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A Comparative Analysis of Advertising Appeals in Anti- smoking Advertisements (Print and Online display ads) from 1990s to 2020s in the U.K

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ABSTRACT

This study provides a comparative analysis of advertising appeals in static display anti-smoking advertisements in the U.K. from the 1990s to the 2020s, using quantitative content analysis. The research evaluates print and online display advertisements, focusing on the prevalence of rational (gain-framed and statistical) and emotional (fear and guilt) appeals. The study investigates shifts in appeal usage over time and the broader societal and regulatory influences driving these changes. Findings indicate a strategic shift in public health messaging, moving from fear-based appeals in the 1990s to increased reliance on gain-framed appeals by the 2020s. This study enhances academic understanding of how advertising appeals have evolved in response to media transformations, government regulations, and social attitudes.

Keywords: *Advertising appeals, Advertising attention, Emotions, Anti-smoking, Public health, Behaviour change, Campaigns*

INTRODUCTION

The power of advertising to shape behaviour is evident in public health campaigns, where strategic choices about message construction are paramount. This study examines the evolution of advertising appeals employed in anti-smoking advertising within the United Kingdom from the 1990s to the 2020s. Focusing on static display advertisements across both print and online platforms, the research undertakes a comparative analysis of the advertising appeals used. Specifically, it examines the prevalence and shifts in the application of rational appeal encompassing gain-framed and statistical information, alongside emotional appeals notably fear and guilt.

By employing quantitative content analysis, this research aims to identify significant trends in how public health messages have been constructed over four decades. While existing research explores advertising appeals and their subtypes, a comprehensive analysis of their prevalence over time, particularly in anti-smoking advertisements, is lacking.

Understanding the strategic choices behind advertising appeals is crucial in the context of public health campaigns aimed at behaviour change. This study investigates how the use of different appeals has evolved in response to transformations in media consumption, changes in governmental regulations, and shifting societal attitudes towards smoking. Ultimately, the findings contribute to a deeper academic understanding of the dynamic relationship between advertising strategies, public health messaging, and societal influences in the specific context of anti-smoking advertisements in the U.K.

LITERATURE REVIEW

The Role of Appeals in Advertising

Advertising appeals play a crucial role as persuasive tactics to engage audiences and shape decision-making (Jovanovic et al., 2016; Yousef et al., 2021). They serve two primary functions: capturing attention and influencing consumer behaviour. Appeals facilitate cognitive and emotional connections, making advertisements more engaging and persuasive (Moriarty, 1991; Long Yi, 2011). Akbari (2015) highlights that greater attention leads to a higher likelihood of achieving advertising objectives. Moreover, appeals guide audiences towards favourable actions by evoking psychological responses that shape attitudes and decisions (Dahlén et al., 2010; Liu & Huang, 2021).

The Evolution of Media and Its Impact on Advertising Appeals

The transformation of media landscapes has significantly influenced advertising appeals. Traditional print and television advertising once dominated public health campaigns, relying on static imagery and controlled narrative pacing. The rise of digital media, particularly in the 2010s and 2020s, introduced dynamic and interactive advertising strategies, allowing for more personalised and emotionally resonant appeals. Digital advertising has also enabled the integration of rational and emotional appeals through immersive experiences, such as virtual reality (VR) and augmented reality (AR), enhancing engagement and message retention (Zhang et al., 2020). Furthermore, the proliferation of social media has also facilitated user-generated content and peer influence, amplifying the impact of fear and guilt appeals in anti-smoking campaigns. Consequently, the shift from traditional to digital advertising has expanded the reach of public health messages and altered the psychological processing of advertising appeals, demanding more nuanced and multi-modal approaches (Dahlén et al., 2010).

Government and Societal Influences on Advertising Appeals

Government regulations have significantly shaped advertising appeals, particularly in anti-smoking campaigns. The 2002 Tobacco Advertising and Promotion Act in the UK restricted tobacco advertising, compelling public health campaigns to adapt by emphasising emotional appeals such as fear and guilt (Hastings et al., 2004). Additionally, the banning of misleading health claims in advertisements reinforced the need for evidence-based rational appeals, ensuring factual accuracy in messaging (Critchlow et al., 2024). The introduction of plain packaging laws and health warning mandates further influenced appeal strategies, increasing reliance on visual fear-based messaging.

Changing social norms have influenced advertising appeal effectiveness. Heightened awareness of smoking-related health risks has led to greater public support for strict anti-smoking measures (ASH 2022). Research suggests that as smoking became less socially acceptable, fear-based appeals gained traction, particularly among younger demographics (Sun, Wang & Jiang 2021). Additionally, the integration of social narratives, such as the environmental impact of smoking, expanded the use of guilt appeals beyond personal health consequences (Tabbakh et al., 2024).

Rational and Emotional Appeals in Advertising

Advertising appeals fall into two broad categories: rational (fact-based, logical persuasion) and emotional (feelings-based, psychological impact) approaches (Casais & Pereira, 2021). Rational appeals use statistics and logical arguments, making them particularly effective in health advertising (Grigaliunaite & Pileliene, 2016). Conversely, emotional appeals, such as fear and guilt, influence behaviour by evoking strong psychological responses (Brennan & Binney, 2010). Recent studies highlight the effectiveness of a hybrid approach, wherein the integration of rational and emotional elements maximises audience engagement and persuasion (Cheong & Cheong, 2020; Kim et al., 2020).

Studies Supporting the Synergistic Approach

The evolving understanding of advertising appeals highlights the dynamic interplay between cognitive (rational) and affective (emotional) elements in shaping audience decisions. While traditional theories suggested that cognition and affect operate separately in persuasion, recent research advocates for their integrated use.

Teichert et al. (2017) demonstrate that cognitive and affective processes often work together to enhance persuasion. Kim et al. (2020) further supports this view, showing that combining emotional and rational elements in advertisements improves consumer decision-making and engagement. Additionally, Casais and Pereira (2021) find that campaigns incorporating both emotional and rational tones generate more favourable consumer attitudes compared to those using only one approach. This balance is particularly effective in social advertising, as noted by Helmig and Thaler (2010), who highlight its ability to increase audience response.

Ruiz and Sicilia (2004) emphasise that while rational and emotional systems can function independently, their interaction often produces better results. Their study indicates that advertisements using both appeals are more effective, particularly for consumers who process information on both cognitive and emotional levels. This dual-appeal strategy thus leverages the strengths of both rational and emotional responses to maximise impact.

Conceptual Framework

Building on the existing literature, this study proposes a conceptual framework (figure 1) examining the prevalence of advertising appeals in UK anti-smoking advertisements from the 1990s to the 2020s. By identifying trends and shifts in rational and emotional appeals, this research aims to provide insights into the historical use of advertising strategies in public health campaigns, contributing to both scholarly understanding and practical applications in anti-smoking efforts.

This model maps out advertising appeal, focusing on rational and emotional appeals. It delves into the subtypes of these appeals, with gain-framed and statistics appeal under rational appeals, and fear and guilt appeal under emotional appeals.

Figure 1. Conceptual Framework on Synergistic Advertising Appeals and Emotions
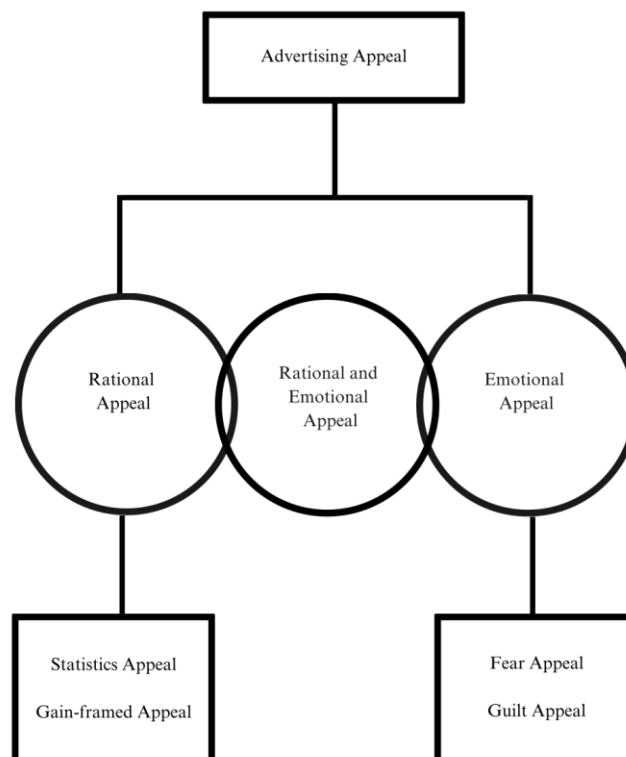
Additionally, it incorporates the synergistic approach that involves the combination of rational and emotional appeals. This framework is designed to strategically inform and direct the research. While existing research explores advertising appeals and their subtypes, a comprehensive analysis of their prevalence over time, particularly in anti-smoking advertisements, is lacking. Most studies focus on the effectiveness of appeals in product advertising, neglecting changes in their application within social marketing. This gap limits our understanding of how anti-smoking adverts have employed appeals to persuade audiences over the decades.

To address this gap, this study will use the conceptual framework to examine the prevalence of advertising appeals in U.K. anti-smoking advertisements from the 1990s to the 2020s. By identifying trends and shifts, this research aims to provide valuable insights for both scholars and advertisers into the historical use of advertising appeals in public health campaigns.

Research Objectives

The overall aim of this research is to investigate the prevalence of advertising appeals - rational appeal, emotional appeal, and their combined use - within anti-smoking advertisements across the U.K spanning from the 1990s through to the present decade, the 2020s. This study also further defines its primary research objectives (RO) which are:

> **RO 1:** To assess the use of Rational Advertising Appeal in anti-smoking advertisements
> **RO 2:** To determine the use of Emotional Advertising Appeal in anti-smoking advertisements.
> **RO 3:** To evaluate the combined use of rational and emotional appeals in anti-smoking advertisements.
> **RO 4:** To undertake a comparative analysis of advertising appeals for anti-smoking advertisements between the 1990s to 2020s.

The longitudinal study offers a unique and important contribution to the academic field by presenting a detailed, four-decade analysis of advertising appeals in anti-smoking advertisements making the findings from this research valuable. A review of previous literature on advertising appeals revealed that no other studies have undertaken a comparative analysis of these appeals specifically in U.K. anti-smoking advertisements over such an extended period.

Despite the limitations concerning sample size and generalisability, this longitudinal study provides valuable insights into the evolution of public health messaging and its strategies deployed to combat smoking. By dissecting the nuances of rational and emotional appeals, and their combined use over an extended period, this study sheds light on the evolving tactics of public health campaigns aimed at reducing smoking rates, enriching the academic dialogue on advertising practices in health promotion.

METHODOLOGY

Positivism aligns with this study as it involved the collection of data about an observable phenomenon, which in the context of this study was advertising appeals and searching for patterns, regularities in anti-smoking advertisements to provide information (Saunders et al. 2023). Given the study's aim to assess the prevalence of advertising appeals in anti-smoking advertisements over the past four decades, a deductive research approach was adopted. This approach starts with established theories on advertising appeals and tests them with specific data from the anti-smoking advertisements. The conceptual framework, (Figure 1) developed from the literature review, exemplifies existing knowledge that the study will then apply to the specific case of anti-smoking advertisements. This deductive method enabled precise measurement of the prevalence and shifts in rational, emotional, and combined (synergistic) appeals, identifying statistically significant changes across select decades.

Research Approach

The approach is a four-decade comparative analysis of advertising appeals in anti-smoking advertisements in the U.K media through statistical means. As this study employed a quantitative methodology this was particularly advantageous due to its ability to produce results that are statistically meaningful (Rahman 2020). This research methodology seeks to explore questions concerning quantities, such as "how many," "how much," and the degree to which something occurs which is pivotal in studies aiming to establish patterns, trends, shifts across broad contexts (Rasinger 2013). This study used content analysis as a method to assess the prevalence of advertising appeals exploring the shifts, changes and trends present within these selective display adverts, indicating how strategies have evolved

over time. By employing content analysis, the study was able to identify the prevalence of the types of advertising appeals in U.K anti-smoking adverts and observe their meaning.

Sample Size and Dataset

The sample for this research consisted of 100 print anti-smoking advertisements over four decades (1990s to 2020s) with 11 in the 1990s, 23 in the 2000s, 28 in the 2010s and 38 in the 2020s. The samples were sourced online and were selected via a purposive sampling method, meaning that the samples were selected based on the researcher's subjective judgement rather than through random selection processes (Berndt 2020). To conduct this analysis, a dataset of anti-smoking advertisements disseminated in the U.K from the 1990s to 2020s was compiled. Advertisements were selected based on their use of specific appeals—rational, emotional, or combined and coded according to a predefined set of categories reflecting these appeals. These advertisements were sourced from the public domain and more specifically, these advertisements have been sourced from digital online newspapers (e.g The Guardian, Mirror), as well as websites of government and charities (such as the NHS, Public Health England, and ASH), facilitating a broad comprehensive analysis.

However, it is important to note that a limitation of using the form of non-probability sampling employed in this study, is its lack of statistical generalisability (Neuendorf 2017). This acknowledgment is important, as it highlights that the findings derived from the purposive sampling method used cannot be generally applied or extended to all populations beyond the sample (Boyd et al. 2023; Saunders et al 2023). Despite this limitation, the study offered valuable insights into the prevalence of advertising appeals in anti-smoking advertisements over time, based on the selected sample.

Intercoder Reliability and Bias Mitigation

Despite the advantages of purposive sampling in focusing on relevant advertisements, limitations of sample size exist. The 1990s sample was smaller due to restricted access to older advertisements, while the 2020s sample is limited to advertisements from 2020-2023. This study acknowledges the need for continued observation to determine whether emerging trends persist. The following techniques were deployed to ensure reliability and minimise bias:

- **Dual Researcher Coding:** To ensure coding reliability and minimise subjectivity, two independent researchers reviewed and coded all advertisements using predefined categories of advertising appeals. This dual approach allowed for diverse perspectives while reducing individual coder bias. Intercoder reliability was assessed using Cohen's kappa (k), a widely accepted statistical measure of agreement for categorical data (Cohen 1960). The overall kappa coefficient was 0.81, indicating a strong level of agreement between coders (Cohen 1960; McHugh 2012). Discrepancies in coding were discussed and resolved through consensus, ensuring the final dataset reflected a unified interpretation of appeal types.
- **Cross-Validation:** To further reduce subjectivity, independent classifications by the two researchers were cross-validated. This process involved comparing initial coding results, identifying inconsistencies, and re-evaluating ambiguous cases. Through collaborative clarification of coding criteria, the reliability and consistency of the dataset were reinforced. These procedures helped to mitigate coder bias and uphold the integrity of the analytical process.
- **Transparency in Selection:** In line with recommendations by Spence and Lachlan (2005), intercoder reliability was calculated and reported to enhance methodological transparency and credibility. The coding and selection processes were clearly documented, and all decisions made during data analysis were thoroughly explained. Reflexive practices were also integrated throughout, enabling researchers to critically consider their own influence on the analysis and further support the study's validity and reproducibility.

Data Collection & Analysis

100 advertisements were selected and systematically coded based on texts, numbers and images, facilitating organised categorisation for content analysis. Advertisements were then coded based on textual, numerical, and visual elements, ensuring structured categorisation. This data was then analysed and presented using bar charts and clustered bar charts to identify the frequency and prevalence of appeals across decades (Woodrow 2014; Achmad et al. 2021).

In this research, the unit of analysis (Table 1) refers to the specific element within the anti-smoking advertisements that was examined to identify the prevalence of advertising appeals; these elements were derived from the operational definition of the types of rational and emotional appeal identified previously in the literature review chapter.

Table 1. Units of Analysis

Advertising Appeal	Units of Analysis	Reference (Source)
Rational Appeals		
Gain-framed Appeal	Advantage of Compliance, Positive Outcomes, Recommendations	O'Keefe & Wu (2012), Wansink & Pope (2014)
Statistics Appeal	Numerical data, Factual information, Encourage action	Yousef et al., (2021), Darstaru (2024)
Emotional Appeals		
Fear Appeal	Emotion of fear, Significant threat, Personally relevant, Recommendations, Deterring the threat	Nicolini & Cassia (2022), Witte (1994, p.114).
Guilt Appeal	Feelings of guilt, Self-reflection	Antonetti et al. (2018), Peng et al. (2023)

The study aimed to identify not just individual presence of rational and emotional appeals in anti-smoking advertisements but also their combined use. This was identified in the study when the advertisements exhibited both types of appeal, as defined in the above units of analysis table (refer to Figure 2 for an illustrative overview of the data analysis approach).

Figure 2. Visual Representation of the Units of Analysis Applied to a Smokefree Campaign

Note. Amended from McVeigh 2008

The presence of the text that reads "average smoker needs over five thousand cigarettes a year" indicates rational appeal, in this case, statistics appeal using numerical data. It also encouraged action to stop smoking with the "get unhooked" text and call a number or visit the website in the advertisement which indicates rational actions / response. Furthermore, the presence of a hook in a person's mouth as seen in the advertisement evokes the feelings of fear and repulsion, using a graphic visual which is an example of using an emotional appeal. From the above, the advertisement analysed employed the combined use of both rational and emotional appeals, in other words combined use.

Validation Methods and Biases

In this study, reflexivity and construct validity were crucial for ensuring transparency and credibility. Reflexivity involved recognising one's own biases and judgement frameworks throughout the research process (Darawsheh 2014; Jamieson et al. 2023). Initially, extensive literature on advertising appeals led the researchers to believe emotional appeals were more prevalent and effective in anti-smoking advertisements. However, through reflexivity, the researchers refocused on charting the prevalence of these appeals, rather than evaluating their effectiveness. This critical self-evaluation helped maintain neutrality and objectively identify trends over time.

Therefore, this study clarifies that two researchers collaboratively conducted selection, coding, and analysis. Furthermore, reflexivity also played a crucial role in recognising potential biases in appeal classification. Initial assumptions that emotional appeals were dominant were critically examined, ensuring that the study focused on charting appeal prevalence rather than assuming effectiveness (Darawsheh 2014; Jamieson et al., 2023).

This study did not presume a direct correlation between appeal use and advertising effectiveness, as it is widely acknowledged that success and failure of appeals are not only subject to audience perception but would also require additional measurement of advertising effectiveness (i.e. smoking cessation numbers). To address this, the study does not infer causation but instead maps the usage of appeals over time and the validation methods ensure that conclusions are drawn based on observed trends of appeals rather than preconceived assumptions of effectiveness.

THE FINDINGS

RO 1: To Assess the Use of Rational Advertising Appeal in Anti-smoking Advertisements

The study conducted a quantitative content analysis on 100 anti-smoking advertisements spanning from the 1990s through the 2020s to assess the prevalence of Rational Advertising Appeals i.e gain-framed and statistics appeal. The findings from the empirical study are concisely summarised in a bar chart (Figure 3), providing an easily understandable visualisation of the collected data (Woodrow 2014).

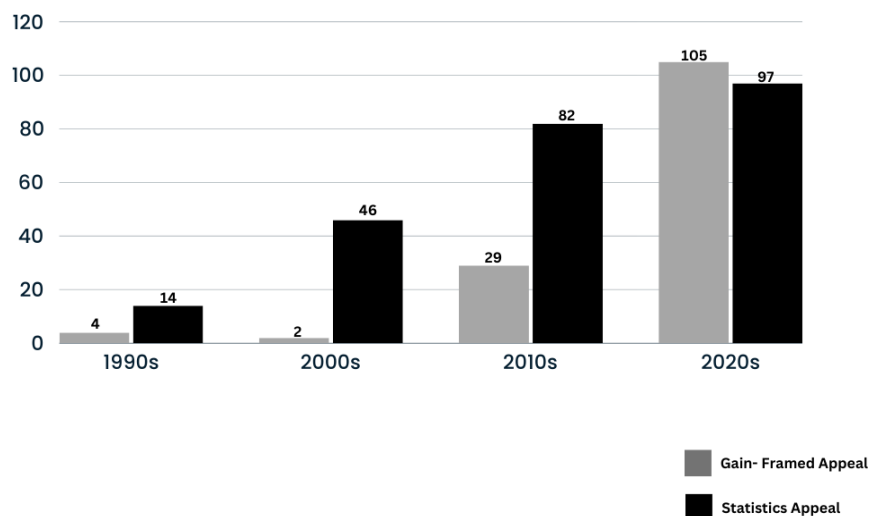**Figure 3. The Prevalence of Rational Advertising Appeals from the 1990s to the 2020s**

Figure 3 illustrates the overall prevalence of rational advertising appeals, specifically gain-framed appeals, across the decades from the 1990s to the 2020s. This figure shows the number of instances these appeals appeared in the advertisements analysed, allowing for a quantitative comparison over time. In the 1990s, for example, gain-framed appeals appeared in 4 of the 11 advertisements, as seen in one advertisement (Figure 4) targeting pregnant women who smoke. This ad used a gain-framed approach by emphasising the benefit of quitting smoking—giving the unborn child a head start, which aligns with the concept of compliance as a gain-framed appeal.

Figure 4. Anti-smoking Advertisement (Foulds 2000)
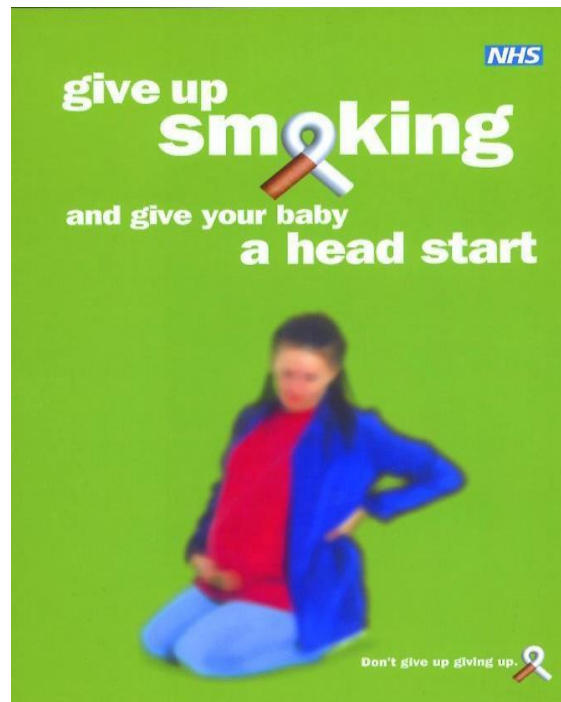
Conversely, statistics appeals were more dominant, with 14 elements of this kind of appeal being present in the analysed advertisements. The use of statistics appeals predominantly provided the target audience with factual information, supporting the assertion by Yousef et al. (2021) that this type of appeal relies on factual data to persuade the audience. A notable example (Figure 5) from this era featured a direct presentation of the amount of toxins cigarettes expose the skin to. The advertisement also quantifies the number of negative things smoking exposes the skin to, leveraging the perceived objectivity of numerical data to highlight the risks associated with smoking. This approach aligns with Reyna and Brainerd's (2023) assertion that numerical information is viewed as more credible, making them effective tools for persuasion.

Figure 5. Anti-smoking Advertisement (RetroAd Archives n.d.)

An examination of 23 advertisements from the 2000s showed a reduction in the use of gain-framed appeals, with only two instances of such appeals identified throughout the decade's advertisements. One advertisement (Figure 6) emphasised the financial savings smokers could achieve by quitting. This approach used potential savings as a positive reinforcement to encourage compliance with the anti-smoking message. This strategy aligns with Wansink and Pope's (2014) argument which posits that communicating positive outcomes can effectively persuade the target audience.

Figure 6. Anti-smoking Advertisement (Silver News 2009)

In contrast, statistics appeals experienced a substantial increase, with 46 statistics elements identified in the advertisements analysed in the 2000s. This trend might indicate a growing reliance on empirical evidence within public health communications (McClaughlin et al. 2023). For example, one advertisement (Figure 7) effectively used statistics to illustrate the invisibility of cigarette smoke, quantifying the percentage of invisible smoke. Additionally, the advertisement incorporated factual information, a key component of statistics appeals as identified by Yousef et al. (2021). It emphasised that while cigarette smoke may be unseen and often undetected by smell, it still poses a significant health risk to those who inhale it, further highlighted by numerically detailing the chemicals involved to make a compelling case for the benefits of quitting smoking.

Figure 7. Anti-smoking Advertisement (AdsSpot 2007)

A shift in advertising strategy was observed in the 2010s, based on the analysis of the dataset used for the study. There was a notable increase in the use of gain-framed appeals as elements of this type of appeal were identified 29 times across 28 advertisements. The empirical analysis indicated that advertisements during this decade emphasised the "advantage of compliance" and effectively communicated the positive outcomes of adhering to anti-smoking messages. Exemplary advertisements from this era (Figures 8, 9 and 10) clearly communicated how amazing things happen to people who quit smoking. These advertisements highlighted significant improvements such as enhanced skin condition, increased financial savings, and fresher breath, illustrating the positive changes that accompany the decision to quit smoking.

Figures 8, 9, and 10. Anti-smoking Advertisements (Buck 2019)

Similarly, the use of statistics appeal in the 2010s significantly intensified, with elements of this category of rational appeal appearing 82 times across the analysed advertisements. Anti-smoking messages were communicated with an increased amount of numerical data and factual information, aiming to appeal to the logical reasoning of the target audience as supported by (Nadube and Isenah 2022). One particular advertisement (Figure 11) effectively used statistics, such as mortality rates from smoking, to convey the urgency of the issue. Additionally, it presented research-based information, including the frequency of hospitalisations due to smoking-related illnesses, to strengthen its argument.

Figure 11. Anti-smoking Advertisement (Cromar 2015)

Moving into the 2020s, the trend of increasing use of Rational Advertising Appeals in anti- smoking campaigns continued as it was experienced in the previous decade. However, gain-framed appeal elements became more dominant,

compared to the previous decades where statistics appeals were employed more. A total of 38 advertisements were analysed to assess the use of Rational Advertising Appeal in anti-smoking advertisements and among these advertisements, the use of gain-framed appeals increased as the elements of this appeal were noted 105 times, surpassing the 97 instances of statistics appeals. This era saw a heightened emphasis on communicating the benefits of quitting smoking, as prominently featured in several advertisements (Figure 12 and 13).

Figure 12 and 13. Anti-smoking Advertisements (Palfreyman 2021; NHS 2022)

The findings of this study on Rational Advertising Appeals in anti-smoking advertisements from the 1990s through the 2020s showed clear consistencies with existing literature. The literature emphasises that rational advertising appeals, including both gain-framed and statistics approaches, utilise logical reasoning and factual information to influence audience behaviour, particularly in health-related contexts (Grigaliunaite and Pileliene 2016; Nadube and Isenah 2022). This study's analysis across decades reveals a strategic use of both appeal types, with varying dominance over time.

During the 1990s, statistics appeals were more common, echoing the literature's emphasis on the persuasive power of factual data regarding the risks of smoking (Yousef et al. 2021). Although gain-framed appeals were less prevalent during this period, their presence aligns with the literature's identification of their use in health communications (Toll et al. 2007). This dynamic began to shift in subsequent decades, with a marked increase in gain-framed appeals in the 2010s and 2020s, suggesting an evolving strategy in anti-smoking campaigns toward highlighting the positive outcomes of quitting smoking.

Furthermore, the continued use of statistics appeals, particularly in the 2000s and 2010s, reflects a consistent application of this approach across time, aligning with the literature's discussions on the use of empirical evidence and numerical data in public health communications (Reyna and Brainerd 2023). The quantitative content analysis shows an alignment between the shifts in advertising strategies observed in the advertisements and the trends discussed in existing research. These findings potentially indicate how the distribution of rational advertising appeals has evolved, reflecting both the strategies documented in the literature such as the specific use of text and imagery that convey factual information or logical arguments relevant to smoking cessation and the changing approaches observed in practical applications across different decades.

RO 2: To determine the Use of Emotional Advertising Appeal in Anti-smoking Advertisements

The study also assessed the prevalence of emotional advertising appeals classified as fear and guilt appeals from the 1990s to the 2020s. The findings are concisely illustrated in a graph (Figure 14), which offers a clear and easily understandable depiction of how these trends have evolved over time.

Figure 14. The Use of Emotional Advertising Appeals from the 1990s to the 2020s
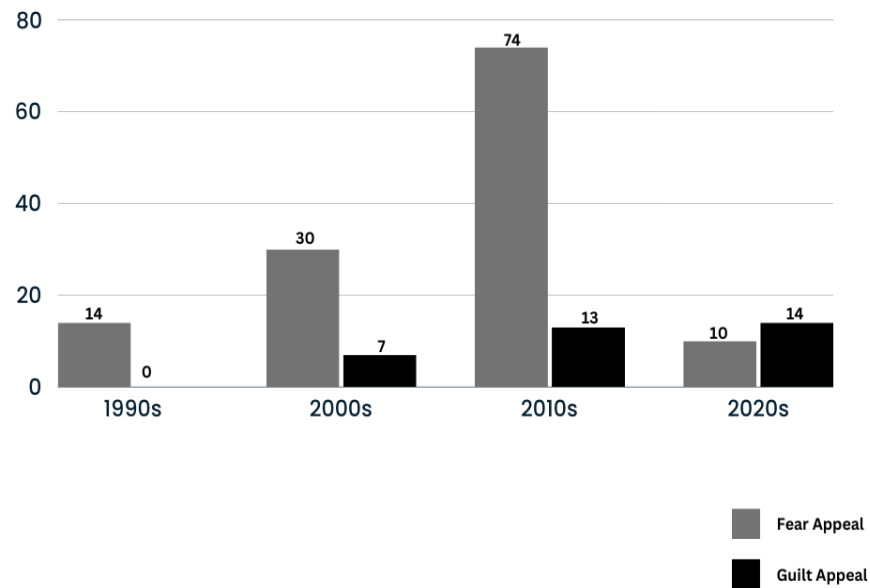
The above figure presents a quantitative overview of emotional advertising appeals, particularly fear appeals, from the 1990s to the 2020s. The figure tracks how often these appeals appeared across the analysed advertisements, highlighting their prevalence in each decade. In the 1990s, fear appeals were notably dominant, appearing 14 times across 11 advertisements. A key example of this is an advertisement (Figure 15) that depicted the severe health risks of smoking, using a stark comparison: a bullet kills instantly, but a cigarette kills slowly, emphasising the long-term dangers of smoking.

Figure 15. Anti-smoking Advertisement (AdsSpot 1994)

Conversely, guilt appeals were non-existent during this decade, with zero elements being identified. This might indicate a strategic focus primarily on fear-based tactics for anti-smoking campaigns during this era.

The 2000s saw an analysis of 23 advertisements, where fear appeals remained dominant with 30 elements of fear appeal identified. An advertisement from this period (Figure 16) effectively utilised fear appeal by featuring a disturbing image of a hook in a woman's mouth, aligning with the theme of the advertisement; "get unhooked." This striking visual metaphor was used to communicate to smokers that they are hooked on cigarettes and need to break free.

Figure 16. Anti-smoking Advertisement (Duncan 2007)

Additionally, this decade marked the introduction of guilt appeals, with 7 instances documented. One notable advertisement (Figure 17) specifically targeted parents, invoking guilt by emphasising the potential early death caused by smoking and the negative impact this would have on their children. It used emotional imagery and narratives to communicate the risk of children losing their parents, thereby fostering a sense of responsibility among smoking parents.

Figure 17. Anti-smoking Advertisement (D&AD 2010)
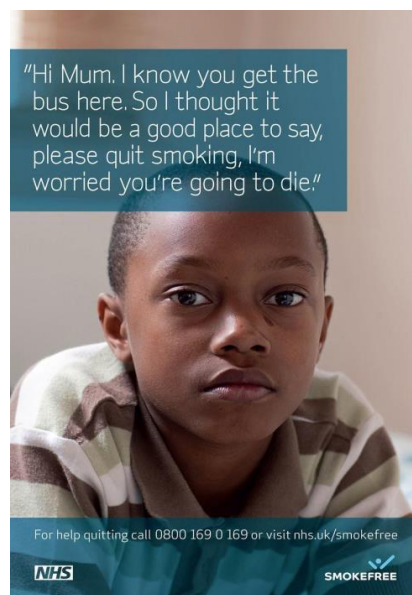
The analysis of the 28 advertisements from the 2010s revealed that anti-smoking advertisements predominantly utilised fear appeals, with a notable increase to 74 elements observed during this period. Figure 18 features an advertisement from this decade that effectively employed this appeal by depicting the physical and emotional deterioration caused by smoking. The images showed an individual hospitalised, an image of a person with medical equipment attached to their stomach area and another person in tears. Accompanying text highlighted the inevitable negative effects of smoking, emphasising the serious health risks associated with smoking.

Figure 18. Anti-smoking Advertisement (Wearing 2019)

In contrast, guilt appeals were utilised less frequently, with only 13 instances identified across the advertisements analysed. This disparity highlights a strategic reliance on fear-based tactics to influence public behaviour during the decade, though guilt appeals were also strategically implemented to complement the overall messaging framework.

In the 2020s, an analysis of 38 advertisements revealed a significant strategic shift. The use of fear appeals dramatically decreased to just 10 elements compared to the previous decade's 74. This reduction might suggest potential oversaturation or a diminished effectiveness of fear-based strategies. This observation is supported by Panda & Mishra (2013) and Casais & Pereira (2021), who argue that an excessive use of fear appeals may cause the target audience to view these messages as false, leading them to disregard them.

On the other hand, guilt appeals were noted 14 times, exceeding the use of fear appeals for the first time. This change potentially indicates a more extensive reliance on guilt to influence behaviour, as illustrated by an advertisement (Figure 19) that highlighted the health benefits of quitting smoking for one's family. This approach aimed to instil a sense of responsibility and induce guilt in smokers, encouraging them to consider the wider impacts of their habits.

Figure 19. Anti-smoking Advertisement (Robinson 2022)

The empirical analysis highlighted a significant evolution in the use of emotional appeals in anti-smoking advertisements from the 1990s to the 2020s. While the initial focus was heavily on fear appeals, there was a noticeable shift towards integrating and even prioritising guilt appeals in recent years.

The analysis of emotional appeals in anti-smoking campaigns within the study reveals significant consistencies with the existing literature. Both the literature and the empirical findings identify specific elements used in advertisements that are indicative of fear and guilt appeals, affirming the theoretical propositions regarding their effective use in eliciting desired behavioural changes (Witte 1994; Brennan & Binney 2010; Tannenbaum et al. 2015; Yousef et al. 2021; Peng et al. 2023).

In terms of fear appeals, the literature suggests that the use of stark, alarming visuals and narratives that depict dire health consequences are effective in provoking a fear response that motivates behavioural change (Bülbül and Menon 2010; Casais and Pereira 2021). The findings through the four decades are consistent with these arguments, showing presence of fear-inducing elements such as images of diseased organs, hospitalisation, and severe health deterioration with high prevalence in three decades. For example, advertisements depicting individuals on sick beds or with medical equipment attached, which were identified in the study, directly correspond to the literature's description of fear appeal strategies. These visuals align with the literature's assertion that showing the severe consequences of smoking can effectively instil fear and discourage the behaviour (Nicolini and Cassia 2022).

Similarly, the use of guilt appeals in literature is characterised by advertisements that draw on social norms and moral obligations, often involving family or close relationships to create a sense of responsibility or remorse (Greenbaum et al. 2019). The study's findings from the 2000s onwards show an increase in the use of guilt appeal, with advertisements featuring children or other family members affected by the smoker's habits. This increase corresponds with the literature by Peng et al. (2023) which notes that placing smokers in a context where their actions visibly affect others can effectively evoke guilt and prompt reconsideration of their smoking habits.

In summary, there is a clear consistency between the elements used to identify emotional appeals in the empirical analysis and those described in existing literature. This correspondence validates the theoretical underpinnings of using fear and guilt in anti-smoking campaigns and indicates the importance of these emotional appeals in influencing public behaviour towards smoking cessation.

RO 3: To Evaluate the Combined Use of Rational and Emotional Appeals in Anti-smoking Advertisements

The research further explored the integration of rational and emotional appeals in anti-smoking advertisements. The results from this empirical study are depicted in a graph (Figure 20), which clearly visualises the proportion of advertisements that incorporate both rational and emotional appeals out of the total analysis.

Figure 20. The number of Advertisements with Combined Appeals from the 1990s to the 2020s.
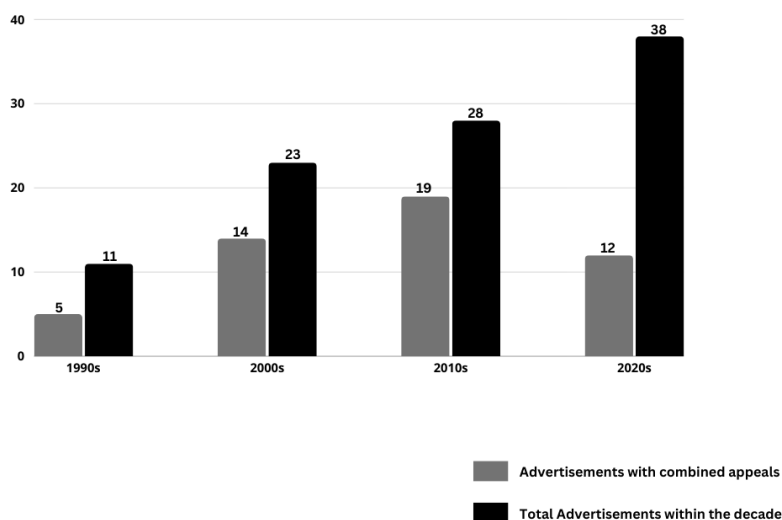
In the 1990s, the integration of both rational and emotional appeals was evident in 5 out of 11 analysed advertisements. The application of this advertising strategy was significantly increased during the 2000s, with 14 out of the 23 advertisements analysed showcasing a combination of both rational and emotional appeals. This trend of integrating dual approaches gained further traction in the 2010s, as evidenced by 19 out of the 28 advertisements from that decade employing both rational and emotional appeal to enhance the anti-smoking message.

However, there was a notable decrease in the 2020s, where only 12 out of 38 advertisements used both appeals. This decrease might indicate a shift in strategic focus during the most recent decade, reflecting adaptations in advertising techniques or changes in target audience perceptions and preferences. The ongoing use of combined approaches, despite fluctuation in the 2020s, highlights a continued exploration within the advertising industry of merging rational arguments with emotional resonance to create advertising content. This strategy possibly indicates an awareness of the importance of addressing both the cognitive and emotional elements in audience decision- making when designing effective advertisements.

This combined approach is demonstrated in Figure 21, which features an advertisement with a compelling visual: a hand in a smoking posture, but instead of a cigarette, the image shows a finger being smoked. This vivid depiction serves as an emotional appeal, utilising fear to capture the viewer's attention. Complementing this visual, the advertisement includes a narrative that provides factual information about the risks of smoking, specifically mentioning how smokers can suffer from Buerger's disease, thereby incorporating a rational appeal.

Figure 21. Anti-smoking Advertisement (Retro AdArchives n.d.)
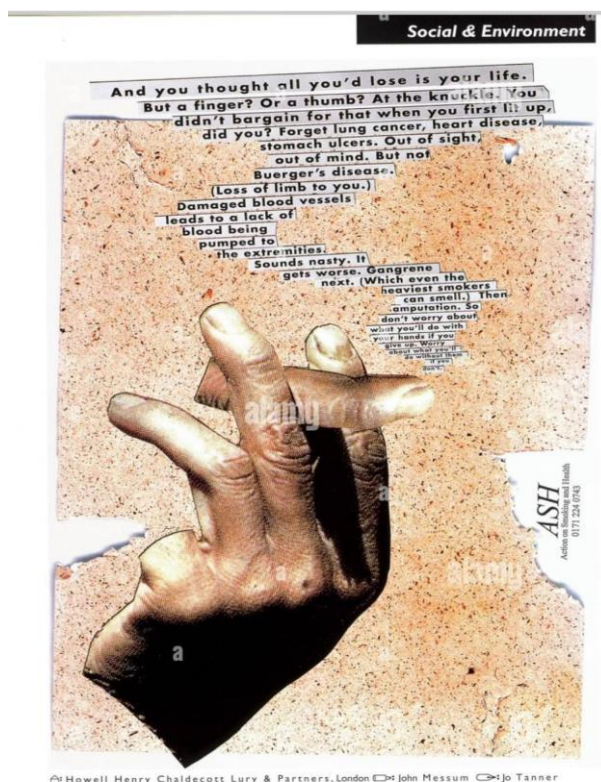
The empirical findings from the analysis of anti-smoking advertisements show a clear correspondence with the theoretical propositions of the combined approach highlighted in the existing literature. Studies emphasise the importance of using both rational and emotional appeals in advertising to engage audiences comprehensively by addressing both logical and emotional aspects (Rolls 2019; Soosalu et al. 2019; Cheong & Cheong 2020). This dual approach is clearly demonstrated in the advertising strategies of the 2010s, the decade where this combined strategy

was most prevalent. During this period, 19 out of the 28 advertisements analysed showcased both rational and emotional appeals.

The analysis of the advertisements in accordance with the criteria established by the units of analysis, shows that the use of rational appeals in anti-smoking advertisements often involves presenting factual information, statistics, or logical arguments that highlight the benefits of quitting smoking, such as improved health or financial savings. These are designed to appeal to the audience's reasoning and decision-making processes. On the emotional side, the advertisements frequently employ powerful visuals or narratives that evoke strong emotional responses, such as fear or empathy, through graphic images of medical consequences or personal stories of loss and struggle.

This practical application was evident in the analysed advertisements, mirroring the theoretical assertions that a blend of rational and emotional elements can create more comprehensive and resonant advertising content (Cheong & Cheong 2020). Literature by Kim et al. (2020) posits that such a strategy not only provides clear information but also emotionally motivates the audience, creating a stronger motivation for behaviour change. The consistency between the advertising trends and the foundational knowledge about the combination of rational and emotional appeal shows an understanding and implementation of the synergistic approach in real- world settings.

Overall, the alignment between the theoretical frameworks and the advertising practices observed especially in the 2010s demonstrates a robust application of combined appeal strategies, affirming the relevance and applicability of academic insights in practical advertising efforts. This synergy reinforces the value of integrating diverse appeal types to craft messages that are both intellectually compelling and emotionally impactful.

RO 4: To Undertake a Comparative Analysis of Advertising Appeals for Anti-smoking Advertisements Between the 1990s to 2020

Historically, anti-smoking advertisements have employed both rational and emotional appeals, as highlighted in sections 4.2.2 and 4.3.2 of this study, which document their use across various advertisements. This research generated new findings through a comparative analysis of the elements that constitute rational and emotional appeals in these advertisements. The findings are illustrated in a graph (Figure 22), which provides a clear and accessible visual representation of the prevalence of both types of appeals throughout the advertisements analysed across different decades.

Figure 22. A Comparative Analysis of Advertising Appeals for Anti-smoking Advertisements from the 1990s to the 2020s

Rational Appeal Elements in Advertisements

Emotional Appeal Elements in Advertisements
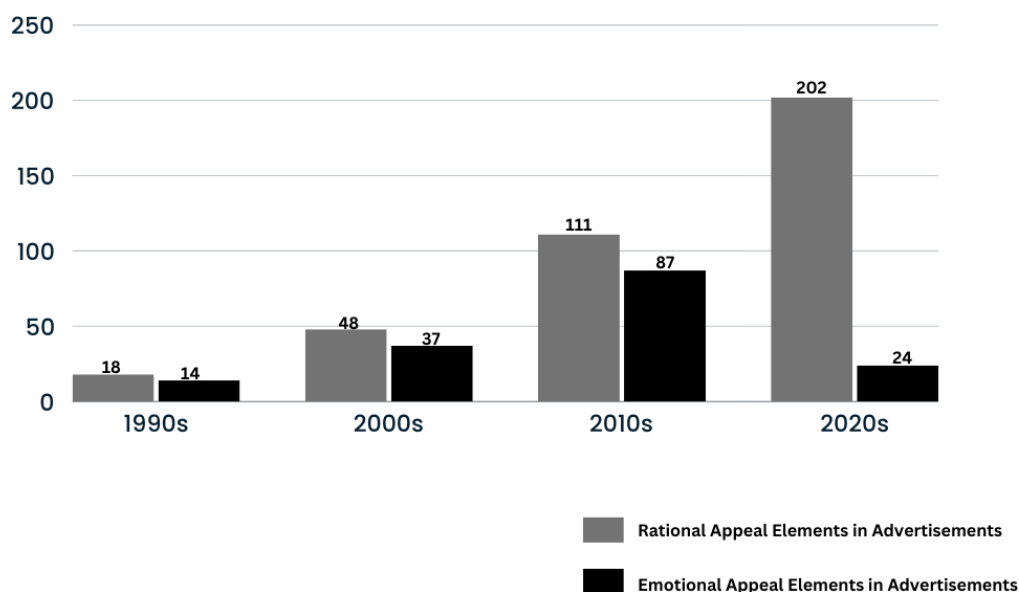
A total of 11 anti-smoking advertisements from the 1990s were examined for this study. Among these advertisements, 18 rational elements and 14 instances of emotional elements were noted. This decade's advertisement analysis revealed a relatively balanced use of both rational and emotional appeals.

In the 2000s, the analysis expanded to include 23 advertisements. With 48 instances of rational components and 37 instances of emotional elements identified, it became evident that both types of elements had increased in frequency. This finding possibly indicates a continuation of the balanced approach observed in the 1990s, but with a slight increase in the total count of elements. The following decade, the 2010s, witnessed a significant growth in the use of rational and emotional appeals in anti-smoking advertisements. Out of the 28 advertisements examined for this period, a significant growth in both categories of appeals were recorded with 111 rational elements and 87 emotional elements found. This decade saw an increase in emphasis on both rational and emotional appeals, indicating a greater effort to engage smokers with both rational and emotional advertisements.

The most significant shift occurred in the 2020s, where 38 advertisements were examined. Here, a remarkable increase in the presence of rational elements was observed, with 202 instances identified, while the count of emotional elements decreased substantially to 24. This change suggests a departure from the balanced approach observed in earlier decades, signalling a strategic shift towards a more rational messaging strategy in anti-smoking advertisements during this period.

Overall, the results of the empirical analysis demonstrate how the application of advertising appeals in anti-smoking advertisements has evolved over decades in the U.K, with changes in the use of rational and emotional appeals. During the 1990s, there was a moderate approach taken, but in the following decades there were shifts which led to a focus on rational advertising tactics in the 2020s, with a reduction in emotional appeal usage. These findings offer valuable insights, showing an evolving approach that prioritises rational appeal over emotional persuasion in anti-smoking advertisements.

The findings of this study uncovered novel insights into the evolution of advertising appeals in anti-smoking campaigns. While there is no direct literature to compare with, the findings resonate with the foundational knowledge provided by previous literature (Zhang et al. 2014; Casais and Pereira 2021; Yousef et al. 2021; Nadube and Isenah 2022) on the concept of advertising appeals. These scholars provided a foundational knowledge that helped the researcher to know that rational appeals are aimed at resonating with consumers' logical beliefs and attitudes about the advantages or functionalities of what is being communicated. Furthermore, they helped create an understanding that emotional appeals use elements that connect with the audience's feelings, motivating them to act based on the emotions elicited by the advertisement.

The study's identification of the prevalence of both rational and emotional appeals across different decades aligns with the theoretical framework established by previous scholars (Zhang et al. 2014; Casais and Pereira 2021; Yousef et al. 2021; Nadube and Isenah 2022). Despite the lack of direct comparison, the findings support the notion that both types of appeals are employed in shaping smokers' perceptions and behaviours regarding smoking.

DISCUSSION OF FINDINGS

The analysis highlighted a shift in rational advertising appeals, with an increased emphasis on gain-framed messages that underscore the benefits of quitting smoking, particularly prominent in the 2020s. This trend marked a departure from earlier decades, which focused more on statistics appeals that outlined the risks associated with smoking. This evolution might suggest a strategic evolution in public health communications, emphasising positive outcomes and benefits of quitting smoking as a more effective way to influence public behaviour towards smoking cessation, rather than relying on statistics.

Subsequently, emotional appeals also evolved, moving from a predominance of fear appeals in the 1990s and 2010s to an increased reliance on guilt appeals in the 2020s. This shift might suggest that fear-based strategies have become overly used, prompting advertisers to increasingly rely on guilt appeals to influence behaviour and instil a sense of responsibility in smokers about the broader impacts of their habits.

The study also observed the use of combined rational and emotional appeals, which initially saw moderate use, but peaked in the 2010s, and then declined in the 2020s. This might indicate changes in advertising strategies or shifts in

audience preferences. Despite the decline, there remains a consistent interest in leveraging both appeals to address the differing cognitive and emotional aspects of decision-making.

Lastly, the study performed a comparative analysis of these advertising appeals across four decades. The findings showed that the 1990s and 2000s displayed a balanced use of both appeal types, but the 2010s saw increased emphasis on integrating both. The 2020s, however, have shown a dramatic shift towards predominantly rational strategies, potentially suggesting a current preference for logical reasoning over emotional persuasion in influencing public behaviour towards smoking cessation.

Contribution to Knowledge and Practice

Longitudinal studies enhance our understanding of how the application of concepts changes over time by repeatedly measuring their usage (Karapanos et al. 2021). By examining anti-smoking advertisements over four decades in the U.K., this longitudinal research provides a comprehensive view of how advertising strategies have evolved, offering valuable historical insights into changes in public health messaging, rather than a snapshot in time.

The study also delved deeply into the specific types of rational (gain-framed and statistics-based) and emotional (fear and guilt) appeals used in anti-smoking advertisements. By dissecting these appeals and their prevalence over time, this study contributed detailed insights into the tactical elements of advertisement design and strategy in public health contexts. This adds to the existing body of literature by providing an understanding of how these appeals have been practically applied differently across the different decades.

Furthermore, by documenting the shifts and trends in advertising appeals, this research provides practical insights that could help optimise future anti-smoking campaigns. Understanding which appeals have been prominent and how their use has evolved can guide the future of creative development on more discreetly targeted and potentially more effective public health messages, regardless of whether it is a display ad (still) image or a more digitally enhanced advertising video message.

LIMITATIONS AND FUTURE RESEARCH

The conclusions of this research, drawn from a limited sample of 100 U.K. anti-smoking advertisements, may not be generalisable to broader contexts or other countries due to cultural, regulatory and social differences. The use of a non-probability sampling method further limits the applicability of the findings to the entire population of U.K. anti-smoking advertisements (Neuendorf 2017). Additionally, the study faced challenges in assessing older advertisements due to the high costs of accessing archival materials, whereas advertisements from more recent years were more accessible due to advancements in digital technology. This discrepancy resulted in an overrepresentation of more recent advertisements, complicating a comprehensive comparative analysis.

Another limitation of this study relates to the potential subjectivity inherent in content analysis. While intercoder reliability was statistically assessed using Cohen's kappa (k) and yielded a strong agreement ($\kappa = 0.81$), this metric does not capture all nuances of coder interpretation. Additionally, the coding process relied on human judgment, which may still introduce interpretive bias despite consensus procedures. As Spence and Lachlan (2005) point out, reporting intercoder reliability is important for assessing the strength of content analysis. However, differences between coders can still be a limitation and should be considered when interpreting the results. Despite these limitations, the study provides valuable insights and serves as a solid foundation for future research.

Future studies can build on this by assessing the effectiveness of rational, emotional and combined appeals not only in smoking cessation campaigns but other public health topics. Researchers should explore the reasons behind the shifts in appeal usage over time, such as the increase in rational appeals using numerical data, to determine if this trend reflects higher effectiveness (which was not a key objective of this research). Expanding the scope to include other channels of messaging could also be explored as could international samples for global insights. Additionally, investigating other subtypes of appeals beyond the two examined in this study could offer a more comprehensive understanding of advertising strategies and their evolution.

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