), the demand for unique ideas, inventive solutions, and creative problem-solving are all necessary components of openness to experience. When performing tasks, conscientious people are composed, methodical, organised, and effective (Mowen, 2000). According to Mowen (2000), extroversion is a tendency towards timidity or nervousness. People who are agreeable are considerate or show kindness to others (Mowen, 2000). According to John and Srivastava (1999), neuroticism is the propensity to be passionate via moodiness. In 2013, Merino-Tejedor and others have mentioned all of the personality traits and how they affect ad annoyance. The degrees of neuroticism and openness to experience have a considerable impact on avoidance attitude, according to Shoji et al. (2010). The following pieces of literature were used to frame the hypothesis because they show that,

with the exception of neuroticism, all of the elemental traits have a positive relationship with general self-efficacy (Furnham et al., 2005; Indibara, 2017; Mumford, 2000; Chen et al., 2008; Paris, 2018; Farag & Elias, 2016). Except for agreeableness, which has a significant negative relationship with ad irritation and ad avoidance, the elemental traits have a direct relationship with online ad irritation and ad avoidance, according to online advertising literature (Bauer & Greyser, 1968; Aaker & Bruzzone, 1985; Boyd & Helms, 2005). Consequently, the following hypotheses are put forth:

Hence the following hypotheses are proposed:

- H1a.** Extroversion positively influences general self-efficacy
- H1b.** Openness to experience positively influences general self-efficacy.
- H1c.** Agreeableness positively influences general self-efficacy.
- H1d.** Conscientiousness positively influences general self-efficacy.
- H1e.** Neuroticism negatively influences general self-efficacy.

The general self-efficacy used in the current study, which was taken from Mowen's (2000) work, is seen as a compound-level attribute that affects how consumers respond to Facebook personalised advertising. Self-efficacy is often investigated as a task-specific concept, according to Sherer et al. (1982) (Ebstrup et al., 2011). In the review of, generic self-efficacy was looked at as a situation-specific construct by Britner & Pajares (2006). In their studies of the relationship between effectiveness and reactance, Quick & Bates (2010) and Hoyt (2005) discovered that the stronger the efficacy, the greater the reactance to the stimuli. The psychological reactance hypothesis has also been expanded by Smith et al. (2016) and Miller et al. (2007), who looked at communication style and reactance as factors and discovered that self-efficacy has a favourable association with reactance. The broad self-efficacy compound characteristic has a strong positive correlation between situational attribute and psychological reaction Xu, 2017; Quick & Bates, 2010; Akestam et al., 2017; Merino-Tejedor et al., 2013; Akestam et al. According to Lee and Hsieh (2009), ad annoyance and ad attitude have a substantial positive association with mobile self-efficacy. According to research by Belanche et al. (2017), the respondent's effectiveness and time urgency strongly influenced different ad-skipping actions. In addition, Kandemir (2014); Liang & Xue, (2010); Silva et al., (2014), neuroticism and self-efficacy show a substantial positive association with avoidance. Consequently, the following hypotheses are put forth:

- H2.** General self-efficacy positively influences reactance arousal.

Despite the possibility that consumers will become saturated and distanced from the brand due to overexposure, businesses are posting and advertising on SNS more frequently (Ramadan, 2017). Typically, Due to the annoyance that advertisements cause, consumers attempt to avoid all forms of advertising (Niu et al., 2021). This reasoning is consistent with the advertising avoidance theory (Knittel et al., 2016), which claims that when customers are irritated, they avoid advertising. Research from the past has indicated that ad irritation has a large negative effect on click-through intentions and viewing intentions towards personalised advertising (Martins et al., 2019), albeit the extent of the impact varies depending on the advertising channel employed. According to a widely held belief, when customers are subjected to personalised advertising, they become agitated, which hurts the click-through intentions of the ads (Lee et al., 2017). It is possible to assume that the irritability effect vanishes when we use personalised digital technologies, like smartphones but consumers are exposed to customised advertising simply by using smartphones, which results to an advertising wear-out effect (Alwreikat & Rjoub, 2020), making them perceive equal irritability and negatively affecting ad avoidance (Lee et al., 2017). Consumers will, however, typically ignore advertising if they find it irritating, especially on social media, where fun is a major component (Niu et al., 2021). According to Ducoffe (1996), advertising annoyance is a bad psychological emotion that causes consumers to

avoid advertising. According to Sun et al. (2010), irritation is a bad feeling that affects consumer behaviour and causes them to react negatively to advertising. As a result, perceived irritation is linked to advertising annoyance and scepticism, which leads to a decline in the perceived value and efficacy of advertising (Martins et al., 2019). As a result, aggravation might prevent people from having favourable opinions towards advertising (Yang et al., 2013).

H3a. General self-efficacy positively influences ad irritation.

H3b. General self-efficacy positively influences ad skepticism.

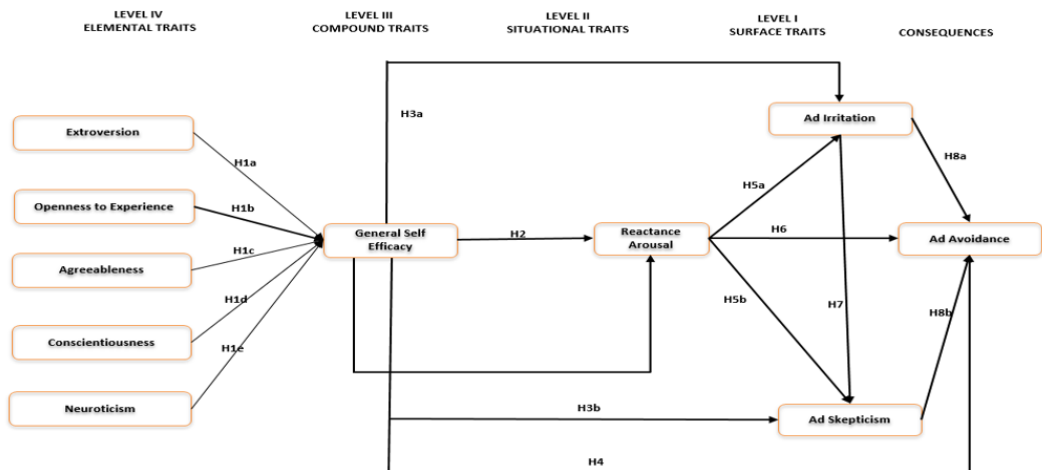
Research studies have posited that the situational level trait reactance arousal has a positive relationship with surface-level trait Ad irritation (Morimoto & Chang, 2010; Lee et al., 2015b; Edwards et al., 2002; Morimoto & Macias, 2009; Koslow, 2000). Consumers' skepticism towards ads will influence their attitude which in turn leads to negative cognitions toward the ads (Obermiller & Spangenberg, 1998; Obermiller et al., 2005; Shapiro et al., 2020). Khuhro et al. (2017) explored consumer disengagements and stressed that situational-level trait reactance arousal has a positive relationship with surface-level trait ad skepticism. Ad skepticism is positively correlated with ad avoidance, according to research by Baek & Morimoto (2012) and advertising avoidance has been classified by Benway (1998) and Cho & Cheon (2004) into three aspects, including cognitive, emotional, and behavioural avoidance. **H5a.** Reactance arousal positively influences ad irritation.

H5b. Reactance arousal positively influences ad skepticism.

H6. Reactance arousal positively influences ad avoidance.

Ad irritation is described as a negative attribute typically regarded manipulative, unpleasant, or insulting in earlier work on internet advertising. (Brehm, 1966; Aaker & Bruzzone, 1985; Bambauer-Sachse & Heinzle, 2018; Rau et al., 2013; Rosenberg & Siegel, 2021; Sandberg & Aronsson, 2017). When commercial information is inaccurate, misleading, or confusing, consumers are undoubtedly irritated. Other factors include an abundance of advertisements or when an ad appears too frequently from time to time. (Lopes & Goulart-da-Silva, 2022; Edwards et al., 2002; Khuhro et al., 2017; Seyedghorban et al., 2016). Hence the following hypotheses are proposed:

Figure 1. Conceptual framework of the study



- H7.** Ad irritation positively influences Ad skepticism.
H8a. Ad irritation positively influences Ad avoidance.
H8b. Ad scepticism positively influences Ad avoidance.

MATERIALS AND METHODS

A descriptive research methodology was used in the current study. Purposive sampling is a type of non-probability sampling approach where the subjects are selected based on their total population proportions (Hair et al., 2021). The data was collected through the self-administered survey questionnaire. The data was collected from a deemed university in Vellore City. The respondents who have an Instagram profile and who has observed or viewed personalised advertisement at least once on Instagram are the target respondents of the survey. The scales used are the Likert scales. The variables chosen for the study are openness to experience (OTE) was examined with three items, extroversion (EXT) has four measurement items, agreeableness (AGR) with three items, the measurement items of conscientiousness were four items and neuroticism (NU) was measured through the five items. Mowen (2000) has developed a General self-efficacy (GSE) scale with three items. The situational trait chosen for the study reactance arousal was measured using fourteen items, which was called Hong's Psychological Reactance Scale (Hong & Faedda, 1996) and the surface traits of the study were Ad irritation (ADIR) and Ad skepticism (ADSK). Ad irritation was measured through an eight-item scale used by Fritz (1979) and Ad scepticism was measured with a nine-item scale adopted from Obermiller and Spangenberg (1998). Finally, the outcome of the study Ad avoidance (ADAV) was examined with a 5 item scale derived from (Cho & Cheon, 2004).

DATA ANALYSIS

Sample Characteristics

The data collected through the self-administered survey questionnaire was coded into a Ms Ex-cell sheet and exported to IBM SPSS Statistics 22 software (see Table 1) to conduct descriptive analysis. However, we have sent 1000 questionnaires to the students from them we have received 938 completed questionnaires. 105 responses were eliminated due to unreliable entries. Finally, 833 questionnaires were retained for further analysis (Table 2). The sample consists of 510 (61.3%) male and 323 (38.7%) female respondents.

Structural Equation Modelling (SEM)

In light of this, the PLS-SEM technique works well for complicated models that contain a number of components (Hair et al., 2019, 2011). As a result, it is determined that the PLS-SEM technique is appropriate for the current investigation. Using Smart PLS 3 (Ringle et al., 2005) software, the variance-based structural equation modelling (VB-SEM) was carried out. For a number of reasons, the study's data analysis used a partial least squares method. Firstly, because the goal of the study is to investigate and predict theory, the PLS-SEM approach is employed suitably. Second, according to Hair et al. (2013), the PLS-SEM technique works well for complicated models that contain several components.

Evaluating the EFA and the CFA of the Proposed Conceptual Model (Model Fit and Construct Validity and Reliability), Then You MAY go for SEM

Measurement Model (Reliability and Validity Tests of Construct Measures of a Proposed Model)

Prior to doing "structural equation modelling (SEM)" (Hair et al., 2013, p. 100), it is necessary to confirm the internal consistency of the constructs selected for the investigation. Numerous statisticians and researchers have established some standards for the CR acceptable level. Advanced phases are

Table 1. Descriptive statistics table

| Variable | Description | Frequency | Per cent |
|-----------------|----------------------|-----------|----------|
| Gender | Male | 510 | 61.3 |
| | Female | 323 | 38.7 |
| Age in years | 17-20 years | 354 | 42.6 |
| | 20.1-23 years | 301 | 36.2 |
| | 23.1-25 years | 124 | 14.9 |
| | 25.1 and above years | 54 | 6.3 |
| Education Level | Undergraduate | 643 | 77.2 |
| | Postgraduate | 140 | 16.8 |
| | Research | 50 | 6.0 |
| Department | Engineering | 558 | 66.9 |
| | Science | 95 | 11.4 |
| | Management | 86 | 10.3 |
| | Commerce | 94 | 11.4 |

Table 2. The descriptive statistics of Instagram usage, from the 833 respondents

| Variable | Description | Frequency | % |
|--|---|-----------|------|
| Time spent using SNS Instagram | I don't use it daily | 223 | 26.8 |
| | Less than an hour a day | 358 | 43.0 |
| | 1-3 hours a day | 214 | 25.7 |
| | More than 3 hours a day | 38 | 4.5 |
| Reason for using Instagram SNS | Stay in touch with family, friends, and others | 454 | 54.5 |
| | Active communication tool (Messenger and events reminder) | 162 | 19.4 |
| | To stay informed about companies, celebrities, and friends | 94 | 11.2 |
| | Games and apps | 60 | 7.2 |
| | Academic usage (Creating groups for projects and coursework) | 37 | 4.6 |
| | Business usage (Advertising, promoting your brand, product, or service) | 26 | 3.1 |
| The device used to check Instagram | Smartphone | 676 | 81.2 |
| | Tablet/iPad | 95 | 11.4 |
| | PC, laptop | 62 | 7.5 |
| Do you follow any pages, campaigns on Instagram based on advertisements? | Yes | 515 | 61.8 |
| | No | 318 | 38.1 |

taken into consideration if the composite reliability (CR) score is more than 0.70 (Bagozzi and Yi, 1988). The CR and alpha values that were obtained for the current investigation all above the thresholds that (Hair et al., 2013; Nunnally and Bernstein, 1994) established as acceptable. The range of CR values is (0.882-0.933). The extroversion (Ex) construct had the lowest composite reliability (CR) score, which was 0.882, while the ad avoidance (ADAV) construct had the highest (CR=0.933). The values of Cronbach's Alpha (CA) range from (0.829- 0.925). The reactance arousal reactance

Table 3. Descriptive statistics of Instagram personalized advertising

| Variable | Description | Frequency | Percent |
|---|--|-----------|---------|
| Have you clicked on any personalised ad shown on your page and visited any website? | Yes | 356 | 42.7 |
| | No | 477 | 57.3 |
| Do you recall any Personalized ad viewed on Instagram? | Yes | 294 | 35.3 |
| | No | 539 | 64.7 |
| What is your feeling towards Instagram personalized ads over the other formats of online ads? | All the personalized ads are the same | 338 | 40.5 |
| | I prefer ads on Instagram to other forms | 116 | 14.0 |
| | All are Irritating | 194 | 23.3 |
| | The most effective ad format | 118 | 14.2 |
| | No feeling | 67 | 7.6 |
| The main reason to ignore personalized ads shown on your Instagram pages? | Irrelevant product | 208 | 24.9 |
| | No time | 331 | 39.7 |
| | Intrusive and Irritating ad | 209 | 25.2 |
| | Privacy issues | 85 | 10.2 |
| Do you like to watch personalized? ads on Instagram? | Yes | 382 | 45.9 |
| | No | 451 | 54.1 |
| After viewing an ad on Instagram how do you respond to it? | Searched about the product | 114 | 14.0 |
| | Purchase the product | 77 | 9.2 |
| | Consider the product or service | 154 | 18.4 |
| | Ignore the advertisement | 418 | 50.0 |
| | Got annoyed | 70 | 8.4 |
| Have you bought any product or service because of the personalized Instagram ad? | Yes | 163 | 20.0 |
| | No | 670 | 80.0 |
| What catches your attention while watching personalized ads | Humour | 217 | 26.0 |
| | Attention-grabbing design | 104 | 12.5 |
| | Unexpected content | 35 | 4.2 |
| | Sexual content | 170 | 20.4 |
| | Relevance to your interests | 119 | 14.4 |
| | Endorsed by celebrities | 74 | 8.8 |
| | Free promotions, coupons, discounts | 114 | 13.7 |

avoidance (RAR) construct on Facebook had the highest Cronbach Alpha value ($=0.925$) while the extroversion construct had the lowest score ($= 0.829$). Most of the constructs' indicator loadings are higher than 0.7, which denotes that each measure accounts for more than 50% of the variation in the constructs. The construct reliability, item loadings, and average variance index values for each measuring construct are displayed in Table 4.

Convergent Validity

According to Hair et al. (2013), “the extent to which a measure correlates positively with alternative measures of the same construct” is the definition of convergent validity (p. 102). According to Hair

et al. (2013), the AVE is defined as “the grand mean value of the squared loadings-of the indicators associated with the construct (i.e., the sum of the squared loadings divided by the number of indicators)” (p. 103). For the study’s variables to have convergent validity, their AVE values must be more than 0.50 (Hair et al., 2013, p.103). The range of AVE values is (0.619–0.789). The neuroticism (NU) construct had the lowest AVE value (0. 619) and the conscientiousness (CON) construct had the greatest AVE value (0. 769). Table 4 demonstrates the AVE values for measuring constructs.

Evaluation of Structural Model (Assessing Structural Model Relationships of a Proposed Model)

The structural model, also known as the inner model in PLS-SEM, must be evaluated after the measurement model, as it aids in studying the links between the constructs and the predictive power of the suggested conceptual model (Henseler et al., 2009, 2012). The path coefficients and predictive relevance (R^2 , Effect size 2, Predictive Relevance Q^2 , Relative Predictive Relevance q^2) are used to evaluate the effects. Hair et al.’s (2011) recommendations state that the tolerance value should be less than 0.20 and the VIF should be less than 5. All VIF values fall below 5, which satisfies the requirements for collinearity measurement. Statistics on collinearity from the SPSS 22 programme are displayed in Table 4.

Structural Path Coefficients

Through the use of Smart PLS software, the PLS-SEM algorithm technique was used to estimate the hypothesised path coefficients. Values for the path coefficient range from -1 to +1. According to Hair et al. (2013), a Path coefficient value near 1 indicates a significant positive association.

Evaluation of Structural Model (Assessing Structural Model Relationships of a Proposed Model)

Structural Path Coefficients

Through the use of Smart PLS software, the PLS-SEM algorithm technique was used to estimate the hypothesised path coefficients. Values for the path coefficient range from -1 to +1. Strongly positive relationships are indicated by Path coefficient values that are close to 1 (Hair et al., 2013, p. 171). 5000 bootstrap samples were employed (Table 5), and the Hair et al. (2013) “thumb rule” of no significant change was selected was followed. Ad avoidance was given an R-square (R^2) score of 0.517 ($R^2=51.7\%$) from the structural equation modelling (SEM) research. The suggested conceptual model (Figure 1) of the study has been declared to have a strong explanatory power because this value is greater than the standards established by Hair et al. (2011) and Henseler et al. (2009).

Figure 2. Conceptual model of consumer reactance towards Instagram personalised advertising

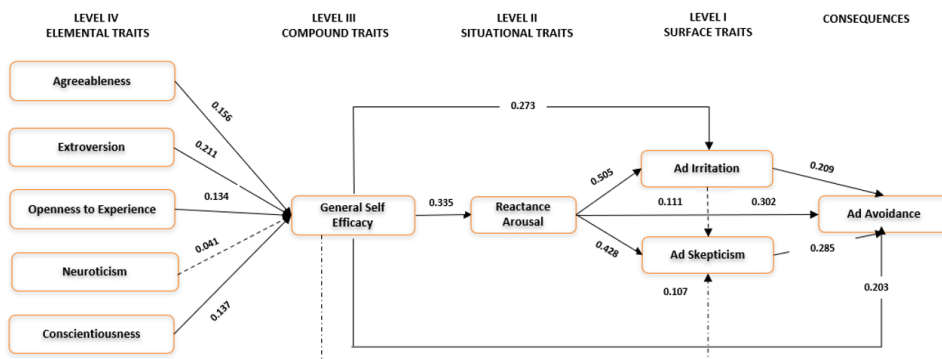


Table 4. Cross loadings, composite reliability (CR), Cronbach's alpha (CA), and average variance extracted (AVE) values

| Constructs | Indicators | Loadings | Composite Reliability (CR) | Average Variance Extracted (AVE) | Cronbach's Alpha (CA) |
|--------------------------|------------|----------|----------------------------|----------------------------------|-----------------------|
| Ad Avoidance | ADA1 | 0.829 | 0.933 | 0.724 | 0.921 |
| | ADA10 | 0.845 | | | |
| | ADA2 | 0.877 | | | |
| | ADA3 | 0.765 | | | |
| | ADA4 | 0.908 | | | |
| | ADA5 | 0.896 | | | |
| | ADA6 | 0.772 | | | |
| | ADA7 | 0.835 | | | |
| | ADA8 | 0.898 | | | |
| | ADA9 | 0.873 | | | |
| Ad Irritation | ADI1 | 0.932 | 0.929 | 0.711 | 0.920 |
| | ADI2 | 0.806 | | | |
| | ADI3 | 0.809 | | | |
| | ADI4 | 0.907 | | | |
| | ADI5 | 0.803 | | | |
| | ADI6 | 0.785 | | | |
| | ADI7 | 0.845 | | | |
| | ADI8 | 0.844 | | | |
| Ad Skepticism | ADS1 | 0.851 | 0.912 | 0.685 | 0.911 |
| | ADS2 | 0.706 | | | |
| | ADS3 | 0.781 | | | |
| | ADS4 | 0.908 | | | |
| | ADS5 | 0.762 | | | |
| | ADS6 | 0.877 | | | |
| | ADS7 | 0.863 | | | |
| | ADS8 | 0.843 | | | |
| | ADS9 | 0.836 | | | |
| Conscientiousness | CON1 | 0.848 | 0.918 | 0.789 | 0.899 |
| | CON2 | 0.909 | | | |
| | CON3 | 0.906 | | | |
| Neuroticism | NU1 | 0.905 | 0.889 | 0.619 | 0.877 |
| | NU2 | 0.827 | | | |
| | NU3 | 0.851 | | | |
| | NU4 | 0.623 | | | |
| | NU5 | 0.693 | | | |

continued on the following page

Table 4. Continued

| Constructs | Indicators | Loadings | Composite Reliability (CR) | Average Variance Extracted (AVE) | Cronbach's Alpha (CA) |
|-------------------------------|------------|----------|----------------------------|----------------------------------|-----------------------|
| Reactance Arousa | RA1 | 0.787 | 0.925 | 0.632 | 0.920 |
| | RA10 | 0.873 | | | |
| | RA11 | 0.792 | | | |
| | RA12 | 0.821 | | | |
| | RA13 | 0.889 | | | |
| | RA14 | 0.804 | | | |
| | RA2 | 0.716 | | | |
| | RA3 | 0.859 | | | |
| | RA4 | 0.715 | | | |
| | RA5 | 0.762 | | | |
| | RA6 | 0.775 | | | |
| | RA7 | 0.782 | | | |
| | RA8 | 0.727 | | | |
| | RA9 | 0.806 | | | |
| Agreeableness | AGR1 | 0.931 | 0.903 | 0.756 | 0.844 |
| | AGR2 | 0.851 | | | |
| | AGR3 | 0.823 | | | |
| Extroversion | EXT1 | 0.933 | 0.882 | 0.654 | 0.829 |
| | EXT2 | 0.781 | | | |
| | EXT3 | 0.696 | | | |
| | EXT4 | 0.806 | | | |
| General Self-Efficacy | GSE1 | 0.887 | 0.906 | 0.763 | 0.791 |
| | GSE2 | 0.846 | | | |
| | GSE3 | 0.887 | | | |
| Openness to Experience | OTE1 | 0.898 | 0.914 | 0.780 | 0.861 |
| | OTE2 | 0.802 | | | |
| | OTE3 | 0.943 | | | |

GSE will positively influence reactance arousal (RAR). The path between GSE to RAR is found to be significant ($p < 0.001$) and $t\text{-value} = 10.168$. Hence the hypothesis is supported. have a positive influence on the consequence of ad avoidance (ADAV). The path between RAR to ADAV is found to be positively significant at 99% of the $p\text{-value}$ ($p < 0.001$) and $t\text{-value} = 8.463$. Ad irritation (ADIR) will have a positive influence on ad skepticism (ADSK) towards Instagram personalized advertisements. The path between ADIR to ADSK is found to be not significant when compared to the significant level 95% ($p > 0.05$) and $t\text{-value} = 1.22$. Hence the hypothesis is not supported. The individual personality difference arising from surface-level traits will influence the consequences. The surface-level trait ADIR positively influences ad avoidance (ADAV). The path between ADIR to ADAV is found to be significant ($p < 0.001$) at 99% $p\text{-value}$ and $t\text{-value} = 4.236$. The surface-level trait of ad skepticism (ADSK) will have a positive influence on the consequence of ad avoidance

Table 5. Bootstrapped critical ratio test with 5000 sub-samples for the proposed model

| Path | Hyp. | B | t-Statistics | Sig. | Results |
|--------------|-----------------|---------------------|--------------|------|---------------|
| EX -> GSE | H1a | 0.211*** | 5.663 | S | Supported |
| OTE -> GSE | H1b | 0.134*** | 3.776 | S | Supported |
| AGR_ -> GSE | H1c | 0.156*** | 5.130 | S | Supported |
| CON -> GSE | H1d | 0.137*** | 4.287 | S | Supported |
| NU -> GSE | H1e | 0.041 ^{ns} | 1.335 | NS | Not Supported |
| GSE -> RAR | H2 | 0.335*** | 10.168 | S | Supported |
| GSE -> ADIR | H3a | 0.273*** | 8.939 | S | Supported |
| GSE -> ADSK | H3b | 0.107 ^{ns} | 0.869 | NS | Not Supported |
| GSE -> ADAV | H4 | 0.203*** | 7.146 | S | Supported |
| RAR -> ADIR | H5 _a | 0.505*** | 17.079 | S | Supported |
| RAR -> ADSK | H5 _b | 0.428*** | 13.378 | S | Supported |
| RAR -> ADAV | H6 | 0.302*** | 8.463 | S | Supported |
| ADIR -> ADSK | H7 | 0.111 ^{ns} | 1.222 | NS | Not Supported |
| ADIR -> ADAV | H8a | 0.209*** | 4.236 | S | Supported |
| ADSK -> ADAV | H8b | 0.285*** | 7.316 | S | Supported |

Were: * $p < .05$ (95%), ** $p < .01$ (99%) and *** $p < .001$ (99.99%), Hyp. =Hypothesis. S=Significant, NS= Not Significant, Sig. = Significance.

(ADAV). The path between ADSK to ADAV is found to be significant ($p < 0.001$) at 99% p-value and t-value= 7.316. Hence the hypothesis is supported. It was also discovered that the respondents with higher efficacy led to higher levels of reactance arousal and Ad avoidance (Figure 2). Intrusive Instagram personalized online ads are found to irritate people, which causes them to avoid the ads altogether. Intrusive personalized online ads were found to increase skepticism and irritation, which causes them to avoid the ads altogether.

From the SEM analysis, the R-square value of 0.583 ($R^2=58.3\%$) on Ad avoidance (ADAV) was achieved which can be described as medium in explanatory power (Henseler et al., 2009) and the R^2 value of 0.595 ($R^2=59.5\%$) on Ad irritation (ADIR), 0.639 ($R^2=63.9\%$) was also achieved and described as medium in explanatory power (Hair et al., 2011). The R-square value of 0.250 ($R^2=25.0\%$) on general self-efficacy (GSE) and the R-square value of 0.356 ($R^2=35.6\%$) on reactance arousal (RAR) was achieved which can be described as a small in explanatory power (Henseler et al., 2009). Since the obtained value is greater than the criteria set by Hair et al. (2011) stated as the proposed conceptual model has good explanatory power. Even though the study has obtained a high

Table 6. R^2 and adjusted R^2 values

| | R Square | R Square Adjusted |
|-------------|----------|-------------------|
| ADAV | 0.583 | 0.579 |
| ADIR | 0.595 | 0.591 |
| ADSK | 0.639 | 0.636 |
| GSE | 0.250 | 0.245 |
| RAR | 0.356 | 0.351 |

Note ADAV-Ad Avoidance (ADAV), Ad Irritation (ADIR), Ad Skepticism (ADSK), General Self-efficacy (GSE) and Reactance arousal (RAR).

R-square value, it is necessary to confirm the explanatory power of the proposed model through the adjusted R^2 value. shows both R^2 and adjusted R^2 values (Table 6). The f^2 value was obtained for the proposed model. The effect size f^2 for the independent variables such as elemental traits, agreeableness (AGR) ($f^2=0.024$) construct was found to have a small effect size on general self-efficacy (GSE), conscientiousness (CON) ($f^2=0.062$) construct was found to have small effect size on general self-efficacy (GSE), extroversion (EX) ($f^2=0.064$) construct was found to have a small effect size on general self-efficacy (GSE), agreeableness (AGR) ($f^2=0.047$) construct was found to have a small effect size on RAR, conscientiousness (CON) ($f^2=0.028$) construct was found to have a small effect size on RAR. Conscientiousness (CON) ($f^2=0.071$) construct was found to have a small effect size on ADIR. The third level exogenous variable general self-efficacy (GSE) ($f^2=0.178$) construct was found to have a medium effect size on ad skepticism (ADSK). Conscientiousness (CON) ($f^2=0.277$) construct was found to have a medium effect size on ADSK.

Predictive Relevance (Q^2) of the Proposed Conceptual Model

The Q^2 values for the independent variable obtained were general efficacy (GSE) = 0.142, reactance arousal (RAR) = 0.186, Ad scepticism (ADSK) = 0.370, Ad irritation (ADIR) = 0.361 and Ad avoidance (ADAV) = 0.366. The constructs ad irritation (ADIR), ad skepticism (ADSK) and reactance arousal (RAR) and GSE have a substantial effect size towards ad avoidance (ADAV) ($Q^2=0.355$). The model fit measures in Smart PLS 3 are measured through the following fit measures. The PLS-SEM model estimation is determined by the indices like SRMR and NFI and these standard criteria SRMR < 0.08 and NFI > 0.90. SRMR is an approximate measure that explains the proposed model goodness of fit (GIF) with (SRMR=0.078, <0.08) which is considered a good fit by (Henseler et al., 2012). RMS theta values of the current study are 0.085 indicates a good fit based on the criteria which are less than 0.12, (Henseler et al., 2012). The NFI (0.958) of the proposed model is between 0 to 1 and is near to 1 which is considered an acceptable fit.

GENERAL DISCUSSION

The last 10 years have seen an increase in scholarly interest in psychological reactance across all academic fields. However, it was discovered that there was a lack of a comprehensive literature review in the area of consumer reaction. In order to provide a conceptual framework, we aggregated and condensed many consumer reactance elements and their experimentally supported linkages in this research. We have offered our suggestions for additional study addressing the research gaps found in the literature in the sections that follow. Finally, we go over this study's main contributions and limitations. According to the recommendations of Hair et al. (2011, 2013) and Henseler et al. (2009) for R^2 values, the suggested conceptual model has 51.7% of explanatory power, which is further deemed to be noteworthy. According to claims, the suggested conceptual model has substantial explanatory ability on avoiding advertising.

The current study has once again demonstrated psychological reactance theory's (PRT) claim that people are frequently persuaded to react negatively to persuasive advertisements. According to consumers, customised advertisements undermine their demand for beliefs, self-rule, and control (Brehm 1966; Burgoon et al., 2002). In light of this, self-efficacy significantly enhances reactance. It is thought that consumers utilise their general efficacy "persuasion knowledge, agent knowledge, and topic knowledge" to avoid being too influenced by advertisements and to maintain their independence. Brehm (1966), Brehm and Brehm (2013), and Wicklund (1974) all attempted to link reactance to people's attempts to assert their autonomy and how any persuasive messages are seen as a danger to that autonomy.

The higher degree of personalization intensifies the feelings of intrusiveness, and negatively affects purchase intention (Van Doorn and Hoekstra, 2013; Quick and Stephenson, 2008). High-reactant customers are typically more agitated as a result, the current study has discovered that

reactance arousal significantly influences ad irritation towards Instagram customised advertising. Consumers are likely to have annoying encounters that might contribute to cognitive or behavioural components of resistance, such as ad skepticism and ad avoidance. According to our study's findings that consumers perceive a loss of control over their self-efficacy when it comes to personalised advertising. According to the survey, customers who are more sceptical about commercials judge their offerings more adversely and steer clear of them. Therefore, most significant element influencing ad avoidance was determined to be ad skepticism towards advertisements.

The investigation discovered customers who have a high level of scepticism are more likely to avoid advertising due to their overall distrust on marketing strategies which includes using their name and other private information, which also includes the goods they have already explored. In addition to the previous conclusions for instance, Instagram users who see personalised advertising from unidentified marketers may feel that their personal information is being misused (Okazaki et al., 2009), which can cause reactance, ad irritation to advertisements, and avoidance. Customers are likely to have effectiveness problems and enter a reactance state if they feel that an advertisement is too intimate because they believe that their autonomy in handling their personal data will be compromised and violated by unidentified marketers or third parties and also feel restricted by the idea of being overly traceable or visible by businesses (White et al., 2008). In conclusion, personalised advertising may raise consumer reactance since it may appear to limit their ability to decide how their personal information is utilised.

THEORETICAL CONTRIBUTIONS

The results of the study have substantial theoretical contributions. Firstly, the “meta-theoretical model of motivation and personality (3M)” which was adapted for the study, has provided a structuring framework and was sparsely used before in this specific context. The proposed model offers a hierarchical approach to the chosen personality traits. That considers the elemental level traits and compound level traits that account for situational level traits and surface level traits. As stated before, the current study was the first to relate this theoretical framework to study personalised advertisements and ad avoidance behaviour in the Instagram context. The current study not only provided empirical evidence to support personality traits and their influence on existing models of online advertising (Ha & McCann, 2008; Cho & Cheon, 2004) but also extended the understanding of ad avoidance to a social media context. (Lee et al., 2015; Mowen & Carlson, 2003). In addition to confirming previously established relationships, the current study identified new correlates of general self-efficacy to reactance arousal, ad skepticism, ad irritation and ad avoidance. (Morimoto & Chang, 2006). In this study, we conceptually incorporate reactance arousal as a situational-level trait in our framework and empirically demonstrate its direct role in ad avoidance in a social media context. (Fransen et al., 2015; Morimoto & Chang, 2006). The proposed framework theorizes the role and nature of traits and consumer reactance in understanding the negative responses to personalized advertising. Any of these issues haven't received explicit attention in earlier literature. By bringing them together in a framework, we aim to guide future empirical research and theoretical work. Developed and tested a theoretical model of ad avoidance on SNS. (Lobus, 2014; Edwards et al., 2002; Khuhro et al., 2017). Thus, the findings of this quantitative study make significant contributions to the knowledge base in personality literature, online advertising, marketing psychology, consumer behaviour, and marketing research.

PRACTICAL IMPLICATIONS

Following up on the conceptual advertising concerns mentioned and explored throughout the text, the following helpful implications for practitioners is briefly noted: According to Van Doorn et al. (2010), the study's findings have some significance for social media marketers, researchers, and

advertisers who wish to comprehend the terms “customer ad avoidance,” “customer ad reactance,” and “customer ad irritation.” The Instagram app now offers audience targeting choices and psychographic segmentation with a new software function through which the advertisers can profile their consumers’ and systematic behavioral tracking. These features will help the marketers in lowering reactance and, consequently, lowering consumer avoidance of advertising messages. the newly-emerging ad type known as contextual advertising, which is created by automated algorithms using data about individuals’ online activities. Nearly 50 metrics are available on Instagram for users to segment and target their audience; this aids in the targeting of potential customers by marketers. This study not only reveals that consumers find advertising irritating and sceptic but that when they encounter reactance, they not only become suspicious of personalized ads but also react against them, which encourages consumer ad avoidance. The report recommends reducing the use of unexpected ad forms by social media advertisers, will reduce ad avoidance behavior. The majority of respondents, according to the research, use smartphones to access their Instagram social networking accounts. Therefore, when placing ads based on screen size and ad formats (carousel ads, video ads, image ads, collection ads, and slideshow ads), advertisers must take the necessary precautions. As a result, new technical applications and various strategies enable advertisers to use novel ad styles.

LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

Only Instagram social networking sites were taken into account for the current study. Future study should compare the many social media platforms that need to be looked at. Because social media platforms like Twitter, Google Plus, and YouTube have different levels of reactance. As a result, experimental designs may be used in the future to study ad clutter and reactance (Atkinson & Supervisor, 2014; Kim & Huh, 2017). Future research that makes an effort to manipulate the level/ types of personalization in advertising messages is advised to carefully examine the impact that has on ad avoidance (Baek & Morimoto, 2012).

CONCLUSION

We recommend conducting further study in the area of digital and social media marketing and its impact on psychological reactions, personality traits, and consumer buying behaviour because we identified a scarcity of research in this area. The majority of the research used university students as their samples, according to the literature review. Consumers are becoming better recognized across a wider range of age groups as advertising exposure to information has expanded in the contemporary online era. It is important to look at psychological factors since consumption habits vary and people receive information and respond differently depending on their age and gender. So, it is worth examining psychological reactance in a more diverse sample. This would enormously enhance the generalizability of the research.

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