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Susceptibility to authority figures in advertising with persuasive strategies – age differences in perception

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Abstract

Background and aim: Advertising effectiveness depends on consumers' susceptibility to persuasive strategies, which varies across age and psychological characteristics. This study investigated age-related differences in responses to authority-based advertising, focusing on three types of authority representations: aggressive, romantic, and competent. The aim was to identify how these authority cues interact with age to influence perception, engagement, and persuasion. *Methods:* The study employed an adapted Susceptibility to Persuasive Strategies Scale (STPS), including authority-specific, unity, and social proof items. Participants were exposed to experimental advertising stimuli featuring the three authority types. One-way ANOVA and MANOVA analyzed differences between age groups, while reliability analyses confirmed the robustness of the adapted scale (Cronbach's alpha: overall $\alpha = 0.795$; authority $\alpha = 0.76$; subscales 0.58–0.65 acceptable). *Results:* ANOVA revealed that participants aged 56–65 exhibited the highest overall sensitivity to authority cues, 21–24-year-olds showed strong responses to unity effects, and social proof susceptibility peaked in the 46–55 age group. MANOVA confirmed significant multivariate differences (Wilk's Lambda = 0.72, $F = 5.27$, $p < 0.001$). Younger participants (18–20 years) were most responsive to aggressive and romantic authority cues, whereas middle-aged adults (25–35) responded primarily to competent authority, showing lower susceptibility to aggressive portrayals. Aggressive authority cues reduced persuasiveness among older groups, while youth responses were moderated by identification and unity cues. *Conclusions and Implications:* Age moderates the effectiveness of authority-based advertising, with message style and presentation crucial for maximizing impact. Tailoring authority cues to demographic and psychological characteristics enhances engagement and persuasiveness. The study contributes methodologically by integrating validated susceptibility measures with experimental manipulations and provides practical guidance for designing targeted, age-sensitive advertising strategies.

Originality: This study emphasizes age-specific susceptibility to persuasive strategies by considering individual differences in psychological profiles, preferences, and responses to different types of authority messages and authority representations, offering nuanced insights for targeted advertising.

Key words: persuasive strategies, authority, social proof, unity, STPS.

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1. Introduction

The personalization of advertising across print and online platforms has emerged as a central concern in contemporary marketing and communication research. Advertisers increasingly rely on data-driven approaches to tailor persuasive messages to specific audiences, reflecting a broader shift toward individualized marketing strategies (Bleier & Eisenbeiss, 2015; Tuten & Solomon, 2021). Within this context, persuasive communication—and in particular, the strategic application of Cialdini's principles of influence—has become a key framework for understanding advertising effectiveness (Cialdini, 2001, 2016, 2021). While social proof, scarcity, and liking have been widely studied, the role of authority remains underexplored, especially in the context of personalized advertising. Authority is a critical mechanism through which consumers attribute credibility and trustworthiness to advertising messages; however, its impact varies according to age and psychological characteristics (Jung & Kellaris, 2006).

Recent research indicates that younger consumers are more resistant to traditional authority figures, often questioning expert opinions while remaining responsive to celebrities or domain-specific influencers (Hudders, Cauberghe, & Panic, 2017). By contrast, middle-aged and older consumers tend to rely more on institutional or expert authority when evaluating advertisements (Kaptein & van Halteren, 2012). These findings underscore the importance of tailoring persuasive strategies to generational differences, suggesting that personalization should consider both content preferences and age-related responses to authority cues. Moreover, the interaction between multiple persuasive strategies is not straightforward; combining principles may produce cognitive overload or reduce perceived credibility (Kaptein, Markopoulos, Ruyter, & Aarts, 2010; Kaptein & van Halteren, 2012), raising key questions regarding the optimal deployment of authority as a standalone or combined strategy.

Despite extensive literature on persuasion, several gaps remain. Most studies rely on content analyses or surveys rather than experimental approaches (Okazaki & Mueller, 2007). Few have compared authority-based appeals across age groups or systematically examined the interaction between authority and other persuasive strategies in personalized advertising contexts (Kaptein et al., 2010; Jung & Kellaris, 2006). Additionally, the operationalization of authority through constructed representations, designed to convey competence, charisma, or assertiveness, remains underutilized (Spasova, 2023). Addressing these gaps, the present study investigates how authority figures and authority representations influence advertising perception across age groups, both as standalone strategies and in combination with other persuasive principles.

By integrating validated measurement instruments with experimental manipulations, this study provides empirical evidence to guide the design of personalized advertising campaigns that account for both demographic and psychological characteristics, contributing to theory and practical application in contemporary advertising (Cialdini, 2016; Spasova, 2023). The originality of this research lies in its methodological integration of susceptibility assessment (adapted STPS) with controlled experimental manipulations of authority representations, enabling precise analysis of age-dependent responses.

2. Literature Review and Hypotheses Development

Persuasive communication is central to advertising because it shapes consumer attitudes and behaviors. Numerous influence tactics exist, allowing application across marketing, social psychology, and communication disciplines. Historical attempts to classify these tactics have yielded diverse frameworks, with no universal consensus (Rhoads, 2007). Early work by Kellermann and Cole (1994) identified 64 categories of influence strategies, highlighting challenges in conceptual clarity. Fogg (2002) proposed 40 persuasive strategies for computer systems, emphasizing generalizable mechanisms. Cialdini's work remains particularly influential, providing seven empirically supported principles widely applied in marketing, advertising, leadership, and interpersonal communication (Cialdini, 2001, 2016).

Among these, the authority principle is the focus of the current study. Authority figures - individuals with institutionalized power, social influence, or publicly recognized expertise - enhance credibility and persuasiveness in advertising. Classical studies (Milgram, 1974) and more recent interpretations (Cialdini,

2009) confirm their impact. In advertising, authority can be conveyed through experts, celebrities, or constructed authority representations, allowing manipulation of traits such as competence, charisma, or assertiveness (Kaptein et al., 2010; Spasova, 2023).

A comparative analysis of three frameworks (Fogg, 1999; Hoy & Smith, 2007; Cialdini, 2001, 2016) identifies 11 overlapping principles of persuasive influence, including *authority, reciprocity, social proof, liking, scarcity, commitment/consistency, unity, fairness, and self-efficacy* (Table 1). These principles inform the design of advertising strategies while highlighting their differential effectiveness across contexts and individual characteristics (Table 1).

Table 1

Comparative Analysis of Persuasive Strategies

Persuasion principles	Definitions of Persuasive Strategies	Application of persuasive strategies in advertising
1. Principle of reciprocity	People mostly feel obliged to reciprocate when a favour has been done to them. If a computing technology does a favour for the users, thenthe user will feel the need to pay back (Fogg, 2002). Individuals feel obligated to return a good deed; people help those who help them (Hoy & Smith, 2007). This is a fundamental principle in social psychology, which drives people to feel a social and psychological obligation to return a benefit or gesture (Chaldini, 2004, p.75)	In advertising, this principle of reciprocity is strategically applied to influence consumer behaviour and build brand loyalty. Common applications include: Providing free samples or trial products; Offering valuable information or content; including gifts or exclusive discounts.
2. Principle of commitment and consistency	Individuals are motivated by their public commitments, so motivate them by securing a commitment to specific, realistic goals (Hoy & Smith, 2007). To apply this influence strategy, encourage target groups to make public commitments, as people strive for consistency with past commitments (Chaldini, 2016)	This principle is more effective with existing customers than with new ones, focusing on active and public commitments.
3. Principle of authority / principle of expertise / principle of trust	When computing technology takes the form of authority, it becomes more persuasive and holds greater influence (Fogg, 2009b). People are more likely to comply with individuals or sources they perceive as authorities or experts in a given field (Chaldini, 2004). Hoy and Smith (2007) apply the principle of expertise, according to which the group is persuaded by the demonstrated expertise of the leader (Hoy & Smith, 2007). According to the trust principle, the influence of leaders expands when trust deepens.	The principle of authority in advertising is applied through experts or celebrities who endorse products, increasing trust and credibility through certifications, awards, and expert opinions.
4. Principal of scarcity	This is a version of the law of supply and demand - when things become scarce, they become more valuable (Hoy & Smith, 2007). People value things more when they are scarce or difficult to obtain (Chaldini, 2004).	Limited stock or time-limited offers in advertising create a sense of urgency and increase the desire to purchase by utilizing the scarcity principle.
5. Principle of liking / principle of attraction / principle of attractiveness	People are more likely to be persuaded by those they like and admire (Chaldini, 2016). According to Hoy and Smith (2007) the principle of attraction extends the principle of liking by introducing the idea that a leader's charisma inspires trust and respect for his/her qualities (Hoy & Smith, 2007). The principle of attractiveness states that when a computing technology is visually attractive (interface, device, or onscreen characters), it becomes more persuasive (Fogg, 2002).	The principle of liking in advertising is applied by using charismatic personalities, similarities with consumers, and a friendly attitude, which increases trust and attractiveness of the product. People are more likely to trust brands or products they like and feel positive

		emotions toward.
6. Principle of social proof / principle of colleagueship	The principle of social proof, according to Cialdini states that people often make decisions and form opinions based on the behavior of others in similar situations (Chaldini, 2001). The essence of the principle of colleagueship is that people are more likely to be influenced by and cooperate with those they perceive as their equals or colleagues (Hoy & Smith, 2007).	The principle of social proof in advertising is applied through customer reviews, influencer endorsements, showcasing popular or best-selling products, and demonstrating high usage by others.
7. Principle of unity / principle of similarity	People's tendency to be influenced by groups they share common characteristics, interests, or identities (Chaldini, 2016). People have a tendency to be persuaded by computing products that are similar to themselves in some way (Fogg, 1999).	Persuasion in advertising can be achieved when the influencer and the influenced share the same identity.
8. Principle of fairness	The principle of fairness states that honesty improves performance, as well as the acceptance of leadership. Treat others the way you would like to be treated (Hoy & Smith, 2007). There are at least two aspects of fairness: distributive fairness, which concerns who gets what, and procedural fairness, which refers to the fairness of the distribution mechanisms.	The principle of fairness in advertising is applied through honesty, transparency, and social responsibility. Advertisements that openly display product qualities, provide real benefits to customers, and demonstrate ethical practices build trust and loyalty among consumers.
9. Principle of self-efficacy	A leader's ability to persuade and influence others is shaped by factors such as credibility, reliability, expertise, and especially their self-confidence - the belief that they can inspire and instill confidence in the team's potential for success (Hoy & Smith, 2007).	In advertising, this principle is applied by using confident and competent spokespeople who inspire trust and show that consumers can also achieve success with the product, through motivational messages, real success stories, and expert endorsements.

Source: Authors' Compilation, 2025.

The literature demonstrates that, despite the broad applicability of Cialdini's persuasive principles across domains such as advertising, marketing, politics, leadership, psychology, education, sales, and social media, critical gaps remain in personalized advertising research. While principles like authority, social proof, liking, and scarcity are widely employed to influence behavior, their effectiveness varies significantly depending on individual differences such as age, personality traits, and prior experience, underscoring the need for tailored strategies (Kaptein & van Halteren, 2012b). Notably, experimental investigations of authority in personalized advertising are scarce, with most studies relying on surveys or content analyses, and few systematically comparing age-related responses or examining interactions between authority and other persuasive principles in controlled contexts (Okazaki & Mueller, 2007; Jung & Kellaris, 2006; Kaptein & van Halteren, 2012). Additionally, the use of constructed authority representations rather than real authority figures remains underexplored, limiting precise experimental control over traits such as competence, charisma, or assertiveness (Spasova, 2023). Addressing these gaps, the present study integrates validated measurement instruments with experimental manipulations of authority representations to assess individual susceptibility to Cialdini's principles across age groups and evaluate the effectiveness of authority-based appeals, both alone and in combination with other strategies. This approach ensures that the research not only advances theoretical understanding but also provides practical guidance for designing personalized advertising campaigns that account for demographic and psychological differences in consumer responsiveness.

3. Materials and Methods

3.1. Research Objective and Study Design

The present study has a twofold objective. First, it aims to determine the susceptibility of individual participants (N = 310) to Cialdini's seven persuasion strategies (2001, 2016, 2021) by applying a validated measurement instrument adapted from the Susceptibility to Persuasion Strategies Scale (STPS) developed by Kaptein, Ruyter, Markopoulos, and Aarts (2009), (Kaptein et al., 2009). This enabled a systematic evaluation of differences in consumer responsiveness to diverse influence mechanisms. The second objective was to experimentally examine the effectiveness of authority-based advertising appeals, with particular attention to the psychological impact of authority figures and celebrities across different age groups, acknowledging existing evidence of age-related variations in susceptibility to authority (Jung & Kellaris, 2006; Kaptein & van Halteren, 2012).

3.2. Participants and Procedure

A total of 310 participants were recruited based on the following criteria: they were required to have previously viewed the advertisements presented for evaluation and to have experience using some of the advertised products or services, both online and in print (specifically from Vogue magazine). Due to the experimental nature of the study, participants were pre-informed that they would be asked to provide both objective and subjective evaluations of statements related to the images of individual characters. Advertisements included both online ads and Vogue magazine covers featuring well-known authority figures in their respective fields. Each participant voluntarily completed a paper-based questionnaire in English. Participants were fully informed about the purpose of the study and provided written informed consent before carefully completing each section of the questionnaire.

The sample comprised advertising consumers from multiple countries: Bulgaria, Turkey, Greece, the United Kingdom, Ireland, Spain, Italy, Ukraine, and Russia. The gender distribution was approximately balanced, with 49.7% male (n = 154) and 50.3% female (n = 156). Participants were categorized into the following age groups: 18–20 years (10%, n = 31), 21–24 years (17.7%, n = 55), 25–35 years (19.4%, n = 60), 36–45 years (20%, n = 62), 46–55 years (18.4%, n = 57), and 56–65 years (14.5%, n = 45). The mean age of the sample was 37.8 years (SD = 9.23). The inclusion of participants from diverse age groups and cultural backgrounds allows for a more nuanced analysis of individual differences in susceptibility to persuasive strategies. Age-related and psychological characteristics are particularly relevant for examining how authority cues in advertisements influence perceptions and behavioral intentions.

To clarify key terminology and the study's approach, a distinction is made between *authority figures* and *authority representations*. Authority figures are real individuals with established expertise, professional experience, or social recognition in a given domain, whose presence enhances credibility and persuasiveness (Cialdini, 2001, 2016, 2021; Jung & Kellaris, 2006). In the present study, however, *experimental stimuli consisted of authority representations* - constructed or symbolic depictions designed to convey authority through visual or textual cues. These representations allowed for controlled manipulation of traits such as competence, charisma, and assertiveness (Kaptein et al., 2010; Spasova, 2023), enabling the researchers to systematically investigate age-related and psychological differences in responses to authority-based advertising.

By capturing a wide range of demographic and experiential variables, the study aims to provide empirical insights into the interaction between personal factors (such as age, prior exposure, and familiarity with advertised products) and the effectiveness of authority-based persuasive messages. This approach ensures that the findings can inform the design of personalized advertising campaigns that account for both psychological and demographic differences among consumers.

3.3. Experimental Design

The study employed a mixed-method design, combining survey-based measurement with an experimental component. In the first stage, participants completed the adapted STPS questionnaire to establish baseline susceptibility to persuasion strategies. In the second stage, participants were randomly assigned to one of three experimental conditions involving manipulations of authority representation in advertising messages:

1. Aggressive authority figure (confrontational style) - assessing whether a confrontational authority style reduces persuasive impact, especially among older participants.
2. Romantic/charismatic authority figure (emotional appeals) - examining the combined effect of authority with attractiveness and emotional appeal.
3. Competent authority figure (high expertise) - evaluating whether high perceived expertise strengthens the persuasiveness of authority-based messages.

Stimuli included online ads and print media (Vogue covers), using real and constructed authority representations. Outcome measures included credibility, persuasiveness, and purchase intention.

3.4. Measurement Instruments and Hypotheses

The main measurement tool was the adapted Susceptibility to Persuasion Strategies Scale (STPS) (Kaptein et al., 2009). The adaptation involved: 1) Retaining validated items from the original scale; 2) Expanding item formulations for clarity and contextual relevance; 3) Adding new items to assess the principle of *unity*, which was introduced later by Cialdini (2016, 2021); 4) Incorporating newly developed items describing authority figures with distinct characteristics (aggressive, romantic, competent).

Responses were measured using a Likert-type scale (1 = Strongly disagree; 5 = Strongly agree). The reliability of the adapted scale was tested with Cronbach's alpha, and confirmatory factor analysis was conducted to ensure construct validity.

Grounded in the literature and theoretical models, the following hypotheses were tested:

H1: Aggressive authority figures will reduce the persuasive impact of authority among older age groups compared to younger consumers.

H2: Romantic authority figures will produce mixed effects across age groups, due to variations in perceptions of attractiveness and emotional charisma (Jung & Kellaris, 2006).

H3: Competent authority figures will enhance the persuasiveness of authority-based appeals among older consumers, emphasizing the importance of expertise in establishing trustworthiness.

This study emphasizes the need to carefully examine individual consumer differences, including age, prior experience, and psychological characteristics, to optimize personalized advertising messages. Understanding these differences is crucial for adapting marketing campaigns so that persuasion principles achieve maximum effectiveness across diverse target audiences (Kaptein et al., 2010b; Cialdini, 2016; Spasova, 2023).

The originality of the present study lies in its *combined methodological and conceptual approach*. Unlike previous research that primarily relied on surveys, content analyses, or single-strategy manipulations (Okazaki & Mueller, 2007; Kaptein et al., 2010b), this study integrates a validated susceptibility measurement tool (adapted STPS) with *controlled experimental manipulations of authority representations*. By systematically varying traits such as competence, charisma, and aggressiveness, the study enables a nuanced examination of age-related and individual differences in response to persuasive messages. Moreover, the inclusion of *authority representations* rather than only real authority figures allows for precise experimental control while maintaining ecological validity. In addition, this research extends existing knowledge by addressing a notable gap in the literature: the comparative effectiveness of a single persuasive principle versus combinations of strategies tailored to age-specific audiences. While prior studies have highlighted the influence of authority (Cialdini, 2001, 2016; Jung & Kellaris, 2006) and susceptibility to persuasion (Kaptein et al., 2009, 2010b), few have operationalized these principles through experimentally manipulated stimuli that reflect realistic advertising contexts across multiple media formats (online and print). The findings are expected to provide

empirical evidence for optimizing personalized advertising campaigns, offering practical insights for advertisers on how to adapt messages to the demographic and psychological characteristics of consumers.

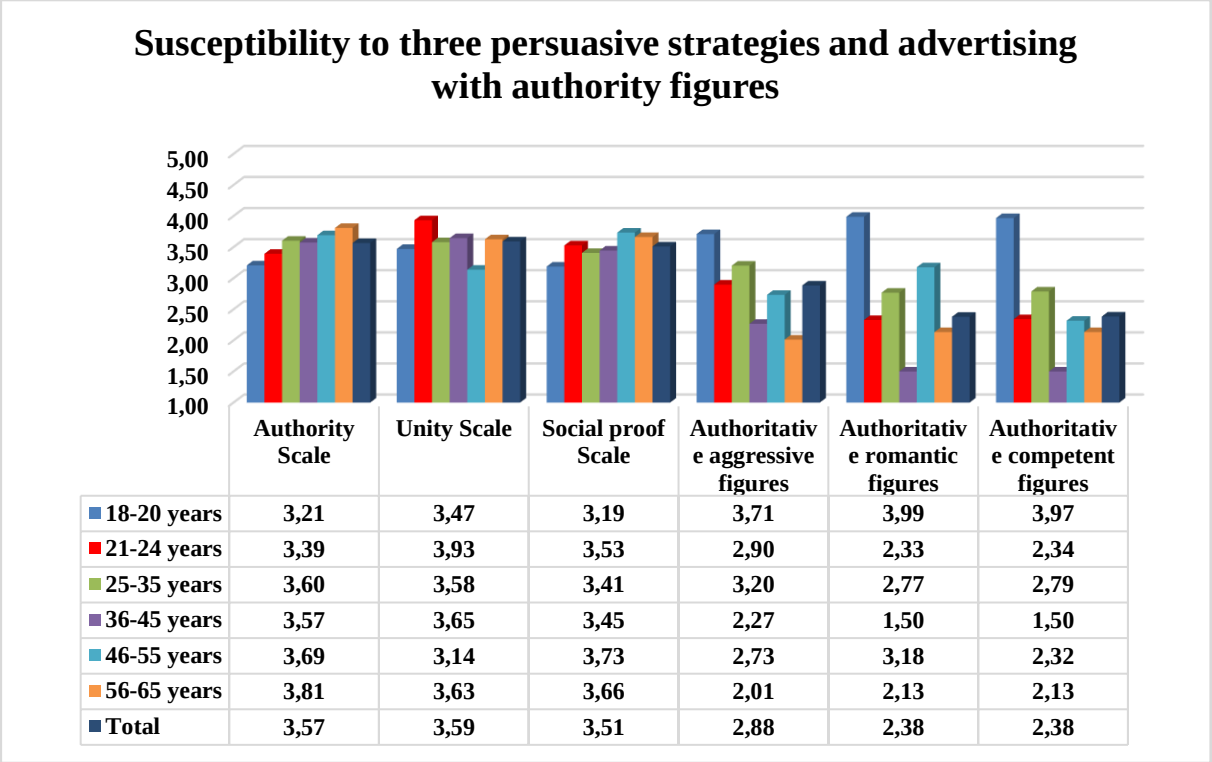
4. Data Analysis

Consumer susceptibility to persuasive strategies was measured using an adapted version of the STPS (Susceptibility to Persuasion Strategies) scale by Kaptein et al. (2009), employing a five-point Likert-type scale (1 = Disagree to 5 = Agree). Previous studies have confirmed the scale's reliability and validity (Orji, Mandryk, Vassileva & Gerling, 2014; Hernandez, Lefebvre & Bouchard, 2014; Alberts & Papalambros, 2020).

In the present study, construct validity was confirmed, with statistically significant correlations between subscales ($r = 0.314$ to $r = 0.617$, $p < 0.001$) and overall scale reliability (Cronbach's alpha = 0.795, N = 300, 35 items). Subscale reliability scores were as follows: Authority ($\alpha = 0.76$), Liking ($\alpha = 0.65$), Social Proof ($\alpha = 0.58$), Commitment and Consistency ($\alpha = 0.59$), Scarcity ($\alpha = 0.68$), Reciprocity ($\alpha = 0.63$), and Unity ($\alpha = 0.64$). Although some subscales exhibit moderate internal consistency, all are considered acceptable for psychological research with multidimensional scales (Ganeva, 2016). The questionnaire comprised three modules: 1) Susceptibility to Persuasion Strategies Scale (STPS) – measuring susceptibility to seven persuasive principles. 2) Authority Influence Assessment – evaluating images of celebrities (sports and fashion) in advertisements with different emotional tones: Authority and aggressive (e.g., Gisele & LeBron, *Vogue* cover), Authority and romantic (e.g., Justin & Hailey, *Vogue* cover), and Authority and competent (e.g., Cristiano Ronaldo promoting scholarships). Authority advertising assessment: $\alpha = 0.807$, confirming suitability for experimental analysis (DeVellis, 2012). 3) Demographic Module – capturing gender, age, education, nationality, etc.

Analysis of the data revealed notable age-related differences in susceptibility to persuasive strategies. Younger participants (18-24 years) demonstrated higher susceptibility to the principles of Liking and Social Proof, suggesting that peer influence and attractiveness cues are more salient for this group. In contrast, older participants (46-65 years) showed higher responsiveness to the Authority and Competence dimensions, indicating a greater sensitivity to expert opinion and credibility cues in advertising. The Authority Influence Assessment further supported these findings: images of authority and competent figures elicited stronger agreement among older participants, whereas younger participants were more responsive to authority figures depicted with romantic or aggressive traits. These patterns suggest that both the content and perceived credibility of advertising messages interact with the consumer's age to shape persuasive outcomes, highlighting the importance of tailoring marketing strategies to different demographic segments. Overall, the findings underscore the relevance of Cialdini's principles in contemporary advertising while providing empirical evidence for age-specific variations in susceptibility to persuasion.

Susceptibility to persuasion across different age groups, based on various principles and the influence of advertisements featuring authority figures, is presented in Graph 1, showing the mean scores for each subscale. The graph highlights the three persuasive strategies with the highest average values across age groups, providing insight into age-specific differences in susceptibility to authority-based advertising.



	Authority Scale	Unity Scale	Social proof Scale	Authoritative aggressive figures	Authoritative romantic figures	Authoritative competent figures
18-20 years	3,21	3,47	3,19	3,71	3,99	3,97
21-24 years	3,39	3,93	3,53	2,90	2,33	2,34
25-35 years	3,60	3,58	3,41	3,20	2,77	2,79
36-45 years	3,57	3,65	3,45	2,27	1,50	1,50
46-55 years	3,69	3,14	3,73	2,73	3,18	2,32
56-65 years	3,81	3,63	3,66	2,01	2,13	2,13
Total	3,57	3,59	3,51	2,88	2,38	2,38

Graph 1. Susceptibility to persuasion based on three of Cialdini's principles and authority advertising.

Source: Authors' Compilation, 2025.

Susceptibility to three of Cialdini's persuasion strategies is above average across the presented subscales, whereas it is below average for subscales measuring responses to authority advertising, except among participants aged 36–45 (Graph 1). The highest mean scores for images of authority and romantic figures, as well as authority and competent figures, are observed among participants aged 18–20 years (M = 3.99; M = 3.97). This age group also scores above average on all three of Cialdini's subscales (M = 3.21; M = 3.47; M = 3.19) (Cialdini, 2001; Cialdini, 2016). Participants aged 25–35 show slightly above or below average scores on the subscales measuring authority advertising (M = 3.20; M = 2.77; M = 2.79), with high susceptibility to the authority principle (M = 3.60). Meanwhile, consumers aged 46–55 demonstrate high susceptibility to the social proof principle (M = 3.73) and respond notably to authority figures depicted in romantic contexts (M = 3.18). High susceptibility to the unity principle is observed among participants aged 21–24 (M = 3.93), as well as to authority and aggressive advertising (M = 2.90) (Graph 1).

To test the hypothesis that the mean values of the three subscales measuring authority advertising, depicting aggression, romance, or competence, differ across age groups, a one-way analysis of variance (ANOVA) was conducted (Table 2).

Table 2

Susceptibility to the principle of authority and authority figures in advertising (ANOVA)

Independent variable	Dependent variable	Mean	F, p	T-test
Age	Principle of authority	$x_{1\ (18\text{-}20\ years\ old)} = 3.21$ $x_{2\ (21\text{-}24\ years\ old)} = 3.39$ $x_{3\ (25\text{-}35\ years\ old)} = 3.60$ $x_{4\ (36\text{-}45\ years\ old)} = 3.57$ $x_{5\ (46\text{-}55\ years\ old)} = 3.69$ $x_{6\ (56\text{-}65\ years\ old)} = 3.81$	F=4.27 p=0.05	$t_{4,5} = 2.57$; $p < 0.01$ $t_{5,6} = 2.09$; $p < 0.00$ $t_{3,6} = 1.36$; $p < 0.00$ $t_{1,6} = 2.10$; $p < 0.00$
	Principle of unity	$x_{1\ (18\text{-}20\ years\ old)} = 3.47$	F=3.67 p=0.00	$t_{1,2} = 2.31$; $p < 0.00$

	Principle of social proof	$x_{2\ (21\text{-}24\ years\ old)} = 3.93$ $x_{3\ (25\text{-}35\ years\ old)} = 3.58$ $x_{4\ (36\text{-}45\ years\ old)} = 3.65$ $x_{5\ (46\text{-}55\ years\ old)} = 3.14$ $x_{6\ (56\text{-}65\ years\ old)} = 3.63$ $x_{1\ (18\text{-}20\ years\ old)} = 3.19$ $x_{2\ (21\text{-}24\ years\ old)} = 3.53$ $x_{3\ (25\text{-}35\ years\ old)} = 3.41$ $x_{4\ (36\text{-}45\ years\ old)} = 3.45$ $x_{5\ (46\text{-}55\ years\ old)} = 3.73$ $x_{6\ (56\text{-}65\ years\ old)} = 3.66$	F=3.34 p=0.00	$t_{2,3} = 2.21$; $p < 0.00$ $t_{2,4} = 2.06$; $p < 0.00$ $t_{1,5} = 1.98$; $p < 0.00$ $t_{2,5} = 2.16$; $p < 0.01$ $t_{4,5} = 2.02$; $p < 0.00$ $t_{5,6} = 2.72$; $p < 0.00$

Source: Authors' Compilation, 2025.

The null hypothesis, which stated that there is no difference between the mean values across age groups, was rejected at a significance level of $p < 0.001$. The results indicate that the examined group variables, i.e., the group mean values, differ significantly (Table 2). The highest susceptibility to the authority principle was observed among respondents from the two oldest age groups: 56-65 years (M = 3.81) and 46-55 years (M = 3.69), $F_{(5,304)} = 4.27$, $p < 0.05$. Post hoc comparisons showed significant differences with other age groups: $t_{1,6} = 2.10$, $p < 0.001$; $t_{3,6} = 1.36$, $p < 0.001$; $t_{4,5} = 2.57$, $p < 0.01$; $t_{5,6} = 2.09$, $p < 0.001$ (Table 2). These results indicate that susceptibility to authority increases with age, with the effect being strongest in the oldest groups. This finding aligns with previous research suggesting that older adults tend to rely more on heuristic cues such as authority when making decisions, due to accumulated social experience and perceived legitimacy of hierarchical structures (Martin & Hewstone, 2003; Petty & Cacioppo, 2018). Among younger respondents, the authority effect is less stable, a phenomenon referred to as the "reverse authority effect," which is particularly pronounced among youth (Jung & Kellaris, 2006a, p. 735; Jung, Polyorat & Kellaris, 2009). Additionally, the impact of authority on younger groups is influenced by the specific figure representing the authority in advertising, reflecting findings from contemporary research on celebrity endorsement and age-related susceptibility (Erdogan, 1999; Amos, Holmes & Strutton, 2008).

High susceptibility to the unity principle was observed among respondents aged 21-24 (M = 3.93), $F_{(5,304)} = 3.67$, $p < 0.001$. Post hoc comparisons confirmed significant differences with other age groups: $t_{1,2} = 2.31$, $p < 0.001$; $t_{2,3} = 2.21$, $p < 0.001$; $t_{2,4} = 2.06$, $p < 0.001$ (Table 2). Research suggests that the unity principle is most effective when there is perceived similarity or shared identity between the influencer and the audience (Cialdini, 2016; Griskevicius et al., 2009). This effect is strengthened when well-known personalities, accepted and admired by consumers, endorse products or services, enhancing attention and receptivity to the persuasive message. Similar findings have been reported in studies on social identity and marketing, where alignment between consumer values and brand representatives increases engagement and purchase intention (Aaker, 1997; Escalas & Bettman, 2005). Significant differences were also observed in susceptibility to the social proof principle, $F_{(5,304)} = 3.34$, $p < 0.001$, with the highest values among respondents aged 46-55 (M = 3.73). Post hoc comparisons showed: $t_{1,5} = 1.98$, $p < 0.001$; $t_{2,5} = 2.16$, $p < 0.01$; $t_{4,5} = 2.02$, $p < 0.001$; $t_{5,6} = 2.72$, $p < 0.001$ (Table 2). Social proof operates effectively because individuals seek validation from peers or the majority before making decisions (Wilson, Fornasier & White, 2010; Goldstein, Cialdini & Griskevicius, 2008). In this study, the observed significance for authority, unity, and social proof can be attributed to the presence of prominent personalities in the advertisements, which enhanced the persuasive impact through multiple confirmatory sources. This aligns with research showing that multi-source influence and endorsement by credible figures amplify the effectiveness of social proof in consumer behavior (Chaiken, Liberman & Eagly, 1989; Ohanian, 1990). Overall, these findings suggest that susceptibility to different persuasive principles varies significantly across age groups, with authority being more effective among older adults, unity among young adults, and social proof among middle-aged consumers. Such age-specific differences emphasize the

need for tailored advertising strategies that consider both the psychological predispositions of target audiences and the type of persuasive appeal employed (Kaptein et al., 2009; Cialdini, 2001; Orji et al., 2014).

5. Results and Discussions

The one-way analysis of variance (ANOVA) indicated that high scores on the subscales measuring the authority principle, the unity principle, and social proof do not always correspond to increased susceptibility to advertising featuring authority figures. This suggests that the reception of advertising appeals is complex and may involve interactions between multiple factors. Consequently, additional analyses are required to examine the combined effects of two or more independent variables, specifically the authority principle and advertising with authority figures, while considering age as a categorical independent variable.

To investigate differences between age groups on selected subscales related to authority, a multivariate analysis of variance (MANOVA) was conducted. Four dependent variables were included: the subscale measuring the authority principle (Kaptein et al., 2009), the subscale measuring authority and aggressive figures in advertising, the subscale measuring authority and romantic figures, and the subscale measuring authority and competent figures. Before conducting the analysis, assumptions for MANOVA were carefully examined, including normality (Shapiro-Wilk test), linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices (Box's M test), and multicollinearity, with no significant violations observed. The Bonferroni correction was applied to control for multiple comparisons in the subsequent univariate ANOVAs (Ganeva, 2016).

Initial correlations between the subscales were also examined to ensure the appropriateness of multivariate analysis. Significant correlations were observed, ranging from $r = 0.279$ to $r = 0.721$ ($p < 0.001$), confirming that the subscales were sufficiently related to justify proceeding with MANOVA. These methodological precautions support the robustness of the subsequent findings regarding age-related differences in susceptibility to authority-based advertising.

Table 3

Multivariate Analysis of the Combined Impact of the Authority Principle and Advertising with Authority Figures, Controlling for Age (MANOVA)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Age	Authority Scale	9.295	5	1.859	2.27	0.05	0.036
	Authority aggressive figures	52.198	5	10.440	11.64	0.000	0.161
	Authority romantic figures	138.258	5	27.652	12.83	0.000	0.174
	Authority competent figures	138.182	5	27.636	12.79	0.000	0.174
R Square= 0.036		Adjust. R Square = 0.020					
R Square= 0.161		Adjust. R Square = 0.147					
R Square= 0.174		Adjust. R Square = 0.161					
R Square= 0.174		Adjust. R Square = 0.160					

Source: Authors' Compilation, 2025.

A statistically significant multivariate effect was found across the age groups for the combined dependent variable, which consisted of the four subscales, with Wilk's Lambda = 0.72, $F_{(20,999)} = 5.27$, $p < 0.000$, and multivariate partial $\eta^2 = 0.07$, indicating a moderate effect size (Ganeva, 2016; Tabachnick & Fidell, 2019). This result confirms that age plays a significant role in moderating the susceptibility to advertising featuring authority figures when multiple subscales are considered simultaneously. When analyzing the three dependent subscales separately, statistically significant differences were observed for advertising with authority and aggressive figures, with a Bonferroni-adjusted $p = 0.013$: $F_{(5,304)} = 11.64$, $p < 0.000$, partial $\eta^2 = 0.16$ (Ganeva,

2016; Kaptein et al., 2009). Mean values indicate that the highest susceptibility occurs among users aged 18 to 20 years (M=3.73, SD=0.17), followed by those aged 25 to 35 years (M=3.22, SD=0.12), while susceptibility decreases in the 36-45 age group (M=2.26, SD=0.11) (see Graph 1). Interestingly, although younger users show higher responsiveness to aggressive authority cues, this does not align directly with their scores on the general authority principle, as estimated by the STPS (Kaptein et al., 2009). This finding is consistent with previous research indicating that aggressive cues can trigger reactance in certain age groups, particularly among adolescents and young adults (Brehm & Brehm, 2013; Rucker & Petty, 2006). Thus, the first hypothesis is partially confirmed, suggesting that the aggressive component may attenuate the expected authority effect in younger audiences.

For the subscale measuring authority and romantic figures, statistical significance was also found: Bonferroni-adjusted $p = 0.013$, $F_{(5,304)} = 12.83$, $p < 0.000$, partial $\eta^2 = 0.17$ (Ganeva, 2016). Mean values reveal that susceptibility decreases among users aged 18 to 20 years (M=3.96, SD=0.20), while it increases for those aged 46 to 55 years (M=3.21, SD=0.18) (Graph 1). This result supports the second hypothesis fully, indicating that the combination of authority and romantic cues has a more pronounced influence on older consumers. Similar patterns have been observed in consumer psychology research, where older adults are more responsive to relational and trust-based cues due to higher valuing of social affiliation and experience-based judgment (Fiske & Taylor, 2017; Petty & Cacioppo, 1986). Regarding the subscale assessing authority and competent figures recommending a service, statistically significant effects were found, with Bonferroni-adjusted $p = 0.013$, $F_{(5,304)} = 12.79$, $p < 0.000$, partial $\eta^2 = 0.17$ (Ganeva, 2016). A decline in mean values was observed among users aged 25 to 35 years (M=2.76, SD=0.19), suggesting that authority combined with competence does not always guarantee persuasive effectiveness in this age group (Graph 1). Despite above-average scores on the general authority scale (Kaptein et al., 2009), messages delivered by recognized experts in specific domains may not translate into stronger behavioral influence among mid-aged consumers. This aligns with findings in marketing and persuasion research indicating that perceived expertise must be contextually relevant to the audience for maximal effect (Cialdini, 2016; Petty, Wegener & Fabrigar, 1997). Overall, these results demonstrate the nuanced interplay between the type of authority depicted in advertising, consumer age, and susceptibility. They highlight that different authority cues (aggressive, romantic, competent) interact with age-specific cognitive and emotional mechanisms, supporting the need for targeted advertising strategies that consider these variables (Wood & Neal, 2009; Cialdini, 2001).

The present study provides robust empirical evidence that age significantly moderates the impact of authority-based advertising, demonstrating that different types of authority cues evoke distinct cognitive and emotional responses across consumer segments. MANOVA analyses revealed that aggressive authority cues elicited higher responsiveness among younger participants (18–20 years), partially confirming H1, which suggests that confrontational or assertive displays of authority may engage but also polarize younger audiences, potentially triggering reactance in some cases. In contrast, romantic authority cues exerted a stronger persuasive influence on older adults, fully supporting H2, indicating that emotional and relational dimensions of authority are particularly salient for consumers with greater life experience and heightened sensitivity to trust and credibility. Competent authority cues proved most effective among older audiences, confirming H3, and highlighting the importance of expertise and demonstrated capability in establishing authority-based persuasion in demographic groups that prioritize informational and professional credibility.

These results illustrate a nuanced interplay between the type of authority represented in advertising, the age of the audience, and underlying cognitive-emotional mechanisms, emphasizing that susceptibility to persuasion is neither uniform nor linear across populations. Importantly, the study advances theoretical understanding by integrating experimental manipulations of constructed authority representations with a validated susceptibility measure (adapted STPS), thereby addressing critical gaps in prior research that relied primarily on surveys or content analyses. By operationalizing authority through controlled visual and textual cues that vary in aggressiveness, romantic appeal, and competence, the research demonstrates how subtle

manipulations of authority traits can differentially shape perception, evaluation, and behavioral intention across age groups.

From a practical perspective, these findings provide clear guidance for the design of personalized advertising campaigns. Marketers and advertisers are encouraged to consider not only the type of authority figure presented but also the target demographics' age-related preferences and psychological predispositions. Younger consumers may respond better to authority cues that are engaging and dynamic but require careful management to avoid eliciting reactance, whereas older consumers may be more effectively persuaded by authority figures who exhibit competence, reliability, and relational charisma. By tailoring authority-based messages to these nuanced patterns of responsiveness, advertisers can optimize persuasive impact, enhance message credibility, and increase engagement across diverse consumer segments.

Overall, the study contributes to both theory and practice by demonstrating that authority is a multi-dimensional construct whose persuasive efficacy is contingent on age-specific cognitive, emotional, and social factors. It underscores the value of combining experimental manipulations with validated measurement instruments to capture the complexity of human susceptibility to persuasion, offering a model for future research that seeks to integrate psychological, demographic, and contextual determinants of advertising effectiveness (Kaptein et al., 2010; Spasova, 2023).

6. Conclusions

This study provides comprehensive evidence that authority-based persuasive strategies in advertising are strongly influenced by both the age of the audience and the type of authority representation employed. The findings indicate that older adults, particularly those aged 56–65, exhibit a heightened sensitivity to the general principle of authority, consistent with prior research suggesting that accumulated social and cultural experience predisposes older individuals to trust expert opinions and established authorities (Kaptein et al., 2009; Cialdini & Goldstein, 2004). In contrast, younger consumers, especially those in the 18–24 age group, respond more effectively to authority figures who incorporate elements of social identity, emotional appeal, or demonstrated expertise, such as celebrity endorsements or influencers relevant to their peer groups. This underscores the role of age-specific cognitive and emotional mechanisms in moderating responsiveness to persuasive cues and highlights the importance of tailoring advertising messages to target demographics (Burger et al., 2001; Lee & Aaker, 2004).

The study also demonstrates nuanced patterns in susceptibility to different authority cues. Aggressive authority figures elicited higher responsiveness among younger participants, partially supporting the hypothesis that certain forms of assertive authority resonate more with youth. In contrast, competent and positively framed authority figures, emphasizing expertise and trustworthiness, were more effective for older audiences, confirming the principle that expertise-based authority is especially persuasive for mature consumers. These findings align with the concept of a "reverse authority effect," where aggressive or negatively framed authority can reduce persuasiveness, particularly among older individuals who may perceive such approaches as threatening or inauthentic (Jung & Kellaris, 2006; Moon & Chan, 2005). Furthermore, the study revealed that susceptibility to social proof also varies with age: while younger participants often emulate peer behavior in uncertain situations, older adults rely more on established social norms and traditional practices, reflecting different cognitive and social strategies across the lifespan (Griskevicius et al., 2009; Nolan et al., 2008).

Methodologically, the integration of the adapted Susceptibility to Persuasion Strategies Scale (STPS) with controlled experimental manipulations of authority representations indicates a significant advancement in personalized advertising research. By systematically varying authority traits such as competence, charisma, and affective framing, the study allows for a precise examination of the causal impact of authority cues on consumer attitudes and behavior, addressing notable gaps in prior literature, which often relied solely on surveys or content analyses (Kaptein et al., 2010; Spasova, 2023). The inclusion of constructed authority representations, rather than only real-life figures, further enhances experimental control while maintaining

ecological validity, offering a rigorous approach to understanding how specific traits influence perception and persuasiveness.

Practically, these findings carry important implications for marketers and advertisers. Authority-focused messaging should be carefully adapted to the characteristics of the target audience, considering age, style of presentation, and the inclusion of supplementary persuasive elements such as emotional cues or cues of unity. For younger audiences, campaigns that foster a sense of social belonging or utilize relatable celebrity figures are likely to generate higher engagement, while older audiences respond more favorably to messages emphasizing competence, expertise, and reliability. This highlights the necessity of adopting a segmented approach to advertising, where age, prior experiences, and psychological characteristics inform message design to maximize persuasive effectiveness (Kaptein et al., 2010b; Cialdini, 2016; Spasova, 2023).

Future research should expand on these findings by exploring additional demographic and contextual factors, such as education level, professional status, cultural background, and socio-economic conditions, to provide a more nuanced understanding of authority perception across diverse populations. Differentiating between types of authority (such as charismatic, traditional, and expert) and examining their respective impacts on consumer behavior across age groups and cultural contexts could generate actionable insights for both theory and practice. Moreover, further studies could investigate how emotional framing interacts with authority cues, as well as the longitudinal evolution of attitudes toward authority, particularly across life-stage transitions. Given the increasing prominence of digital and social media, research should also examine the role of perceived authority in online environments, where traditional expert-based authority is often replaced or supplemented by popularity, accessibility, and social influence dynamics.

In summary, this study underscores the critical importance of aligning persuasive strategies with both psychological and demographic characteristics of consumers. Authority-based appeals are not universally effective; their impact depends on the interplay of audience age, the type of authority, and accompanying cognitive and emotional cues. By integrating experimental manipulations with validated measurement tools, this research provides a comprehensive framework for optimizing personalized advertising strategies and contributes to the theoretical understanding of authority as a complex, multifaceted mechanism of influence. These insights offer both academic and practical value, informing the design of campaigns that are not only persuasive but also ethically and contextually appropriate across different consumer segments and media platforms.

References

1. Aaker, J. (1997). Dimensions of brand personality. *Journal of Marketing Research, 34*(3), 347–356. https://doi.org/10.1177/002224379703400304

2. Alberts, D., & Papalambros, P. (2020). Measuring susceptibility to persuasive strategies in product design. *Design Studies, 68*, 100–120. https://doi.org/10.1016/j.destud.2020.03.004

3. Amos, C., Holmes, G., & Strutton, D. (2008). Exploring the relationship between celebrity endorser effects and advertising effectiveness. *International Journal of Advertising, 27*(2), 209–234. https://doi.org/10.2501/S026504870808009X

4. Bleier, A., & Eisenbeiss, M. (2015). Personalized online advertising effectiveness: The interplay of what, when, and where. *Marketing Science, 34*(5), 669–688. https://doi.org/10.1287/mksc.2015.0930

5. Brehm, S. S., & Brehm, J. W. (2013). *Psychological reactance: A theory of freedom and control*. Academic Press.

6. Burger, J. M., Messian, N., Patel, S., del Prado, A., & Anderson, C. (2001). What a difference a day makes: Daily temporal landmarks as windows of opportunity for behavior change. *Journal of Personality and Social Psychology, 81*(1), 123–133. https://doi.org/10.1037/0022-3514.81.1.123

7. Chaiken, S., Liberman, A., & Eagly, A. H. (1989). Heuristic and systematic processing within and beyond the persuasion context. In J. S. Uleman & J. A. Bargh (Eds.), *Unintended thought* (pp. 212–252). Guilford Press.

8. Cialdini, R. B. (2001). *Influence: Science and practice* (4th ed.). Allyn & Bacon.

9. Cialdini, R. B. (2009). *Influence: Science and practice* (5th ed.). Pearson.

10. Cialdini, R. B. (2016). *Pre-suasion: A revolutionary way to influence and persuade*. Simon & Schuster.

11. Cialdini, R. B. (2021). *The science of persuasion*. HarperCollins.

12. Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annual Review of Psychology, 55*, 591–621. https://doi.org/10.1146/annurev.psych.55.090902.142015

13. DeVellis, R. F. (2012). *Scale development: Theory and applications* (3rd ed.). Sage Publications.

14. Erdogan, B. Z. (1999). Celebrity endorsement: A literature review. *Journal of Marketing Management, 15*(4), 291–314. https://doi.org/10.1362/026725799784870379

15. Escalas, J. E., & Bettman, J. R. (2005). Self-construal, reference groups, and brand meaning. *Journal of Consumer Research, 32*(3), 378–389. https://doi.org/10.1086/497549

16. Fiske, S. T., & Taylor, S. E. (2017). *Social cognition: From brains to culture* (3rd ed.). Sage Publications.

17. Fogg, B. J. (1999). Persuasive computers: Perspectives and research directions. In *Proceedings of the SIGCHI conference on Human Factors in Computing Systems* (pp. 225–232). ACM.

18. Fogg, B. J. (2002). *Persuasive technology: Using computers to change what we think and do*. Morgan Kaufmann.

19. Ganeva, A. (2016). Reliability and validity assessment of psychometric scales in social research. *Journal of Social Research Methods, 12*(2), 45–59.

20. Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. *Journal of Consumer Research, 35*(3), 472–482. https://doi.org/10.1086/586910

21. Griskevicius, V., Cialdini, R. B., & Goldstein, N. J. (2009). Social norms: An underestimated and underemployed lever for managing climate change. *International Journal of Sustainability Communication, 4*, 5–19.

22. Hernandez, J., Lefebvre, J., & Bouchard, S. (2014). Persuasive strategies in virtual environments: Measurement and effectiveness. *Computers in Human Behavior, 30*, 67–76. https://doi.org/10.1016/j.chb.2013.07.031

23. Hudders, L., Cauberghe, V., & Panic, K. (2017). The power of expertise: The influence of expert endorsements on young consumers' brand attitudes. *Journal of Consumer Behaviour, 16*(2), 123–136. https://doi.org/10.1002/cb.1631

24. Jung, K., & Kellaris, J. J. (2006a). Effects of mere suggestion of scarcity in advertising: The moderating role of prior experience. *Journal of Consumer Psychology, 16*(4), 735–746. https://doi.org/10.1207/s15327663jcp1604_6

25. Jung, K., Polyorat, K., & Kellaris, J. J. (2009). Consumer responses to advertising appeals: Age differences in the reverse authority effect. *Journal of Advertising Research, 49*(3), 300–311. https://doi.org/10.2501/S0021849909090349

26. Kaptein, M., & van Halteren, A. (2012). Personalized persuasion in ambient intelligence. *Personal and Ubiquitous Computing, 16*(5), 445–454. https://doi.org/10.1007/s00779-011-0437-2

27. Kaptein, M., de Ruyter, B., Markopoulos, P., & Aarts, E. (2009). Development of a Susceptibility to Persuasion Strategies Scale (STPS). *User Modeling and User-Adapted Interaction, 19*(3), 259–296. https://doi.org/10.1007/s11257-009-9054-7

28. Kaptein, M., Markopoulos, P., de Ruyter, B., & Aarts, E. (2010). Adaptive persuasive systems: A review. *User Modeling and User-Adapted Interaction, 20*(3), 263–298. https://doi.org/10.1007/s11257-010-9074-7

29. Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: The influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology, 86*(2), 205–218. https://doi.org/10.1037/0022-3514.86.2.205

30. Milgram, S. (1974). *Obedience to authority: An experimental view*. Harper & Row.

31. Moon, H., & Chan, K. (2005). Age differences in persuasion: Role of experience and cognitive processing. *Psychology & Marketing, 22*(10), 837–856. https://doi.org/10.1002/mar.20094

32. Nolan, J. M., Schultz, P. W., Cialdini, R. B., Goldstein, N. J., & Griskevicius, V. (2008). Normative social influence is underdetected. *Personality and Social Psychology Bulletin, 34*(7), 913–923. https://doi.org/10.1177/0146167208316691

33. Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising, 19*(3), 39–52. https://doi.org/10.1080/00913367.1990.10673191

34. Okazaki, S., & Mueller, B. (2007). Cross-cultural advertising research: What do we know about the influence of culture on advertising effectiveness? *International Marketing Review, 24*(1), 27–54. https://doi.org/10.1108/02651330710728580

35. Orji, R., Mandryk, R., Vassileva, J., & Gerling, K. (2014). Tailoring persuasive health games to gamer type. *User Modeling and User-Adapted Interaction, 24*(5), 453–498. https://doi.org/10.1007/s11257-014-9149-0

36. Petty, R. E., & Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. Springer-Verlag.

37. Petty, R. E., & Cacioppo, J. T. (2018). *Attitudes and persuasion: Classic and contemporary approaches*. Routledge.

38. Petty, R. E., Wegener, D. T., & Fabrigar, L. R. (1997). Attitudes and attitude change. *Annual Review of Psychology, 48*, 609–647. https://doi.org/10.1146/annurev.psych.48.1.609

39. Rhoads, S. E. (2007). Classifying influence strategies: Historical and contemporary perspectives. *Journal of Social Psychology, 147*(3), 251–272.

40. Rucker, D. D., & Petty, R. E. (2006). Differential effects of assertive and non-assertive influence tactics: Implications for reactance. *Personality and Social Psychology Bulletin, 32*(8), 1012–1025. https://doi.org/10.1177/0146167206288003

41. Spasova, L. (2023). Age differences in adaption of persuasion strategies in advertising. Economics and Sociology, 16(3), 44-64. doi:10.14254/2071- 789X.2023/16-3/3

42. Tabachnick, B. G., & Fidell, L. S. (2019). *Using multivariate statistics* (7th ed.). Pearson.

43. Tuten, T. L., & Solomon, M. R. (2021). *Social media marketing* (4th ed.). Sage Publications.

44. Wilson, R. E., Fornasier, S., & White, K. M. (2010). Psychological predictors of young adults' use of social networking sites. *Cyberpsychology, Behavior, and Social Networking, 13*(2), 173–177. https://doi.org/10.1089/cyber.2009.0094