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AGE DIFFERENCES IN ADAPTION OF PERSUASION STRATEGIES IN ADVERTISING

Lyubomira Spasova

*Department of Social Sciences and
Business Language Training,
Trakia University, Stara Zagora,
Bulgaria*

E-mail: liubomira1975@abv.bg

ORCID 0000-0002-1438-9104

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ABSTRACT. This investigation has three aims: (1) to adapt and modify the STPS questionnaire - developed by Kaptein, Markopoulos, Ruyter and Aarts, (2009) as a basic instrument for measuring achieved social influence; (2) to establish susceptibility to Cialdini's persuasion strategies among different age groups; and (3) to determine the advertising effectiveness achieved through advertising messages- based on persuasion principles. The paper used the adapted and modified STPS questionnaire, measured respondents' individual susceptibility to persuasion strategies relative to their age. The results of the univariate analyses of variance show achieved social influence among different age groups in terms of the principles. For respondents aged 46-55, the principle of social proof and commitment and consistency, are relevant; scarcity is significant for 36-45-years old, while authority is dominant for the 56-65 age groups. Positive correlations were found between the persuasion strategies present in advertising: the presence of the reciprocity principle enhanced the influence of the liking and consistency principles to the greatest extent, while the presence of the scarcity principle enhanced the influence of the authority and reciprocity principles. The consumers' susceptibility to advertising is greatest when consumers' willingness to purchase is measured against the principle of reciprocity, authority and social proof. On the other hand, offering a stimulus in advertising is most successful when the principles of scarcity, authority, and commitment /consistency are present, and least successful when the principle of liking is present. In older age groups, different consumer sensitivity to persuasion in advertising can be achieved with different combinations of persuasion strategies. These research findings are useful for organizations that offer products and services through advertising.

JEL Classification: D20,
M31, M37

Keywords: persuasion principles, social influence in advertisements, STPS, advertising in Bulgaria.

Introduction

In the scientific literature, there is a number of studies on the measurement of advertising effectiveness, as well as much information available on the achievement of advertising impact among different groups of consumers. However, with the advent of mass media and technology, advertising communication takes on a different meaning in achieving targeted and consistent persuasion, as well as in changing consumer behaviour. A number of researchers have found that in order to achieve long-term social influence, advertisements need to apply some personalization at the level of persuasive strategy (Kaptein and Saini, 2010a), rather than follow individual-level theory development (Hutchinson *et al.*, 2001). This is the reason for the application of persuasive digital technologies in advertising communication. They are used to track consumer behaviour and preferences in order to reconstruct advertising calls and appeals (Zanker *et al.*, 2009; Amit and Zott, 2001; Alslaity and Tran, 2020). The scientific literature examining advertising communication as part of persuasive communication provides a variety of theoretical and empirical evidence, which states that issues of achieved persuasion can be better illuminated by establishing individual consumer differences in persuasion (Brug *et al.*, 2003), and creating a measure to distinguish between consumers' advertising responses when applying persuasive strategies. In order to establish individual differences in consumers' responses to advertising strategies (referred to as persuasion principles) for achieving social influence, the effects of using multiple strategies for a single advertisement, and possible means of measuring individual age differences, is this empirical study about consumers' susceptibility to persuasion considered.

The paper is organized as follows: the first section reviews previous literature on the principles of persuasion, and formatting of a reliable and valid instrument for measuring achieved persuasion social influence. In line with this review, hypotheses were formed regarding age differences in the effects of persuasion principles on the general persuasiveness of advertising consumers. In the following sections - 2 and 3, the methodology of the scientific research is presented, including the measurement of susceptibility to persuasion among different age groups, determination of willingness to purchase, and various consumer responses to providing incentives in advertising with persuasion principles. In the last part of the study, a thorough commentary on the obtained results is provided, along with summaries of the achieved social influence among different age groups, as well as recommendations for future research regarding the application of persuasion principles in advertisements.

1. Literature review

Some of the most complex processes in social psychology, subject to analysis and evaluation, are the processes of persuasion and influence, as the achieved effects are always sought among representatives of different societies and groups. The establishment of genuine persuasion through advertising communication is an issue examined in much theoretical and empirical research on social influence, which represents an important application of persuasive communication principles (Johnson, 2004; John & Jackson, 2004). Researchers of advertising influence unite around the view that persuasion differs from influence because persuasion is a method of influence that can be realized in a different communication environment (John & Jackson, 2004). Other researchers, applying the concept of "persuasive influence," indicate that this concept is inherently two-component, encompassing both the process of persuasion and the process of influence (Christov, 2008, p. 62). The aim is to differentiate the essence of these concepts, and also to establish some causal relationships between them. The general view of persuasion is that: "persuasion involves a conscious effort at influencing the thoughts or actions of a recipient" (Bettinghaus, 1994, p.128). Since it conveys specific thoughts and affects human

actions, persuasion is also discussed as part of advertising communication, where goods and services are offered, sales are stimulated, and reactions are provoked. Scholars in psychology and communication define persuasion as "a symbolic process in which communicators try to convince other people to change their attitudes or behaviour regarding an issue through the transmission of a message in an atmosphere of free choice." (Perloff, 2003, p.89). Therefore, the role of the persuasive individual in advertising communication is constantly increasing, with the emphasis in a number of contemporary studies falling on changing the persuasions and behaviour of individual consumers. In the approach of this study, the focus is on different age groups of consumers with specific advertising responses to the individual social influence strategies, applied in advertising communication. The emphasis in this study is not on consumer attitudes, as they represent another aspect of psychological research, but rather on the properties of the strategies of social influence and the responses of advertising consumers to these strategies. For the proper perception of the persuasion principles, proposed by R. Cialdini (Cialdini, 2001; Cialdini, 2016; Cialdini, 2021), as well as for evaluating the effectiveness of each strategy as an operational measure of the achieved persuasiveness of advertising consumer (Kaptein, Markopoulos, Ruyter, and Aarts, 2010b), the literature review will comment on the different strategies, as well as ways of understanding them.

The persuasive principles for achieving social influence have a wide application in the development of persuasive technologies as part of computer-aided design. These technologies include the interactive systems of Fogg (2009), designed to change human attitudes and behaviour, as well as the Persuasive Systems Design (PSD) model, presented by Oinas-Kukkonen and Harjuma (2008a), (Fogg, 2009; Oinas-Kukkonen and Harjuma, 2008). Researchers have found that persuasive technologies can be more effective than their human counterparts because they are more resilient, able to adapt their persuasion strategies to users' responses (Fogg and Eckles, 2007). The same authors point out that influencing through the right message, at the right time, in the right way is important in order to achieve persuasion effectiveness. In another study, Kaptein and Eckles (2010) describe the adaptation of 'the way' by focusing on different means to achieve the goal (Kaptein and Eckles, 2010). Before them, Kellermann, and Cole (1994) collected 64 groups from several taxonomies that describe different persuasion strategies and their operationalisations to achieve social influence (Kellermann and Cole, 1994). Difficulties arise during integrations of the cross-taxonomies motivating human evaluation (Kellermann and Cole, 1994, p. 3), but they are a useful level of analysis that helps to group and distinguish specific influence tactics or implementations of these strategies (Kellermann and Cole, 1994; O'Keefe, 1994). In order to identify the effects of these persuasive strategies, as well as the ways in which they can be combined, Cialdini (2001-2021) has over the years formed seven persuasion principles, based on research on some individual differences of consumers (Cialdini, 2001; Cialdini, 2004; Cialdini, 2016; Cialdini, 2021), achieving influence through both direct and peripheral routes (Petty and Cacioppo, 1986; Petty and Wegener, 1999; Goldstein and Gigerenzer, 2002). While the central route is characterized by addressing the merits of the arguments presented, the peripheral route provides responses to signals peripheral to the central arguments of advocacy (Goldstein and Gigerenzer, 2002). In the present study, it is assumed that the social influence achieved by advertising can be realized through both routes, but at different stages of the influence conduct - during the influence of advertising, and then during the influence exerted through other communications. In order to clarify the scientific content of each persuasion strategy, as well as the social influence achieved among different consumers, the author of this research paper presents a table explaining the essence of persuasion strategies from the first stages of their understanding to their application in practice (*Table 1*).

Table 1. Understanding of persuasion strategies and social influence

Researchers	Understanding strategies and achieved social influence	Persuasion principle
James and Bolstein, Chaldini, Dohmen, <i>et al.</i>	Principle of reciprocity People feel obligated to return a favor (James and Bolstein, 1992). People are inclined or go through a great deal of effort to pay back a favor (Chaldini, 2004, p.75). Trust and positive reciprocity are only weakly correlated, while trust and negative reciprocity exhibit a negative correlation (Dohmen, <i>et al.</i> , 2006).	1.Principle of reciprocity
Chaldini Dare, <i>et al.</i>	Principle of commitment and consistency People align with their clear commitments (Chaldini, 2001, p. 76). Adults tend to experience higher cognitive dissonance (Fesinger, 1957), when new information conflicts with their beliefs, ideas or values and are more responsive to the commitment strategy (Dare, <i>et al.</i> , 2013).	2.Principle of commitment and consistency
Milgram Chaldini Oinas-Kukkonen and Harjumaa	Principle of authority People value the opinion of experts (Milgram, 1974). People defer to experts (Chaldini, 2001, p. 77). Some expert endorsement of a PT could help increase its appeal (Oinas-Kukkonen and Harjumaa, 2009).	3.Principle of authority
West Chaldini	Principle of scarcity People value scarce products (West, 1975). People tend to place more value on things that are in short supply (Chaldini, 2004, p. 69). A product or service is scarce will favor its evaluation and consequently increase the chance of purchase (West, 1975).	4.Principle of scarcity
Chaldini Oinas Kukkonen and Harjumaa	Principle of liking People can be easily influenced or persuaded by someone they like (Chaldini, 2001, p.63). A system that is visually attractive for its users is likely to be more persuasive (Oinas-Kukkonen and Harjumaa, 2009).	5.Principle of liking
Chaldini Clark and Tennessee	Principle of social proof People do as other people do (Chaldini, 2001, p. 75). A large majority of individuals are imitators rather than initiators, and therefore make decisions only after observing the behaviors and consequences on those around them (Clark and Tennessee, 2008).	6.Principle of social proof
Tajfel Chaldini	Principle of unity This principle explains that persuasion can take place when the influencer and the influence share a same identity (Chaldini, 2016, p. 101). The principle of Unity suggests that an individual's behaviour may be influenced by reference to shared identities, the individual may consider themselves to be a member of, together with others (Tajfel, 1978).	7.Principle of unity

Source: *own compilation*

Since the primary goal is to identify some causal relationships between individuals' susceptibility to persuasion strategies and the receipt of more positive advertising responses from consumers, a reliable assessment tool must be proposed. Early research focused on achieving social influence through central and peripheral routes, offering a tool for measure the dual processing of human attitude change (Petty and Cacioppo, 1986). A Need for cognition (NfC) scale was developed to identify individual differences that influence variations in the peripheral and central processing of persuasive messages (Cacioppo *et al.*, 1986). To provide greater clarity about the scope of social influence effects and that individuals are consistent in their attitudes and behaviours, Cialdini, Trost and Newsom (1995) developed a scale to assess individual differences in preference for consistency (PFC), (Cialdini, Trost and Newsom, 1995). Overall, researchers have discovered mixed findings resulting from studies exploring

the achievement of different effects of persuasion strategies for social influence (Kaptein, De Ruyter, Markopoulos and Aarts, 2009). This is why Kaptein, Ruyter, Markopoulos and Aarts (2009) proposed another instrument, called the STPS questionnaire or Susceptibility to Persuasion Strategies Scale, designed to assess potential user responses to subsequent exposure to social influence strategies (Kaptein *et al.*, 2009). In addition to applying measures of the general persuasion tendency for different persuasion principles in advertising, the researcher in this study is interested in advertising effectiveness achieved through the combination of strategies.

Based on these prior studies, the researcher presents the following hypotheses:

Hypothesis 0: There are no age differences in the effects of persuasion principles on the overall persuasiveness of consumers;

Hypothesis 1: There are age differences in the effects of persuasion principles on the overall persuasiveness of consumers;

Hypothesis 2: There are age differences in the effects of persuasion principles compared to the effects of their combined social influence.

Considering previous research on the effectiveness of advertising messages through persuasion principles, this article aims to empirically demonstrate the different consumer susceptibility by adapting and modifying the scale, proposed by Kaptein, Ruyter, Markopoulos and Aarts (STPS), as well as applying some persuasive strategies in advertising (Kaptein *et al.*, 2009). The reasons for conducting the study is that there are contradictions regarding the combination of the persuasion principles, developed by Cialdini, as well as the degree and strength of the impact achieved when applying one or more strategies. The results of this study attempt to contribute the scientific understanding of these issues.

2. Methodological approach

The purpose of this study is to propose a reliable measurement tool for assessing persuasion strategies, an adapted and modified version of the STPS questionnaire or Susceptibility to Persuasion Strategies Scale, developed by Kaptein, Ruyter, Markopoulos, and Aarts (Kaptein *et al.*, 2009). The second objective of the research is to measure age differences in consumers' susceptibility to Cialdini's seven persuasion principles and their combined influence in advertising (Cialdini, 2001; Cialdini, 2016; Cialdini, 2021). Another main part of the research is the subjective-objective assessment of consumers' reaction to various persuasion advertising strategies for social influence, measuring the willingness to purchase and the offering a stimulus.

The proposed Kaptein scale has been adapted and modified by the author as follows: the principle of reciprocity, the principle of scarcity, the principle of commitment and consistency are formed by 5 statements (as in Kaptein); the principle of authority consists of 4 statements in Kaptein and one added by the author of the present work; the principle of social proof consists of 4 statements in Kaptein and one added by the author; the principle of liking consists of 3 statements in Kaptein and 2 added by the author; the principle of unity is based on 5 statements, all proposed by the author of this work. An attempt has been made to evaluate different statements: for the Kaptein scale - STPS questionnaire, and for the additional statements among the study subjects to gather sufficient data. The author suggests different combinations in the advertising message module for evaluating consumers' reactions to an advertisement: 1) advertisements with one persuasion strategy; 2) advertisements with two or more persuasion strategies, meaning the messages in these advertisements contain persuasive statements, proposed by Kaptein, (Kaptein *et al.*, 2009). The respondents answer all modules of the questionnaire, which is available in paper format for more accurate completion, using a five-point Likert-type scale, ranging from 1 - I do not agree, to 5 - I agree. A structured survey

has been conducted, implemented as a questionnaire with the following modules: 1) first module – the STPS questionnaire or Susceptibility to Persuasion Strategies Scale (adapted and modified version); 2) second module – the subjective evaluation of advertisements (the sequence is described below); 3) third module - demographic characteristics of the surveyed respondents.

In the remaining of this article, the author focuses on the use of social influence persuasion strategies in advertising to impact consumer behaviour. The approaches can be as follows: to apply influence through each principle separately or to group together multiple influence strategies (Kaptein, De Ruyter, Markopoulos and Aarts, 2012). Since one strategy can be applied in various combinations as well as individually, the author, in line with other studies (McGree, 2010), adopts both the application of strategies individually and separately in advertising messages to find different advertising effectiveness. The reason is that all persuasive strategies function through different psychological processes, as Cialdini (2001-2021) examines and applies them (Cialdini, 2001; Cialdini, 2016; Cialdini, 2021). The statements in the advertising messages are constructed to align with the persuasion strategies: 1) Statements measuring the willingness to purchase: Cristiano Ronaldo endorsing Nike sports shoes in an advertisement makes me try them on immediately for sport: (authority); An online advertising offering a 10% discount for a short period of time makes me order food at home: (scarcity); An advertisement for a detergent makes me participate in an online game and buy more tickets (commitment and consistency); The presence of a popular influencer in an advertising for a bag with over 7,000,000 likes makes me try the product: (unity and social proof); An expert in online advertising recommends a very rare product - only 100 available in the entire country (authority and scarcity); An advertisement for a detergent makes me participate in an online game and purchase more tickets, which gives me a discount in the product price (commitment / consistency and reciprocity); 2) Statements measuring the offering a stimulus: An online advertisement for pet food stimulates me to try the product because the product has 3,000 likes: (social proof); An advertisement for cosmetics with a beautiful woman stimulates me to try products (liking); An online advertisement recommended by a well-known fitness instructor stimulates me to take advantage of the free service: (authority and reciprocity); An advertisement for cosmetics with a beautiful woman stimulates me to try products, as I will receive discounts shortly (liking, reciprocity and scarcity).

3. Conducting research and results

The study was conducted from the beginning of 2021 to the beginning of 2022. Self-reported data were collected from a total sample of 300 respondents, distributed across six age groups, ensuring a 95% representative sample (being in $\pm 5\%$; $p = q = 0.50$). Respondents were selected based on the following criteria: having information about the advertised content and use of products and services presented in those advertisements. Each case from the general population had an equal chance of being included in the study. All respondents filled out the questionnaire on paper to ensure the accuracy of the responses. According to these criteria, the overall sample consists of 52% man (156 individuals) and 48% women (144 individuals). By age group, 19.7% (59 individuals) are between 18 and 20 years old, 22% (66 individuals) are between 21 and 24 years old, 17.7% (53 individuals) are between 25 and 35 years old, 18.3% (55 individuals) are between 36 and 45 years old, 16.3% (49 individuals) are between 46 and 55 years old and 6% (18 individuals) are between 56 and 65 years old.

The data were processed using the statistical analysis package SPSS 19.0. The following basic statistical analyses were used: Descriptive analysis of frequencies and mean values; Internal consistency for each subscale measuring the different persuasion strategies (Cronbach's alpha coefficient α) as well as for the entire sample; Factor analysis of the main components to

test internal and construct validity; One-way analysis of variance (ANOVA) to examine the influence of age on susceptibility to persuasion based on the persuasion principles; Student's t-test for independent samples to assess the statistical significance of differences in mean values between age groups and between variables; Pearson's correlations to uncover the strength of the relationship between different persuasion strategies in advertising, which constitute the factors (formed scales and subscales); Regression analysis to establish the causal relationship between the susceptibility to persuasion principles and the willingness to purchase, as well as responses to offering a stimulus in advertisements (Ganeva, 2016).

3.1. Reliability and validity of STPS

Since one of the objectives of the study was to determine the internal validity of the Susceptibility to Persuasive Strategies Scale (STPS), the author administered the scale to N = 300 participants. All participants completed 35 statements from the STPS questionnaire (26 statements from Kaptein) and 9 statements from the author. The respondents answered a total of 35 questions on a five-point Likert-type scale, regarding from 1 - I do not agree, to 5 - I agree.

To assess whether the methodology proposed by Kaptein for analysing persuasion principles (Kaptein *et al.*, 2009) could be applied and analysed with the data, a confirmatory factor analysis was used, employing the principal component method. Seven factors, corresponding to the number of subscales in the methodology, were specified. To ensure the suitability of the data collected with the 35-item scale for factor analysis, several well-known diagnostic checks were performed: 1) 34 statements exhibited correlations above 0.400 or higher with other items in the STPS, with one exception ($r=0.318$); 2) The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.766 for the entire sample (N = 300), which is above the recommended value of 0.600, (Kaiser, 1974). 3) Bartlett's test of sphericity was statistically significant for all subjects ($\chi^2(595) = 2445.3$, $p < 0.000$), (Bartlett, 1954). The measure of adequacy for each subscale of the STPS questionnaire was also checked, and the following values were obtained: for the liking subscale, KMO was 0.759; for the scarcity subscale, KMO was 0.719; for the reciprocity subscale, KMO was 0.672; for the authority subscale, KMO was 0.705; for the commitment and consistency subscale, KMO was 0.697; for the social proof subscale, KMO was 0.689; for the unity subscale, KMO was 0.630. Bartlett's tests of sphericity for each subscale were also statistically significant for all subjects ($p < 0.000$), (Bartlett, 1954).

The principal component analysis (PCA) method with Varimax rotation was used to analyse the data. The extracted communalities ranged from 0.340 to 0.772 for all sample, which is considered satisfactory (*Table 2*). Factor loadings greater than 0.400 were considered for clarity of factor definitions. With these positive indications, an exploratory factor analysis was conducted, including all 35 items that were applied. Rotations were performed with 5, 6, and 7 factors, but the author adopted the 7-factor solution, based on the latent variables representing the 7 subscales used to construct the components of the STPS questionnaire (Kaptein *et al.*, 2009). After applying principal component analysis (PCA), it was determined that 7 factors could be accepted, as the factor loadings obtained ranged from 0.772 to 0.481, which is acceptable to forming each factor, (*Table 2*).

Table 2. Factor loadings based on PCA with Varimax rotation for 35 items of the STPS

Items from STPS	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
34. Liking-author's item	0.605						
20. Liking	0.562						
23. Authority	0.555						
13. Liking	0.451						
32. Liking-author's item	0.448						
27. Authority	0.413						
19. Social proof	0.394						
24. Social proof		0.681					
33. Social proof-author's item		0.678					
11. Social proof		0.589					
7. Commitment/ consistency			0.626				
5. Commitment/ consistency			0.609				
15. Commitment/ consistency			0.519				
18. Commitment/ consistency			0.481				
28. Commitment/ consistency			0.365				
16. Social proof			0.340				
9. Scarcity				0.772			
10. Scarcity				0.672			
6. Scarcity				0.645			
2. Scarcity				0.570			
8. Scarcity				0.514			
17. Reciprocity					0.681		
3. Reciprocity					0.620		
4. Reciprocity					0.585		
1. Liking					0.433		
25. Reciprocity					0.429		
22. Reciprocity					0.410		
31. Unity-author's item						0.692	
35. Unity-author's item						0.688	
29. Unity-author's item						0.673	
26. Unity-author's item						0.670	
21. Unity-author's item						0.660	
30. Authority-author's item							0.594
12. Authority							0.576
14. Authority							0.525

Source: *own compilation*

The overall cumulative variance explained by all seven factors is 53%, which falls within the general range for multidimensional constructs. *Table 2* provides a general overview of the loadings of each of statement forming one of the subscales. Due to relatively low loadings, three statements are removed from the scale: 19. Social proof- 0.393; 28. Commitment and consistency – 0.365; 16. Social proof – 0.340, as well as those that did not form a factor. Reducing the solution from seven items to 32 statements increased the cumulative variance from 53% to 58%, with some cross-loadings of factors. Therefore, these statements need to be removed. From the obtained factors, it was found that the first subscale is Liking-2 items, the second subscale is Social proof - 3 items, the third subscale is Commitment and consistency - 4 items, the fourth subscale is Scarcity - 5 items, the fifth subscale Reciprocity - 3 items, the sixth subscale is Unity – 5 items, and the seventh subscale Authority – 3 items. The eigenvalues for the factors, as presented in *Table 2*, meet the requirement to be greater than 1. The data were analysed using factor analysis with the principal component method; Varimax rotation with Kaiser normalization; the factor loadings are arranged in descending order for each factor, with the smallest value being 0.481. In our further assessment of the use of adapted advertising messages for achieving persuasive social influence, the STPS questionnaire with 25 items (seven subscales) will be applied as a measure to determine respondents' individual

susceptibility to different strategies. The next paragraph operationalizes the advertising messages that are used to measure persuasive influence.

For each of the seven factors, a composite score was calculated from the mean values of the statements, ranging from 2 to 5 statements in each subscale, (Table 3).

Table 3. Mean values and standard deviation of subscales in STPS questionnaire

Subscales	Items	Means	Std. Deviation
Liking	2	3.52	1.17
Social Proof	3	3.43	1.06
Commitment and consistency	4	3.67	1.00
Scarcity	5	3.44	0.97
Reciprocity	3	3.49	1.18
Unity	5	3.22	1.05
Authority	3	3.42	0.89

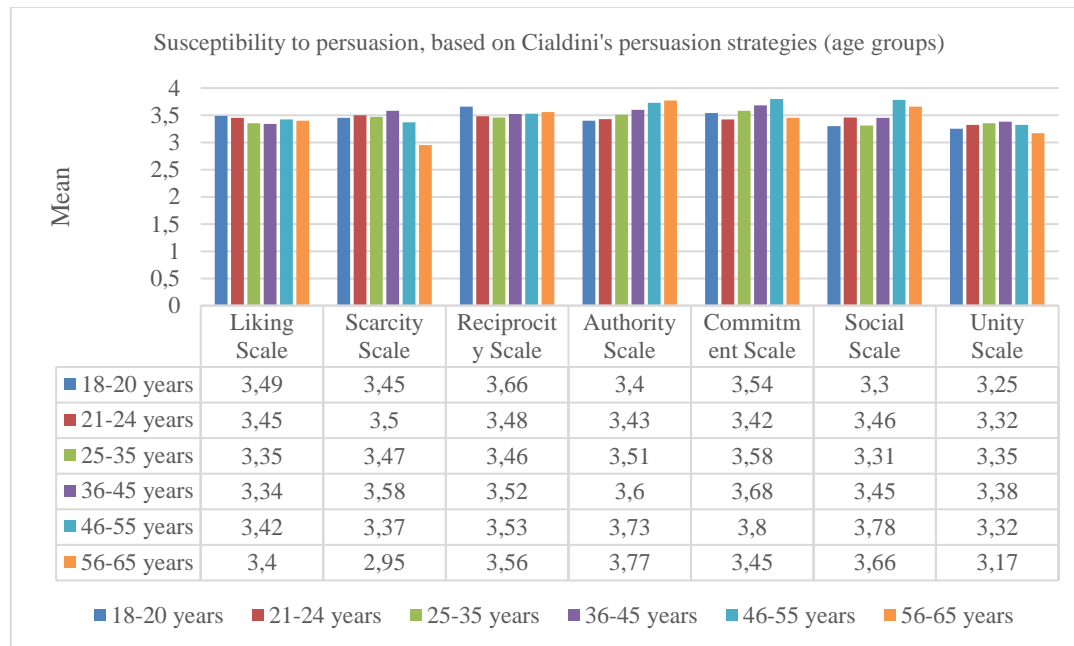
Source: *own compilation*

Cronbach's alpha was used to test the reliability of the adapted and modified version of the STPS questionnaire (Kaptein *et al.*, 2009). The reliability of Liking Scale is $\alpha=0.77$, the reliability of Social Scale is $\alpha=0.82$, the reliability of Commitment and Consistency Scale is $\alpha=0.79$, the reliability of Scarcity Scale is $\alpha=0.95$, the reliability of Reciprocity Scale is $\alpha=0.92$, the reliability of Unity Scale is $\alpha=0.85$, the reliability of Authority Scale is $\alpha=0.78$. For the entire sample, the Cronbach's alpha coefficient is $\alpha=0.803$. Since the values exceed the minimal recommended value of $\alpha=0.700$ (DeVellis, 2012), the internal consistency for the respective subscales is sufficiently high, meaning that the items comprising them form a consistent scale.

To test the construct validity of the subscales in the STPS questionnaire for the sample analysed sample, the hypothesis that each subscale should have a positive correlation with the other subscales was tested. Pearson's correlation coefficient was used to test the validity of the subscales. All correlations from the newly obtained results were positive, statistically significant, and range from $r=0.233$ to $r=0.588$; $p<0.000$. These are mainly moderate positive correlations. These values of Pearson correlation coefficient confirm the construct validity of the subscales for the analysed sample. A comparative analysis with other studies revealed that the correlations between the results of the subscale also range from 0.200 to 0.400 (Kaptein *et al.*, 2012b). In other words, the results in our study for the adapted and modified instrument measuring persuasion strategies for social influence are entirely acceptable. According to Kaptein, De Ruyter, Markopoulos, and Aarts (2012), when subscales are moderately internally reliable and correlations between subscales are relatively moderate, the STPS questionnaire does measure individuals' susceptibility to different strategies (Kaptein *et al.*, 2012, p. 9). Therefore, the investigation of the adapted and modified version of the STPS questionnaire can be continue (Kaptein *et al.*, 2009).

3.2. Age differences in susceptibility to persuasion principles

The susceptibility to persuasion in different age groups, based on different principles, is presented in *Graph 1*, from which the mean values on each subscale can be seen, (*Graph 1*).



Graph 1. Susceptibility to persuasion, based on different principles of the Cialdini's classification. Source: *own data*

The susceptibility to persuasion based on different principles is moderate on average for the individual subscale, which is observed across various age groups (*Graph 1*). The graph shows that respondents aged 18 to 20 have the highest average value on the reciprocity subscale (Mean=3.66), while respondents aged 21 to 24 have the highest average value on the scarcity subscale (Mean=3.50). For respondents aged 25 to 35 and respondents of mature age groups: 36-45 years and 46-55 years, the highest average values are observed for the commitment and consistency subscale (Mean=3.58; Mean=3.68; Mean=3.80). As for respondents in the oldest age group: 56-65 years old, they have the highest average values on the authority subscale (Mean=3.77), (*Graph 1*).

To determine the influence of persuasion principles on different respondent groups formed by age, a one-way analysis of variance (ANOVA) was applied. The hypothesis that the mean scores on the social proof scale differ across age groups was also tested, and the results of the one-factor analysis of variance (ANOVA) are presented in *Table 4*.

Table 4. Influence of age on the persuasion principle of social proof (ANOVA)

Independent variable	Dependent variable	Mean	F, p	T-test
Age	Principle of social proof	X1 (18-20 years old) = 3.30	F=2.46 p<0.03	t _{1,2} = 2.88; p < 0.03
		X2 (21-24 years old) = 3.46		t _{2,3} = 2.82; p < 0.00
		X3 (25-35 years old) = 3.32		t _{3,4} = 3.01; p < 0.00
		X4 (36-45 years old) = 3.45		t _{4,5} = 2.94; p < 0.02
		X5 (46-55 years old) = 3.78		t _{4,6} = 2.97; p < 0.05
		X6 (56-65 years old) = 3.66		t _{1,6} = 3.33; p < 0.05

Source: *own calculation*

There was a statistically significant difference between the studied age groups, with younger respondents aged 21 to 24 years having the highest average scores on the social proof scale, where $F = 2.46$; $p < 0.03$; $x_2 = 3.46$, compared to the other younger age groups: $t_{1,2} = 2.88$; $p < 0.03$ and $t_{2,3} = 2.82$; $p < 0.00$, (*Table 4*). Many researchers share the opinion that social proof

is a powerful persuasive tool, with its manifestations being particularly emphasized in situations of uncertainty. This is the moment when individuals are most interested in the beliefs and behaviors of others, thus accurately establishing their own (Latané and Nida, 1981; Cialdini, 2001). Furthermore, most sources with such confirming information reinforce individuals' beliefs about their final decisions (Latané and Bourgeois, 1996). A similar phenomenon has been observed among young people in situations of rapid decision-making, where monitoring the behavior of celebrities on social networks is a powerful source of social influence (Wilson, Fornasier and White, 2010).

When comparing the more mature age groups, it is found that the respondents in their mature age, that is, individuals aged 46 to 55, who are actively engaged in life and profession, declare the strongest influence of the persuasion strategy – Social proof. The mean values are $F = 2.46$; $p = 0.03$; $x_4 = 3.78$, compared to other older respondents: $t_{4,5} = 2.94$; $p < 0.02$ and $t_{4,6} = 2.97$; $p < 0.05$, (Table 4). In mature age, people seek consensus among different viewpoints, possessing the ability to minimize the stress and conflict arising from competing opinions or behaviors (Asch, 1955). This activates a persuasion system, where expert opinions are sought for processing complaints affecting persuasion.

The results from the analysis of variance (ANOVA) show that age has a statistically significant effect on susceptibility to persuasion through the principle of commitment and consistency (Table 5).

Table 5. Influence of age on the persuasion principle of commitment and consistency (ANOVA)

Independent variable	Dependent variable	Mean	F, p	T-test
Age	Principle of commitment and consistency	X1 (18-20 years old) = 3.54	F=3.16 p<0.00	$t_{1,2} = 2.78$; $p < 0.00$
		X2 (21-24 years old) = 3.42		$t_{2,3} = 3.52$; $p < 0.00$
		X3 (25-35 years old) = 3.58		$t_{1,3} = 3.12$; $p < 0.03$
		X4 (36-45 years old) = 3.68		$t_{1,4} = 2.78$; $p < 0.00$
		X5 (46-55 years old) = 3.80		$t_{4,5} = 3.47$; $p < 0.00$
		X6 (56-65 years old) = 3.45		$t_{5,6} = 3.36$; $p < 0.00$

Source: own calculation

When analyzing and comparing the obtained results, an increase in the average values of the respondents on this principle is observed with the increase in the age of the respondents in the more mature groups. Among these three groups, respondents aged 46 to 55 are statistically significantly more susceptible to persuasion through the principle of commitment and consistency ($F = 3.16$; $p < 0.000$; $x_5 = 3.80$), compared to respondents from the other mature age groups ($t_{4,5} = 3.47$; $p < 0.00$; $t_{5,6} = 3.36$; $p < 0.00$), (Table 5). The obtained results are a consequence of individuals' tendency to engage in and maintain logically consistent persuasions and actions (Cialdini, 2001), as adults are more prone to experience higher cognitive dissonance (Festinger, 1957) when new information conflicts with their beliefs, ideas or values and they need to respond to the commitment strategy (Dare, *et al.*, 2013). Therefore, as individuals mature, their inclination to take on commitments and follow through on them intensifies. Additionally, Guadagno and Cialdini (2010) demonstrated in their study that commitment and consistency strategy is effective only for individuals who have high scores on the preference for consistency scale (PFC), (Guadagno and Cialdini, 2010). The same authors found that individuals with low scores on the scale tend to prefer change, spontaneity and unpredictability in their responses to social stimuli and do not strongly preference for conformity with past behavior (Guadagno and Cialdini, 2010, p. 158). Therefore, it is necessary to investigate other factors that may influence the effectiveness of the strategies.

Statistically significant results were found when measuring scarcity principle, and the results of a one-way analysis of variance (ANOVA) are presented in *Table 6*.

Table 6. Influence of age on the persuasion principle of scarcity (ANOVA)

Independent variable	Dependent variable	Mean	F, p	T-test
Age	Principle of scarcity	X ₁ (18-20 years old) = 3.45	F=3.55 p<0.00	t _{1,2} = 3.05; p < 0.00
		X ₂ (21-24 years old) = 3.50		t _{2,3} = 3.02; p < 0.00
		X ₃ (25-35 years old) = 3.48		t _{2,5} = 2.96; p < 0.00
		X ₄ (36-45 years old) = 3.59		t _{3,4} = 3.14; p < 0.03
		X ₅ (46-55 years old) = 3.38		t _{4,6} = 3.17; p < 0.00
		X ₆ (56-65 years old) = 2.96		t _{5,6} = 2.72; p < 0.00

Source: *own calculation*

The mean value of the scarcity principle for different ages are distinct, with the highest average values on the subscale being observed in respondents aged 36 to 45, where $F = 3.55$; $p < 0.00$; $x_4 = 3.59$, compared to other age groups: $t_{3,4} = 3.14$; $p < 0.03$ and $t_{4,6} = 3.17$; $p < 0.00$, (*Table 6*). Perceived scarcity increases the perceived value of the products and the offered opportunities (Cialdini, 2001). In our study, susceptibility to this principle was also found among respondents aged 21 to 24, where $F = 3.55$; $p = 0.00$; $x_2 = 3.50$, compared to the other younger age groups: $t_{1,2} = 3.05$; $p < 0.00$ and $t_{2,3} = 3.02$; $p < 0.00$, (*Table 6*). This is because advertisers and marketers often use phrases such as: "limited release" and "while supplies last" (Lynn, 1991). There is ample evidence that identifying a product or service as scarce positively influences consumer attitudes and increase the likelihood of purchase (West, 1975; Eisend, 2008). Other studies have found that people desire scarce products more because owning such products creates a sense of personal distinctiveness or uniqueness in individuals (Kaptein and van Halteren, 2013), when they possess them (Fromkin, 1970; Snyder and Fromkin, 1980).

The results of the subsequent analysis of variance (ANOVA) show that age has a statistically significant effect on susceptibility to persuasion through the principle of authority (*Table 7*).

Table 7. Influence of age on the persuasion principle of authority (ANOVA)

Independent variable	Dependent variable	Mean	F, p	T-test
Age	Principle of authority	X ₁ (18-20 years old) = 3.40	F=2.84 p<0.05	t _{1,4} = 3.20; p < 0.03
		X ₂ (21-24 years old) = 3.43		t _{2,5} = 3.56; p < 0.00
		X ₃ (25-35 years old) = 3.51		t _{3,5} = 3.60; p < 0.00
		X ₄ (36-45 years old) = 3.60		t _{2,4} = 3.05; p < 0.00
		X ₅ (46-55 years old) = 3.73		t _{4,6} = 3.06; p < 0.00
		X ₆ (56-65 years old) = 3.77		t _{5,6} = 3.03; p < 0.05

Source: *own calculation*

A statistically significant difference is observed between the studied age groups, with the highest mean values on the authority scale found among the oldest respondents - aged 56 to 65, where $F = 2.84$; $p < 0.05$; $x_6 = 3.77$, compared to the other age groups: $t_{4,6} = 3.06$; $p < 0.00$ and $t_{5,6} = 3.03$; $p < 0.05$, (*Table 7*). Furthermore, a trend of increasing susceptibility to authoritative statements with age is identified, meaning the lowest susceptibility is observed among the youngest respondents $x_1 = 3.40$. The reason is that consumers often encounter product endorsements from experts, such as "expert reviews". Authority is considered a form of social influence (Martin and Hewstone, 2003), which is very effective, as a certain level of

responsibility and obedience to authority is crucial for the existence of any social community (Modigliani and Rochat, 1995; Cialdini, 2001). On the other hand, a number of researchers argue that authority can have both a positive and a negative influence on an individual's behavior when people's perception of freedom of choice is threatened (Fuegen and Brehm, 2004).

3.3. Implementations of persuasive advertisements to achieve social influence

Adapting persuasion strategies into advertising messages proves to be a challenging task for researcher, as the proposed statements must be very well understood by advertising consumer. To achieve this goal, the researcher aims to present respondents with statements for evaluation in advertisements, closely resembling the content of persuasion strategies. Pearson's correlation coefficient was used to measure the linear relationship between advertisements containing statements from the subscales in the STPS questionnaire. Pearson correlations indicate positive statistically significant connections between persuasive statements applied in advertisements, (Table 8).

Table 8. Correlations between advertisements with persuasion strategies ($p < 0.000$)

Advertisements	Authority Ad	Social proof Ad	Scarcity Ad	Commitment consistency Ad	Liking Ad	Reciprocity Ad	Unity Ad
Authority Ad	-	0.651**	0.716**	0.514**	0.511**	0.664**	0.611**
Social proof Ad	0.651**	-	0.515**	0.471**	0.400**	0.550**	0.747**
Scarcity Ad	0.716**	0.515**	-	0.712**	0.677**	0.703**	0.656**
Commitment consistency Ad	0.514**	0.471**	0.712**	-	0.627**	0.623**	0.529**
Liking Ad	0.511**	0.400**	0.677**	0.627**	-	0.858**	0.722**
Reciprocity Ad	0.664**	0.550**	0.703**	0.623**	0.858**	-	0.822**
Unity Ad	0.611**	0.747**	0.656**	0.529**	0.722**	0.822**	-

Source: own calculation

The correlation analysis has showed that the assumptions of normality, linearity and homogeneity were not violated. The linear correlations between the variables ranged from moderately positive, $r = 0.400$, $p < 0.000$ to very strong $r = 0.858$, $p < 0.000$, with a sample - $N = 300$, (Table 8). The strongest proportional dependencies for the examined sample indicate the following: 1) Greater persuasiveness of advertisements containing the reciprocity principle is associated with greater persuasiveness of the liking principle ($R = 0.858$; $p < 0.000$), as well as with the principle of unity ($R = 0.822$; $p < 0.000$); 2) Greater persuasive power of advertisements containing the scarcity principle is connected with greater persuasive power of the authority principle ($R = 0.716$; $p < 0.000$) as well as with the reciprocity principle ($R = 0.703$; $p < 0.000$); 3) Greater persuasiveness of advertisements containing the liking principle is associated with greater persuasiveness of the unity principle ($R = 0.722$; $p < 0.000$); 4) Greater persuasive power of advertisements containing the social proof principle is connected with the greater persuasive power of unity principle ($R = 0.747$; $p < 0.000$); 5) The weakest persuasive strength is observed between the social proof principle and the commitment and consistency principle ($R = 0.471$; $p < 0.000$), as well as the liking principle ($R = 0.400$; $p < 0.000$).

Another study also found that social proof is the only persuasive principle whose persuasive strength does not strongly correlate with the persuasive power of three other principles: reciprocity, commitment and consistency, and unity. However, this study only

considered three age groups (Spasova, 2022). In the current study, the persuasive power of the reciprocity principle is highlighted, which is enhanced when combined with principles such as liking, unity, authority and scarcity. In practice, various cognitive methods are employed to influence attention and behavior of consumers, as marketers and advertisers use quantitative propositions (e. g., ‘the product is nearly sold out’) or (‘the expert recommends this product’). All of this leads to a rapid and relatively accurate assessment of the product’s merits, as the consumer, without engaging in complete and prolonged cognitive processing, makes choices based on precise peripheral cues (Goldstein and Gigerenzer, 2002). Therefore, the application of different persuasion strategies is effective both in marketing and advertising (Payan and McFarland, 2005), especially when combined under certain conditions.

Nevertheless, another study indicated that combining multiple strategies does not always enhance persuasion, and administering various measures from the questionnaire can be used for a reliable assessment of people’s susceptibility to different persuasion strategies (Kaptein, Markopoulos, Ruyter and Aarts, 2010b). Therefore, the primary task for advertising and marketing specialists is to identify how the means by which persuasive claims are made in persuasive advertisements can be combined to increase their impact (Kaptein *et al.*, 2010b). These results emphasize the need for creating advertising messages tailored to individual preferences based on consumer responses. In their study, Kaptein and van Halteren (2013) generalize that when designers pay attention to individual differences in consumers’ reactions to the use of persuasion principles, they will design and create the appropriate influence strategy to be used for a specific user basis on the expected success of this strategy (Kaptein and van Halteren, 2013). In order to establish some of the individual reactions, the researcher in the current study offers adapted versions of the persuasion strategies to assess advertising consumers. The purpose of these messages is twofold: the first group of statements aims to determine willingness to purchase, and the second group is aimed at assessing the achieved influence by providing incentive.

In order to establish the linear relationship between the willingness to purchase a product or service under the influence of persuasion advertising principles, a linear regression analysis was conducted (*Table 9*).

Table 9. Persuasion strategies with willingness to purchase, regression analysis (β , p)

		Susceptibility to persuasion persuasions							Adjusted R ²
		Reciprocit y	Scarcity	Authority	Commitment andconsisten cy	Social proof	Liking	Unity	
Adverti sements with different persuasion strategies (willingness to purchase)	Reciprocity	0.03	0.17	0.327*	0.367*	0.18	0.28	-0.10	0.41
	Scarcity	0.18	0.01	0.19	0.29	0.221*	0.15	0.12	*
	Authority	0.274*	0.303**	0.01	0.194	0.016	0.110	-0.09	0.15
	Commitmentand consistency	-0.019	0.129*	0.00	0.014	-0.34	0.015	-0.08	*
	Social proof	0.242	0.251	0.423*	-0.187	0.00	0.254	0.278*	0.21
	Liking	0.027	-0.127	0.173	0.024	-0.366	0.00	0.140*	*
	Unity	0.210	0.112	0.008	0.096	0.078	-0.340*	0.01	*

Source: *own calculation*

The susceptibility to persuasion in advertisements with reciprocity principle determines the willingness to purchase determines the authority principle, as well as the commitment and consistency principle to the greatest extent, ($\beta = 0.327$; $p < 0.05$; $\beta = 0.367$; $p < 0.05$), (*Table 9*). A combined social influence of these persuasion principles in advertising has been established. The value of the adjusted coefficient of determination is $R^2 = 0.41$, which means that 41% of the variation for willingness to purchase can be explained by the presented regression model, which, according to Cohen (1988), represents a moderate effect (Cohen, 1988).

According to some authors, peripheral cues provide a cognitively easy direct route to moderately effective decision-making for a product or service (Petty and Wegener, 1999; Goldstein and Gigerenzer, 2002). However, other studies have found that not all psychological theories predict a positive effect of authority endorsement and reciprocity, as Fuegen, and Brehm (2004) utilize the theory of reactance to explain how authority endorsement can lead to negative effects when people perceive their freedom of choice to be threatened (Fuegen, and Brehm, 2004). Consequently, authoritative arguments can have both positive or negative effects on attitudes and behavior, but in our case, we observe a positive advertising response, reinforced by the influence of reciprocity and commitment. The effect of consistent and committed action is achieved through advertising, leading to a reduction in cognitive dissonance (Festinger, 1957).

A statistically significant causal relationship has been established between the principles of authority, reciprocity and scarcity, as well as between willingness to purchase ($\beta = 0.274$; $p < 0.05$; $\beta = 0.303$; $p < 0.00$). The value of the adjusted coefficient of determination is $R^2=0.15$, with combined scarcity (*Table 8*). The scarcity effect, the most popular of which is based on the theory of commodity (Brock, 1968), states that individuals desire scarce products more due to the sense of uniqueness among other consumers (Kaptein and van Halteren, 2013). Similarly, susceptibility to persuasion is observed with the social proof principle, as indicated in another study (Spasova, 2022). The strength of this principle is supported by the authority and unity principles in the present study, as multiple processes were employed to apply this principle, such as celebrity endorsements and accepting authoritative opinions ($\beta = 0.423$; $p < 0.05$; $\beta = 0.278$; $p < 0.05$). The value of the adjusted coefficient of determination is $R^2=0.21$, with a combined social influence (*Table 9*). Researchers have also discovered, similar to the authority principle, processes where adverse effects of the influence of social proof are observed. Conway and Schaller (2005) use the theory of attribution to explain how individuals reject the value of social proof under certain conditions (Conway and Schaller, 2005). Therefore, more resilient advertising effects can be achieved by applying multiple strategies to an advertising message under certain conditions without decreasing the likelihood of perceiving positive advertising responses among individuals.

In order to establish the linear relationship between the offering a stimulus in advertising with different persuasion strategies, a linear regression analysis was conducted (*Table 10*).

A statistically significant cause-and-effect relationship has been established between the authority principle in advertising and consumers' susceptibility to the reciprocity principle ($\beta = 0.344$; $p < 0.05$), (*Table 10*), and this was achieved when there is an offering a stimulus in the advertising. The value of the adjusted coefficient of determination is $R^2=0.33$, with combined social influence (*Table 10*). Similarly, there is a weak but statistically significant effect of social influence through the liking principle in advertising, which can be explained by the fact that individuals tend to respond positively to people they like (Cialdini, 2001) or approve of certain criteria. Many studies have linked the liking process of the individual presenting the product in the advertisement to the perceived value of the product, leading to the acceptance of the offered product (Latané, and Bourgeois, 1996). What enhances the influence of the liking strategy is the presentation of a product by an authoritative person that we like (Kaptein *et al.*, 2010b), a process also supported by our study, ($\beta = 0.169$; $p < 0.00$), (*Table 10*). The value of the adjusted

coefficient of determination is $R^2=0.19$, (*Table 10*), with combined social influence of these principles. Therefore, there are differences in the effects of persuasion principles compared the effects of their combined social influence, and researchers need to pinpoint conditions for successful social influence more precisely.

Table 10. Persuasion strategies with an offering a stimulus, regression analysis (β , p)

		Susceptibility to persuasion persuasions							Adjusted R^2
		Reciprocity	Scarcity	Authority	Commitment and consistency	Social proof	Liking	Unity	
Advertisements with different persuasion strategies (offering a stimulus)	Reciprocity	0.01	0.11	0.122	0.006	-0.02	0.18	0.14	*
	Scarcity	0.13	0.05	-0.34	0.334*	0.221*	0.140	0.177	0.20
	Authority	0.344*	0.290	-0.119	0.135	0.00	-0.11	0.00	0.33
	Commitment and consistency	0.19	0.123	0.033	0.015	0.225*	0.066	0.04	*
	Social proof	0.110	0.350	0.00	0.120	0.216	-0.29	-0.44	*
	Liking	0.25	0.11	0.169**	-0.10	-0.006	0.002	0.15	0.19
Unity	0.11	0.24	0.00	-0.06	0.01	0.15	0.11	*	

Source: *own calculation*

Susceptibility to persuasion in advertisements with scarcity principle in product offerings enhances the achieved influence of the commitment and consistency principle, as well as the social proof principle ($\beta = 0.334$; $p < 0.05$; $\beta = 0.221$ $p < 0.05$), (*Table 10*). The value of the adjusted coefficient of determination is $R^2=0.20$, with a combined social influence of these principles. (*Table 10*). The negative effects of scarcity should not be underestimated, which can be explained by the theory of reactance (Brehm, 1966) and the theory of cognitive dissonance (Festinger, 1957). Therefore, not every achieved influence leads to positive advertising responses from advertising consumers, as the theory of reactance predicts effects of scarcity only when the considered product represents an important right or freedom (Kaptein *et al.*, 2010b). If freedom of choice is threatened or only limited (Fuegen, and Brehm, 2004), individuals are inclined to resist the imposed restriction, which reduces cognitive dissonance (Festinger, 1957), but does not necessarily lead to a purchase. Thus, our study provides some answers regarding the combined impact of advertising through persuasion strategies, but also raises many new unexplored questions.

Conclusion

Establishing individual susceptibility of consumers to Cialdini's (2001-2021) seven persuasion principles and their combined impact in advertising is a task that does not always lead to positive advertising effectiveness, (Cialdini, 2001; Cialdini, 2016; Cialdini, 2021). The accuracy of measurement requires the application of a reliable and valid instrument, an adapted and modified version of the STPS questionnaire (Kaptein *et al.*, 2009), and the design of

appropriate persuasive advertising implementations. To determine the social influence achieved through advertising, consumers' positive and negative advertising responses to their willingness to purchase and to the offering a stimulus have been examined. In order to shed some light on the subject, the present study applies the STPS questionnaire with 25 (seven subscales) statements as a measure to determine the individual respondents' susceptibility to different strategies (Kaptein *et al.*, 2009). The results of the analysis of variance showed that age had a statistically significant effect on susceptibility to persuasion through the following principles: social proof, commitment and consistency, scarcity and authority, with each age group exhibiting different varying levels of susceptibility to the presented persuasion strategies.

Social proof, as a powerful persuasion tool, achieves its greatest effect among respondents in the mature age group, 46 to 55, and young adults, 21 to 24. In the search for consensus among differing viewpoints, individuals tend to reduce cognitive tension from cognitive dissonance (Festinger, 1957) by following the behavior of a larger group of people. This empirical result is relevant to individuals' striving to engage and maintain logically consistent persuasions and actions (Cialdini, 2001), when new information conflicts with their beliefs, ideas, or values, and they need respond to the commitment strategy (Dare, *et al.*, 2013). The findings from our study regarding the influence achieved through the commitment and consistency principle show that individuals' maturity increase their propensity to take on commitments and follow through. Consequently, it is observed that when a product or service is positioned as scarce, persuasion social influence on consumer attitudes is largely achieved (West, 1975; Eisend, 2008), which was particularly successful among individuals aged 36 to 45 years old. Some researchers empirically demonstrate that owning such products creates sense of personal distinctiveness or uniqueness among these consumers (Kaptein and van Halteren, 2013). The strength of the authority persuasion strategy should not be underestimated either, as it is most evident among individuals aged 56 to 65. In a completely orthogonal relationship with both the commitment and consistency principles, a tendency to conform to authoritative opinions is also clearly present among respondents in the study, with an increases in age. Hence, it confirms once again the statement that consumer susceptibility to advertising largely depends on their belonging to a specific age group, as pointed out in our previous research (Spasova, 2022), as well as on the ways of combining various persuasion strategies in advertising.

Although some researches suggesting that combining multiple strategies does not always enhance persuasion (Kaptein *et al.*, 2010b), our study reveals numerous positive correlations among persuasive strategies present in advertising. The application of the reciprocity principle also leads to increased advertising effectiveness for the liking principle, as well as the unity principle. Similarly, the scarcity principle correlates, enhancing the advertising effectiveness for both the authority and reciprocity principles. The lack of persuasion influence through the social proof principle in advertising is also evident when the commitment and consistency principle, as well as the liking principle, are simultaneously applied.

In order to demonstrate the actual advertising impact achieved among different advertising consumers, some adaptations of advertising influence were designed using Cialdini's (2001-2021) persuasion strategies (Cialdini, 2001; Cialdini, 2016; Cialdini, 2021). When separating the statements describing various persuasions, several achieved influences were discovered both the willingness to purchase and the offering a stimulus. Susceptibility to persuasion in advertisements with the reciprocity principle primarily determined the willingness purchase based on the authority principle, as well as the commitment and consistency principle to the greatest extent. The effect of consistent and committed action is also achieved through advertising, leading to the reduction of cognitive dissonance (Festinger, 1957). However, some negative advertising responses among advertising consumers cannot be

excluded from the authority approval or the reciprocity principle, as individual freedom of choice must be affirmed (Fuegen and Brehm, 2004).

Similarly, but not to the same extent, a causal relationship between the authority principle in advertising and consumers' susceptibility to the reciprocity and scarcity principle is discovered. Individuals' desire to possess scarce products due to a sense of uniqueness (Kaptein and van Halteren, 2013) can also be explained by the reduction of cognitive dissonance (Festinger, 1957) resulting from the final decision.

In the process of providing incentives in advertising, advertising effectiveness is achieved through the authority and reciprocity principles. The application of the liking principle also serves as a measure of influence alongside the authority principle, as there is a transfer of preference from the individual to the offered product (Cialdini, 2001). In our study, the susceptibility to persuasion in advertisements with the scarcity principle in product offerings was also demonstrated, reinforcing the achieved influence of the social proof principle, as well as the commitment and consistency principle. Therefore, there are differences in the effects of persuasion principles when considering their combined social influence, and researchers need to more precisely establish the conditions for successful social impact. The approaches used in this study allow researchers to expand their understanding of persuasion strategies and assess the utility of persuasive social influence in advertising. The proposed research findings can serve a variety of marketing, advertising, and social psychologists applying persuasion communication in their practice.

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