

When Advertising Seeks to Save Lives: A Comparative Social Perception of Public Health Communication Campaigns and Their Application to Road Safety

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ABSTRACT

Introduction: This study evaluates the social perception of social communication campaigns and, in particular, traffic and road safety campaigns, establishing relationships regarding their effectiveness in comparison with commercial advertising. **Methodology:** The study is based on a combination of qualitative and quantitative techniques, including analyzes conducted with SPSS and Alceste software. These techniques are applied to communication campaigns according to parameters such as recall, attention, information transmission, attitude change and behavioral change, as well as to the assessment of communicative strategies such as realism, humor, fear and empathy, among others. The perceived effectiveness of different preventive measures aimed at reducing road traffic accidents is also evaluated, and proposals for improvement are collected through open-ended questions. **Discussion and Results:** The study participants considered commercial advertising to be more effective than social advertising, especially in terms of recall, attention, and changes in attitudes and behaviors. Traffic campaigns are perceived as more memorable and as having a greater capacity to capture attention than other social campaigns, although their overall effectiveness is considered limited and their perceived efficacy low. **Conclusions:** Citizens' perception of social communication campaigns, particularly those related to traffic and road safety, does not always coincide with the current effectiveness of the communicative techniques applied. These aspects need to further refine the design of communication campaigns so that they are better aligned with their social purposes and can increase their capacity for awareness-raising and prevention.

Keywords: social marketing; social perception; communication strategies and effectiveness; traffic and road safety; public health.

1. INTRODUCTION

Raising public awareness and promoting well-being and safety necessarily involves the strategic implementation of social communication campaigns (Gupta et al., 2021). Significant resources and effort are invested in their design and execution to achieve the objectives of modifying and/or modulating risky behaviors. However, little research has been conducted on the effectiveness of these campaigns, and only a few variables, such as recall, have been investigated (Sivakumaran et al., 2023). Some studies indicate that the public has a higher recall rate for commercial advertisements than for social or public health campaigns, due to various factors, such as the greater frequency and repetition of the message in commercial advertising across different media compared to awareness campaigns (Shen et al., 2021; Whang & Lee, 2025).

Due to the importance and prevalence of road traffic accidents, which are a leading cause of death and disability globally (World Health Organization, 2023), campaigns addressing this issue are among the most frequent public health communication initiatives. These campaigns aim to reduce road accidents by promoting safe driving behaviors and reducing risky actions that affect driving. Historically, a wide variety of communication strategies have been employed to address the objectives of changing attitudes and behaviors related to these risks. These strategies range from advertisements focused on transmitting data and information to highly aggressive and realistic campaigns designed to instill fear in the population.

To optimize the achievement of the objectives of these communication campaigns, it is necessary to conduct analyses of their effectiveness. These analyses, in addition to studying the degree of effectiveness of the messages and communication strategies used in traffic and road safety advertisements, should provide corrective and improvement alternatives (Faus et al., 2021). Thus, this article aims to provide indicators on the public's perceived effectiveness of such social communication campaigns, with the objective of modulating communication strategies aimed at modifying the behavior of their target audience. This will generate a positive and tangible change by increasing the perceived importance of the issue addressed (Van den Berghe & Christie, 2022).

Because, just as in commercial advertising consumers tend to value and purchase products from companies they consider authentic and effective (reputable), in public health advertising a positive perception, and confidence in its effectiveness, can motivate people to prioritize the issue at hand and consider changes in their behavior (Phillips et al., 2011). It should be noted that several factors influence the perceived effectiveness of a traffic safety campaign, including, but not limited to, the credibility of the source, the tone and style of the message, the familiarity and visibility of the campaign, and the identification of individuals with the characters or scenes depicted in the advertisements. Furthermore, the role of the communication approaches and styles employed should not be overlooked. Road safety campaigns often use preventive or punitive approaches to highlight risks, appealing to the individual's rationality or their fear of potential sanctions or negative consequences. However, discrepancies have been observed regarding the effectiveness of these approaches. And, for this research, it is important to provide conclusive precision and resolve analytical controversies because, to cite an obvious case of them, while some research has concluded that the punitive tone increases attention, there are others that demonstrate that it can generate rejection and resistance in certain groups of the population, influencing their perception and thus limiting its effectiveness (Netemeyer et al., 2016).

2. OBJECTIVES

The main objective of this research, in line with the above, is to evaluate the public perception of traffic and road safety communication campaigns, especially regarding the perceived effectiveness of the types of advertisements they contain, identifying the differences in the perception of different communication strategies employed in these campaigns. Additionally, the study aims to gather the measures, recommendations, and proposals made by participants to improve the effectiveness of these campaigns, identifying the variables considered important in the broadcasting of traffic and road safety advertisements. Furthermore, it seeks to analyze, in relation to the public perception of social and commercial advertisements, with the aim of identifying potential significant differences compared to traffic advertisements, with a view to optimizing future implementations of the latter.

3. METHODOLOGY

A strategically designed questionnaire with respect to the objectives was applied to a significant sample of participants. Furthermore, the data obtained was processed according to the following specifications.

3.1. Participants

The sample consisted of 403 adults residing in Spain. To achieve the necessary representativeness, the minimum sample size had to exceed $n = 385$, assuming a 95% confidence level and a maximum margin of error of 5% ($\alpha = 0.05$). The sample comprised 61.8% women (249) and 38.2% men ($n = 154$). The mean age was $M = 33.17$ years ($SD = 16.265$). Participation in the research was voluntary and anonymous. Personal data was handled in accordance with current data protection laws and ethical requirements.

3.2. Design, Procedure and Instruments

The questionnaire used to obtain data was designed focusing on various parameters related to advertising; specifically, the following variables were considered:

1. Perception of effectiveness of social advertising, product advertising and traffic and road safety advertising, using Likert scale questions from 0 (Nothing) to 4 (A lot) and the open question "What do you think traffic advertising would need to be more effective?"

2. Perception of the marketing strategies and techniques used in traffic ads by asking "To what degree do you think the ads are: impactful, emotional, realistic, symbolic, humorous, tragic?" with the Likert scale from 0 (None) to 4 (Full) for each of these variables.
3. Marketing strategies and techniques perceived as most effective, requesting the assessment of the degree of effectiveness of various awareness tools about the dangers of traffic (realism, data graphics, victims and their consequences, fear, humor, empathy, among others) through a Likert scale from 0 (Not at all) to 4 (A lot).
4. Perception of the degree of effectiveness of different preventive measures against accidents (road education, economic sanctions or communication campaigns, among others) through a Likert scale from 0 (None) to 4 (A lot).

3.3. Data Processing

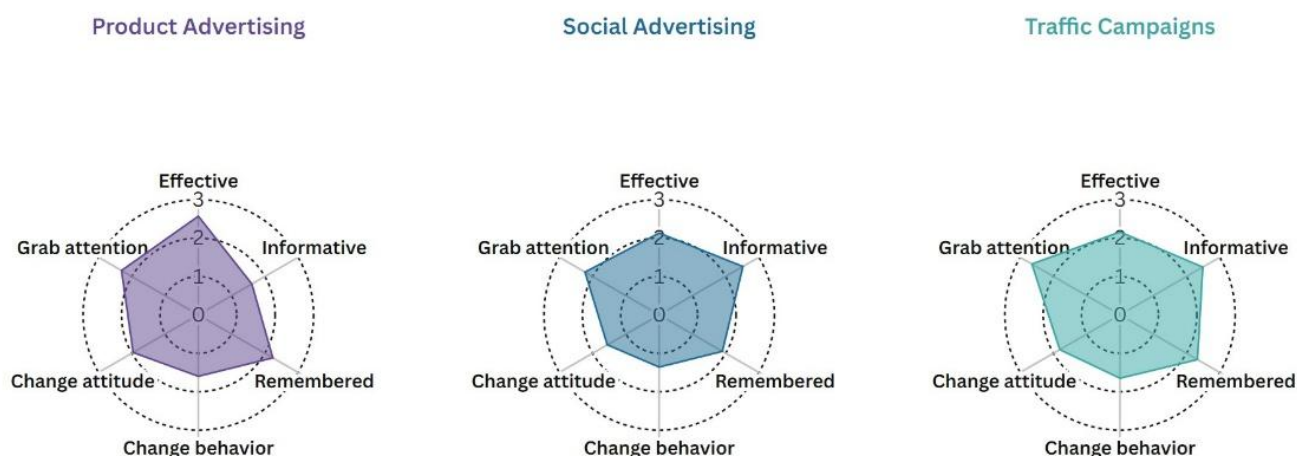
The data obtained were subjected to both quantitative and qualitative analysis. Qualitative analysis was conducted using the Alceste software, version 8.0 (Hamiot, 2025), which allows for the analysis of open-ended questions, including descriptions of word communities and discourse trend analysis of the participants. Quantitative procedures combined descriptive and characterization analyses of the perceived effectiveness of advertisements broadcast in Spain with the variables analyzed in relation to product advertising and social advertising. Furthermore, analyses were performed to establish statistical differences between the various sociodemographic groups, using ©IBM SPSS (Statistical Package for the Social Sciences), version 26.0 (Armonk, NY, USA).

4. RESULTS

4.1. Social Communication Campaigns Versus Commercial Communication: Quantitative Results on Relative Perception and Considerations for Improvement of Social Campaigns

A key finding worth highlighting—in line with the introductory remarks—is that, in general, participants perceive commercial advertisements to be more effective than public service announcements. This finding, which carries significant weight, is illustrated in Figure 1, which shows the differences in the ratings of various variables commonly used as indicators of the effectiveness of spots. Product advertising is rated as more memorable ($M=2.24$; $SD=1.08$) than social advertising ($M=1.90$; $SD=1.06$). The same applies to variables such as attitude change ($M=1.96$; $SD=1.02$ for product advertising and $M=1.57$; $SD=1.01$ for social advertising), behavior change ($M=1.60$; $SD=1.01$ for product advertising and $M=1.36$; $SD=0.93$ for social advertising), and the degree to which they capture the audience's attention ($M=2.31$; $SD=1.08$ for product advertising and $M=2.23$; $SD=1.11$ for social advertising). In contrast, the information presented is rated more highly in public service announcements ($M=2.52$; $SD=1.03$). With regard to traffic safety ads, the results indicate that these spots are perceived as having a level of information ($M=2.49$; $SD=1.06$) and effectiveness ($M=2.16$; $SD=0.98$) similar to that of other public service announcements. However, recall is higher, and this is the variable showing the greatest difference between the scores ($M=2.33$; $SD=1.07$). There is also a higher rating for capturing the audience's attention ($M = 2.65$; $SD = 1.05$), attitude change ($M = 1.81$; $SD = 1.02$), and behavior change ($M = 1.65$; $SD = 0.97$).

Figure 1. Differences in the Perception of Advertising Effectiveness



Source: Elaborated by the authors.

Having obtained these results, participants were asked an open-ended question to determine what they believed could make social advertising more effective. The most frequent suggestions were: increasing the quantity and frequency of this type of advertising (18.6%); increasing the emotional impact of the spots (17.9%); and using real-life case studies and experiences (12.7%). Meanwhile, 5.2% considered the ads adequate and believed the problem lay within society. Table 1 presents the responses organized into 15 categories.

Table 1. Proposals for Increasing the Effectiveness of Social Advertisements

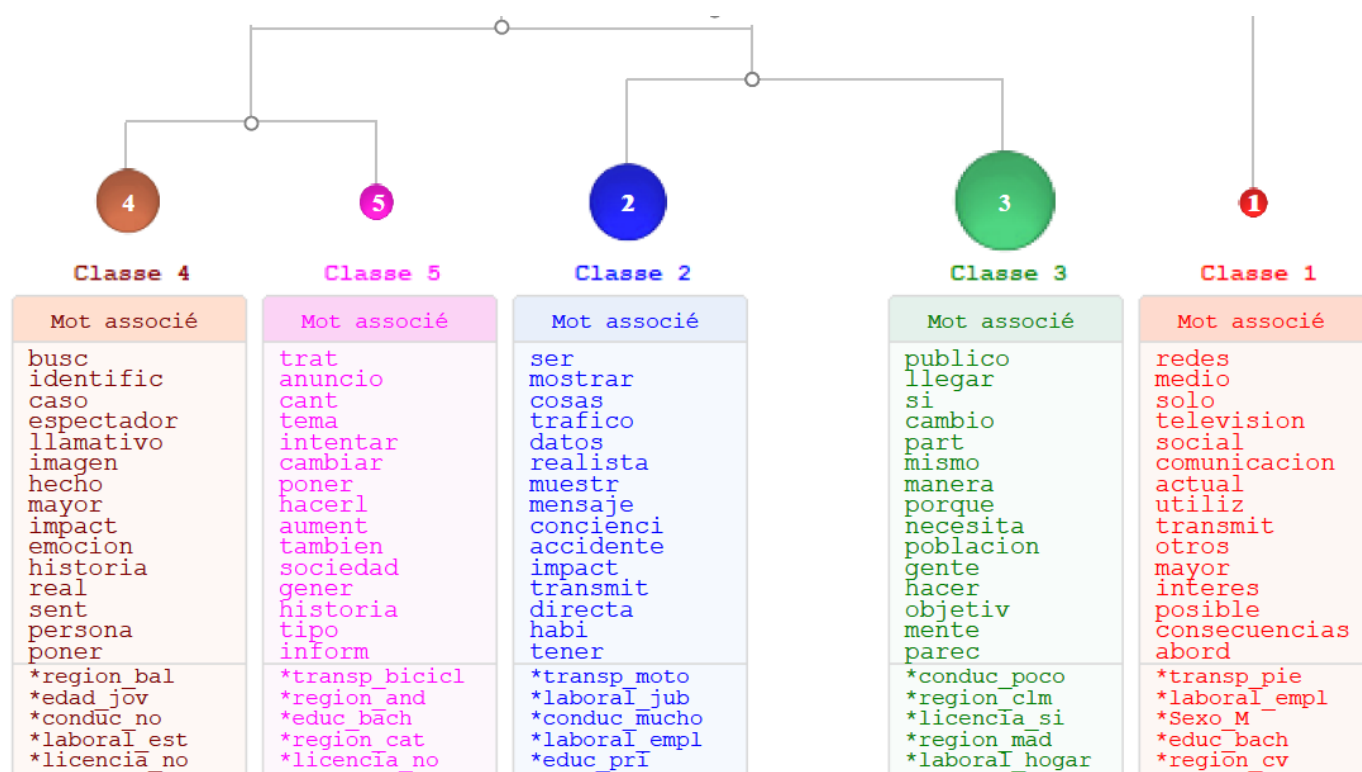
Category	Frequency	Percentage
Increasing the number and frequency of broadcasts	75	18.6%
Increasing emotion and impact	72	17.9%
Real-life examples	51	12.7%
Capturing attention with direct and eye-catching commercials	24	6.0%
Using appropriate content	21	5.2%
Expanding the audience	17	4.2%
Providing specific information	17	4.2%
Supplementing with education	13	3.2%
Expanding media channels	12	3.0%
Broadcasting during prime time	11	2.7%
Being objective	10	2.5%
Periodically evaluating the effectiveness of commercials	7	1.7%
Interacting with viewers	6	1.5%
Supplementing with guidelines	5	1.2%
Allocating more resources	5	1.2%
Including celebrities	4	1.0%
DK/NA	53	13.2%
Total	403	100.0%

Source: Elaborated by the authors.

4.2. Perceptions of Communication Campaigns on Traffic, Transport, Mobility and Road Safety: Combined Qualitative and Quantitative Results

Figure 2 addresses perceptions of traffic, transportation, mobility, and road safety advertisements, and analyzes the text corpus of responses to the question, "What would make this advertising more effective?" The classified units are divided into 5 groups—which are called classes—of meaningful statements. Class 1 is the most specific and has the most homogeneous vocabulary, accounting for 10.05% of the classified textual units. Class 2 accounts for 25.36%, Class 3 accounts for 32.06%, Class 4 accounts for 20.57%, and Class 5 accounts for 11.96% of the classified textual units.

Figure 2. Lexicographical Analysis of Discourse in the Text Corpus of Responses



Source: Elaborated by the authors.

Figure 3 provides greater detail on the five identified classes. Class 1, which specifically refers to the media channels, shows the greatest difference from the others, while the remaining classes show less difference and refer to concepts related to communication strategies. Therefore, the perceived importance of diversifying the media used to disseminate awareness campaign messages emerges as a relevant finding, in order to increase their effectiveness. Television and, above all, social media are the channels most highly valued for this purpose.

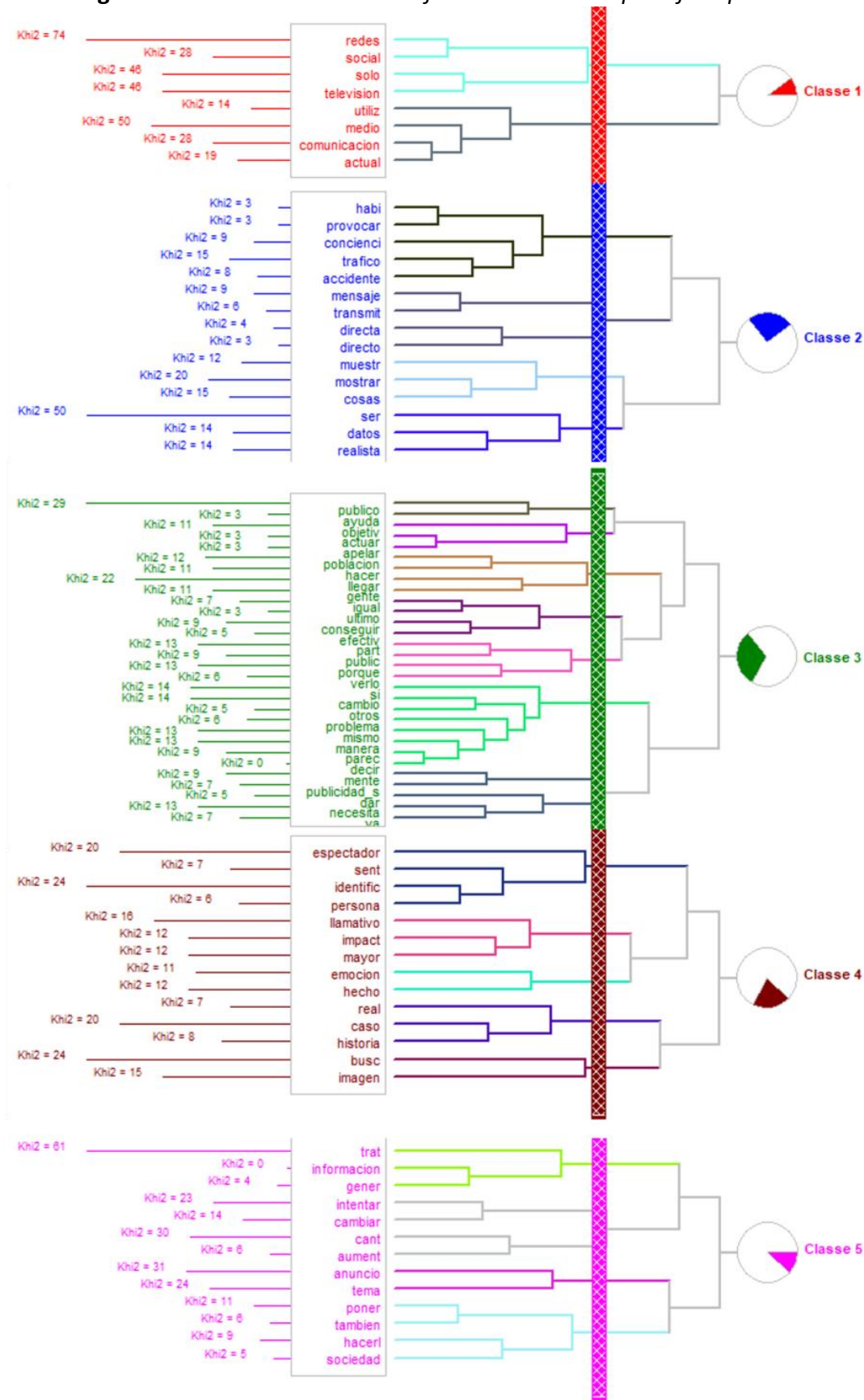
It should be noted that Class 2 and Class 3 are related, as both present strategies for conveying information, although they have distinct characteristics that warrant their classification into two groups. Class 2 specifically refers to direct persuasion strategies. This group presents a discourse that uses raw, realistic, and direct imagery to make the campaign message more effective. It also emphasizes the need to graphically depict the negative consequences of the issues addressed, whether traffic accidents and their victims, or other types of adverse events resulting from unsafe behavior. Class 3, on the other hand, focuses on raising awareness of the issues, without detailing specific measures or actions.

Specifically, Class 3 presents concepts related to social issues to the audience in order to achieve a long-term change in their behavior or attitude. Although its members are not clear on the specific communication strategy to be used, they do mention some of them, but without a specific pattern. Furthermore, they emphasize the importance of the audience's own characteristics in achieving change, highlighting personal responsibility, beyond the role that a communication campaign might play, which indicates their agreement with the importance of educating society on this matter.

Classes 4 and 5 are also related, as both emphasize personal stories as a fundamental element for the effectiveness of a social campaign. However, the two classes present certain differences that contribute to establishing two distinct groups. Those in Class 4 appeal to empathy to effectively convey the message to the audience, considering that the most effective way to do so is through real cases and testimonies from victims of the issue at hand, thus transmitting genuine feelings and emotions to the audience. It's important to note that the impact is not generated by the graphic nature of the images (as in Class 2), but rather by the emotions of the people involved in or affected by the issue presented in the campaign.

Finally, Class 5 relates to the treatment of the message and the presence of this type of campaign in the social sphere, aiming to transmit information effectively by addressing stylistic aspects rather than content elements. In this regard, it is noted that dissemination should have a broader reach, generating larger audiences that view the communication materials, as well as increasing the number and/or frequency of advertisements and message repetition. The need to broaden the themes and diversify the campaigns is also indicated.

Figure 3. Discourse Classes Identified in the Text Corpus of Responses

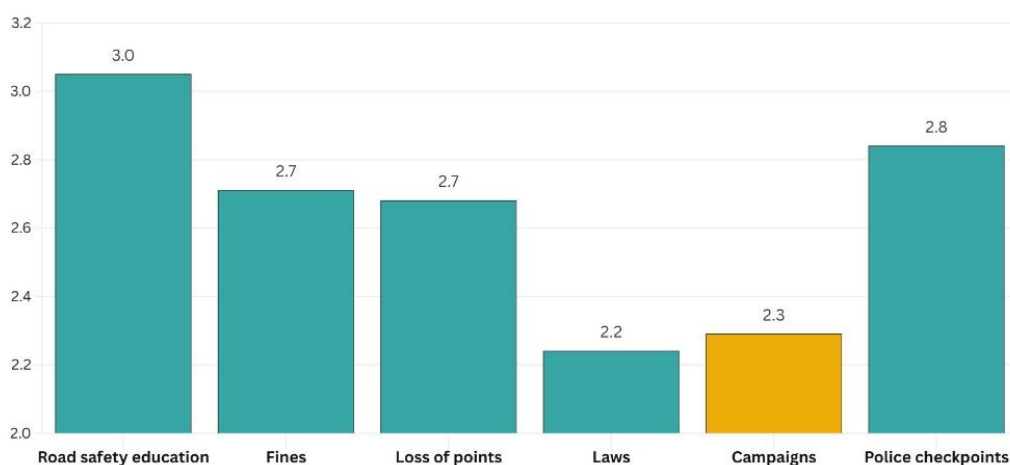


Source: Elaborated by the authors.

4.3. Perceptions of Road Accident Prevention Measures Historically Applied in Spain: Quantitative Results

Participants evaluated the effectiveness of various road accident prevention measures implemented in Spain (Figure 4). The results showed that road safety education for citizens was the highest-rated measure ($M=3.05$; $SD=1.006$), while traffic laws and regulations were the lowest-rated ($M=2.24$; $SD=1.080$). Traffic safety campaigns were the second lowest-rated measure by respondents ($M=2.29$; $SD=1.035$).

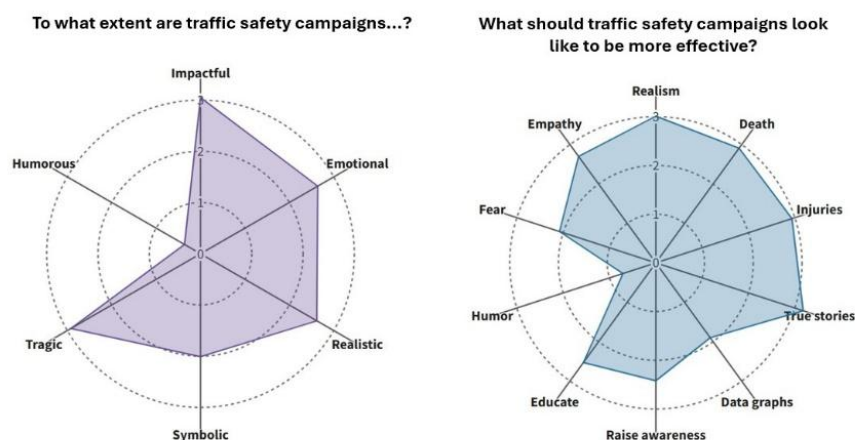
Figure 4. *Perception of the Effectiveness of Different Preventive Measures*



Source: Elaborated by the authors.

Similarly, participants in the sample were presented with various communication techniques to determine the varying degrees of effectiveness they assigned to these techniques when applied to traffic and road safety advertisements broadcast in Spain. The results showed that the most frequently identified and considered strategy in these types of spots is impact ($M=3.05$; $SD=1.016$), followed by tragedy ($M=2.92$; $SD=1.078$), while humor is practically not associated with traffic advertisements ($M=0.36$; $SD=0.821$) (Figure 5). Participants were also asked which strategies they considered most effective for future advertisements of this type. The most highly rated strategies were real-life stories ($M=3.18$; $SD=1.048$), realism and graphic imagery ($M=3.01$; $SD=1.131$), and depictions of victims and their consequences ($M=3.00$; $SD=1.086$).

Figure 5. *Perception of the Differential Effectiveness of Communication Strategies in Traffic Campaigns*



Source: Elaborated by the authors.

5. DISCUSSION AND CONCLUSIONS

5.1. Perceptions of Advertising in Public Health: Is It Really Less Effective Than Commercial Advertising?

In light of the approaches and results obtained in this research, a key conclusion can be drawn: the general perception among the study sample is that commercial advertising is more effective than social advertising. This should be compared with the other results regarding whether these perceptions align with the existing evidence on the effectiveness of social advertising.

Scientific literature indicates that the effectiveness of social marketing depends on various factors related to the fact that social advertising aims to change or modify individual behavior, considering individuals responsible for their choices and capable of changing their attitudes and behaviors with adequate information (Helmig & Thaler, 2010). Thus, social campaigns that inform, educate, or warn the public about certain harmful actions are considered effective if the issue addressed fulfills the assumption of individual responsibility (Gordon et al., 2006).

However, there are times when the individual is not solely responsible for the problematic situation or is not capable of reversing the problem solely through their behavior. Therefore, in these cases, campaigns focused on individual change are ineffective, as the assumptions are not met, and the problem exists beyond the "will" or responsibility of the citizenry (Ontiveros-Jiménez, 2020). Thus, those responsible for designing and developing communication campaigns must study and understand the root causes of the problem they intend to address and implement communication strategies appropriate to the specific context.

This gives rise to the concept of relative effectiveness, since different campaigns can have positive impacts—albeit to varying degrees—depending on the target audience to which they are directed. In this regard, it is important to note that a social campaign is considered effective when, following its launch, there has been a significant improvement among the target audience in the behaviors or issues addressed, compared to groups that were not exposed to the campaign. Relative or comparative evaluation allows a distinction to be made between campaigns that have employed different communication techniques or strategies and helps assess which are more effective or how their effectiveness could be increased in the future. In fact, in various fields of social communication, such campaigns have proven effective as a tool for behavior change in issues related to public health and the social sphere in general, such as promoting physical activity, improving nutrition and dietary habits, or reducing the use of tobacco, alcohol, and other drugs (Gordon et al., 2006; Helmig & Thaler, 2010).

5.2. Perception of the Effectiveness of Communication Campaigns in the Traffic Sector

To assess the data on the perceived effectiveness of communication campaigns in the traffic and road safety sector, it is important to contextualize the scores by comparing them with those given to social advertising in general. Traffic advertisements are indeed perceived as more memorable and more capable of capturing the audience's attention, which may be related to the diverse considerations and responses to the different communication strategies employed by these campaigns. Familiarity with the context of road traffic and the role of driver are influencing the scores, which is consistent with some previous research (Giroto et al., 2020). Along these lines, it can be stated that user characteristics are a variable influencing the perception of this type of campaign. Therefore, given the diverse and heterogeneous nature of the target audience, one can conclude that the most effective approach for message penetration is to begin with basic, simple ideas supported by compelling arguments.

These ideas should encourage the public to pay attention to the information presented, and once this initial seed has been planted, more complex messages can be introduced. For this reason, it can be asserted that user characteristics are a variable influencing perceptions of this type of campaign.

5.3. Communication Strategies in Traffic, Mobility, and Road Safety Campaigns: Are the Ones Considered To Be the Most Effective Really That Effective?

The communication strategies employed by traffic and road safety campaigns have been, and continue to be, highly varied. This is undoubtedly a key element of their effectiveness in reaching a very heterogeneous population with diverse sociodemographic characteristics. In this research, it has been shown that audience perception indicates the best techniques for such campaigns are the impact of the communication product and the dramatization of a tragic situation. Following closely behind is the emotion and realism of the advertisement. Finally, with a significant difference in scores, the use of humor in traffic advertisements is perceived as a flawed and/or ineffective strategy for changing behavior.

Furthermore, it is worth noting that the emotions closely related to the aforementioned resources received average scores, especially empathy and fear. Thus, it can be concluded that the realism and starkness of these types of campaigns evoke strong emotions that influence the degree to which the message is integrated into the audience's consciousness, potentially persuading people to take preventive measures and adopt safe behaviors in the future, to a greater extent than other communication strategies (Akbari et al., 2021; Faus et al., 2023). Showing the serious consequences of inappropriate behavior in traffic raises awareness of the risks and prompts users to reflect on the appropriateness of their actions.

However, it's important to keep in mind that using high-impact, aggressive ads isn't the only effective strategy for changing traffic behavior. In fact, while evidence points to the importance of developing hard-hitting audiovisual pieces, as they have proven more effective for behavioral change, it also indicates that a constant presence of these images can be counterproductive to the intrinsic purposes of a traffic campaign. If a person is repeatedly exposed to them, they can become desensitized to the emotional stimuli they generate, thus diminishing their effectiveness in changing behavior.

In addition, it should be noted that some viewers may experience emotional aversion, leading them to avoid viewing these campaigns and, consequently, ignore the intended message (Li & Cho, 2023). Therefore, this type of campaign should be planned within a comprehensive strategy that includes other communication actions, alternating aggressive and realistic campaigns with others designed using less visually impactful resources and techniques. These latter campaigns should inform and encourage reflection among the audience, thus enhancing their effectiveness in preventing traffic accidents. This aligns with the findings regarding the importance of considering educational factors and components in the conception and design of communication campaigns, rather than relying solely on spectacular or high-impact strategies.

5.4. Increase the Perceived Effectiveness of Social Advertising

Some of the most prominent actions or strategies proposed by study participants to increase the effectiveness of social media campaigns include increasing the quantity and frequency of these types of ads, enhancing the emotional impact of the commercials, using real-life case studies and testimonials, and developing short, direct, and impactful ads. These factors have been shown to contribute substantially to behavior modification. Regarding frequency, social media marketing on broadcast channels is not constant and fluctuates depending on the time of year, while product or service advertising campaigns typically run for months, or even years, without changes to their content or slogan. Furthermore, social media ads are more commonly displayed for relatively short periods (Friedman et al., 2016). Many social campaigns increase their

media presence during the first few days or weeks, when, due to societal habits, the aim is to generate a high impact on viewers. Subsequently, their frequency and broadcast time are substantially reduced. Although, as shown, it is important not to overexpose the audience—especially when using realistic images—it is nevertheless possible to reinforce the message by making certain strategic changes to the content of the spot to help viewers remember the message itself (Woelbert & d’Hombres, 2019).

It is also worth noting, regarding the responses obtained in this study concerning the perceived value of increasing the emotional impact of social advertisements to enhance their effectiveness, the alignment with various studies indicating that highly emotional and impactful advertisements are more effective, especially in non-profit social marketing campaigns. However, the behavioral repercussions are less clear, according to several studies that suggest emotional images promote a simple charitable impulse or one aligned with the content of the message, without attitudinal repercussions (Chung & Lee, 2019; Kite et al., 2023). Furthermore, other research highlights that negative images are associated with audience inactivity; therefore, although a change in attitudes toward the issue occurs, significant behavioral commitments are not achieved (Salazar et al., 2022).

In any case, it is important to understand the process that triggers an individual to change their habits or behaviors as a result of viewing an advertisement. Antonetti et al. (2015) conducted a systematic review on the role of fear and guilt in social marketing ads, determining that the underlying process for behavioral change differs depending on the emotion activated, as it triggers specific action tendencies. Thus, the studies analyzed suggested that guilt is linked to the perception of harming others, while fear is related to suffering harm to oneself (Peng et al., 2023). In both cases, greater behavioral changes are observed compared to advertisements that do not generate these types of emotions (Yousef et al., 2021). Therefore, depending on the focus of the advertisements, as well as the issue addressed, the expected changes in viewers will (or will not) manifest themselves to some degree.

Furthermore, it's important to consider that the target audience isn't always the general population. Therefore, broadcasting the same advertisement and message to everyone generates unnecessary costs and can even be counterproductive to its social impact. In this sense, the characteristics of social advertising must be adapted to the specific characteristics of the target population group (Suryani, 2024). This aligns with the findings of this study regarding the perceived need to diversify and increase the media and channels used to disseminate campaigns, especially on social media. Moreover, the respondents' finding that complementing social campaigns with training and/or formal regulations increases their effectiveness, with substantially higher results when these actions are implemented together, is consistent with various studies that demonstrate the role of communication campaigns in enhancing other preventative measures (Faus et al., 2021).

Finally, it is important to keep in mind that the person who views a commercial or is exposed to a communication campaign is not a passive recipient but actively participates in the process; therefore, their individual characteristics or personality traits will also influence the extent to which their behavior is affected by that campaign (Li et al., 2021). For example, scientific evidence indicates that people who have a low perception of risk regarding a particular issue tend to engage in more dangerous or risky behaviors; furthermore, this user profile is less likely to modify their behaviors. Conversely, the population's behavioral patterns classified as low-risk are often modified based on information received through communication campaigns or other sources that highlight the safe behaviors necessary to prevent a specific disease or eradicate a social problem (Masuri et al., 2012).

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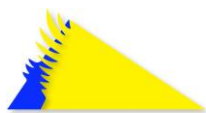
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