
Protagonist of public service advertising in changing attitude in a specific territory: empirical study in COVID-19 era

Krishna Pal Singh* and Amima Shoeb

Axis Institute of Planning and Management,

Kanpur, 209402, India

Email: kps907@gmail.com

Email: amimashoeb89@gmail.com

*Corresponding author

Anurag Singh

Institute of Management Studies,

Banaras Hindu University,

Varanasi, India

Email: anuragbhadauria@gmail.com

Mohsen Brahmi

Faculty of Economic and Management FEM,

University of Sfax,

CP1204, Tunisia

Email: brahmi.mohsen@gmail.com

Email: brahmi_mohsen@yahoo.fr

Abstract: The purpose of this study is to determine the critical function of public service advertising in raising health awareness among Kanpur residents and how it is influencing people's attitudes in the COVID-19 scenario. A total of 200 Kanpur residents were considered for this study, and data was collected using seven-point Likert scale questionnaires. This study's data is gathered through a convenient sampling procedure. We have one dependent variable (e.g., public service advertising) and four independent variables (e.g., healthcare ad, informativeness, attitude change, source credibility) in this study, thus it is a multivariate analysis. To arrive at a conclusion, the claimed relationship between the variables was tested using multiple regression analysis. Findings of the current study reveal that public service advertising is one of the most effective forms of advertising for raising public awareness and influencing people's attitudes and health behaviours so that the COVID-19 pandemic catastrophe may be properly managed. As a result, many people's lives have been saved. Thus, based on the findings of the study, the researchers suggested that public service advertising be used to spread COVID-19 awareness in order to increase health awareness.

Keywords: attitude; COVID-19; public service advertising; awareness; health behaviour.

Reference to this paper should be made as follows: Singh, K.P., Shoeb, A., Singh, A. and Brahmi, M. (2022) 'Protagonist of public service advertising in changing attitude in a specific territory: empirical study in COVID-19 era', *Int. J. Technology Transfer and Commercialisation*, Vol. 19, No. 1, pp.163–176.

Biographical notes: Krishna Pal Singh is an Assistant Professor of Marketing at Axis Institute of Planning and Management, Kanpur. His research interest includes consumer behaviour, and social media marketing. He has published papers in journals of national and international repute.

Amima Shoeb is an Assistant Professor of Marketing at Axis Institute of Planning and Management, Kanpur. Her research interest includes consumer behaviour, and brand management. She has published papers in journals of national and international repute.

Anurag Singh is an Associate Professor of Marketing at Institute of Management Studies, Banaras Hindu University, Varanasi, India with an experience of 22 years. His research area is customer engagement, consumer behaviour, social media marketing, and digital marketing. He has published research papers in *South Asian Journal of Business Studies*, *International Journal of Engineering and Advanced Technology*, *Journal of Innovation and Entrepreneurship*, *International Journal of Customer Relationship Marketing and Management*, *Journal of Rural Development*, *SCMS Journal of Indian Management*, *Journal of Direct, Data and Digital Marketing Practice*, *International Journal of Recent Technology and Engineering, Paradigm*, and *IMT Journal*. He has authored one reference book and edited seven books.

Mohsen Brahmi is affiliated with the Sfax University. He is teaching Master levels and licenses in business economics fields. His research interest includes technological innovations, industrial sector performance, firm governance, analytics solutions for various mining industries, and quantitative corporate finance. He has published books in firms technologies ICT adoption and finance economics, research articles in ranked journals, and also a member in the editorial board of reputed journals.

1 Introduction

The world is a very dynamic place and it is currently confronted with numerous difficulties in the guise of social and health issues. Coronavirus is the most well-known pandemic disease in this regard, as it has spread rapidly and has a specific makeup in India as well. Every country in the world is attempting to deal with this extremely difficult problem (Brahmi and Sonia, 2013). India is likewise attempting to effectively combat the pandemic. Since this disease is new to the planet, no one knows how to cope with it or how to save humanity. In the current situation, the only remedy is to raise awareness about the disease. The Indian government is also attempting to raise awareness about this extremely difficult health problem. As a result, public service advertising has emerged as the most successful technique for raising COVID-19 awareness and saving the lives of the general public in the country.

COVID-19 emerged lately in Wuhan, China, as a result of growing population and direct human contact. Coronavirus was first discovered at a seafood market and has since

infected a number of people all over the world. People all throughout the world were unaware of the severity of the sickness. In order to raise awareness, the World Health Organization has taken the initiative and is working with local media outlets to do so. According to World Health Organization (2020), it is critical to raise awareness in order to combat an enhanced coronavirus ratio. The international community has taken numerous steps in this direction, particularly in the areas of mobility and travel. Furthermore, various healthcare public service advertising programs have begun to educate people about the pandemic's transmission and impacts (Wang et al., 2020a).

Coronavirus is a highly dangerous disease, and the media must play a critical role in raising public awareness through public service advertising (Nooh et al., 2020). In many parts of the world, new rules geared at maintaining social distance and intended at expelling this deadly disease from the society, despite the fact that people's irrational behaviour is considered as a result of a lack of understanding (Sadati et al., 2020; Vohra and Soni, 2016). As Wogu (2018) also emphasised the value of media-based healthcare public service advertising efforts, citing them as a reliable source of information. According to him, the majority of people, particularly those living in rural areas, are still uninformed of this health problem and are failing to address it. As a result, public service advertising campaigns are best suited to alerting them about the need of following the appropriate healthcare practises in order to preserve their lives and prevent the spread of this deadly disease (Brahmi and Laadjal, 2015).

After witnessing such a difficult circumstance as a result of COVID-19, (Yang, 2020) researchers concluded that modern marketing and advertising strategies have a substantial impact on people's behaviour (Muhammad et al., 2021), which has been proven in the past to be beneficial in a variety of social and health issues. We can infer that interactive feature advertising allows consumers to acquire useful information about events occurring across the world from one another. Health communication is recognised as the most essential part of public service advertising in India, and it is also seen as the most effective vehicle for disseminating information in society during the COVID-19 lockdown era. By producing, disseminating, and passing along health-related information, viewpoints, and advances about various health crises impacting Indian society, the mass means of communication are most successful in delivering health communication.

In the light of these challenging health issues, Gupta and Sharma (2015) highlighted the importance of mass media in providing important health information to the general public, allowing ordinary people to make informed decisions about this deadly pandemic that is sweeping the globe and taking proper action to protect their lives and health. In this regard, the function of public service advertising in disseminating information about COVID-19 in India is very significant. For an effective and rapid global response, media platforms are playing a critical role in communication between researchers, scientists, public health experts, and funding agencies (Roy et al., 2020). They also hope to improve public awareness and healthcare practises by facilitating information transmission and enhancing knowledge (Gralinski and Menachery, 2020).

For the purpose of their physical and mental health and progress, it is critical to provide an environment that is conducive to learning. The job of public service advertising is critical. A source of information for the general public a winning combination is the use of effective public service advertising in the media. In the

COVID-19 age, public service advertising can serve to create an environment that fosters good health and education.

2 Review of literature

2.1 Public service advertising

Public service advertising is one of the most powerful ways to raise awareness and impact change, and it also serves as a driver for India's overall economic growth (Kaya, 2007). The use of marketing knowledge, concepts, and tactics to preserve and promote social purposes in public service advertising allows for a wider scope of social marketing than that of managerial marketing. The major element in social marketing is the shift from a managerial to a social orientation, and it is against this backdrop that we see a need for the concept to be applied by all sorts of organisations, regardless of whether they work for profit or not. Institutions nowadays adopt an integrated marketing communication strategy to reach out to their clients. They employ a variety of media, including television, radio, magazines, newspapers, billboards, and the internet (Lee and Kotler, 2011).

Today, public service advertising has grown in popularity and is often regarded as one of the most successful methods for raising social awareness and influencing people's attitudes. When designing a social message for effective public service advertising, it is critical to keep the target audience in mind. The impact of the message is increased much more when the target group is thoroughly understood. Public service announcements should have a brief and to-the-point message. These statements might be dramatic, and they should ideally stand out among all the other commercials (Block, 2009). When crafting a social message, it is critical to keep the target audience in mind (Crosby and Bryson, 2005) should be communicated via a public service announcement the effect of the message given is enhanced by a good understanding of the target population. Public service announcements should have a brief and to-the-point message (Wood, 2012). Governments and non-profit organisations are increasingly using a social marketing approach to facilitate voluntary behaviour change in order to increase society and individual wellbeing, according to the report (Nicolini et al., 2017).

Paul and Singh (2016) in their study, they found that public service advertisements with an educational message appeal have a long-lasting effect on people's minds. Public service advertisements assist people in properly understanding social and health issues and encourage them to change their thinking in response to the message. As a result, public service reports and addresses these issues. The general population pays more attention to advertisements and responds positively to them. Television, radio, newspapers, social media, magazines, and other strategic communication vehicles have all shown to be reliable. The goal of public service commercials is to change people's attitudes and behaviours in society as a whole.

2.2 Healthcare advertising

In the midst of COVID-19 pandemic, when people all over the world, including those in India, are largely unaware of the disease and have no idea how to deal with it, public service advertising have emerged as a viable option for raising awareness about this

public health crisis. In this regard, Kim and Diwas (2020) underlined the importance of these advertising, which have a big impact on changing people's minds. These kind of public awareness initiatives are quite effective in achieving the desired results. Previous studies in this area have also demonstrated a favourable impact on people's attitudes and tried to encourage the public to support the essential healthcare procedures. Drugs, alcohol use, HIV, cancer awareness, Tuberculosis, and other 'media advertisement campaigns' are some of the most prominent examples of public service advertising that have a beneficial impact on attitudes and cause positive behavioural change (Wakefield et al., 2010).

In similar fashion (Gordon et al. 2012) impacted the advertisements in conveying information about the threat of HIV and educating people about all of the preventative measures was also examined. Lapierre et al. (2017) highlighted the importance and influence of healthcare public service advertisements, particularly on youngsters and the younger generation. This trend was particularly evident during the COVID-19 pandemic, which had a significant impact on young people's attitudes. According to the findings of this study, public service advertising has an important role in keeping the general public informed about preventative measures. It is exceedingly fatal, according to several studies, especially for the elderly and those with compromised immune systems (Xu et al., 2020). Coronavirus moved fast from China to other countries, causing widespread alarm among health professionals and creating a number of challenges. Within three months of its spread, thousands of cases were reported from various nations, making it a terrifying pandemic for the entire world (Li et al., 2020). Coronavirus has now become more dangerous than extreme acute respiratory syndrome (SARS-CoV), according to an urgent inquiry into its causes (Wang et al., 2020a).

H1 Healthcare advertisements positively enhance the effectiveness of public service advertisements.

2.3 Informativeness of advertising

Wang et al. (2020a) analysed the effectiveness of healthcare public service advertising in raising awareness about the COVID-19 pandemic was underlined in their study. We continue to learn new information about coronavirus on a regular basis. As a result, arming the public with information regarding the pandemic's origins, causes, and preventative actions is a pressing requirement. As a result, public service advertisements can help promote public knowledge about the coronavirus, which is a fatal respiratory disease (Nooh et al., 2020).

We have a responsibility as media and marketing researchers to use various marketing tools and techniques to help raise awareness about serious health issues such as COVID-19. The use of public service advertising, in particular, will aid in the fight against coronavirus transmission. Many people are still ignorant of the danger of COVID-19, so we should utilise these messages to educate the public on how to protect themselves and prevent the disease from spreading (Debatin et al., 2009; Huh, 2020; Schiffman and Wisenblit, 2015).

The main goal of public service advertisements is to raise public awareness of concerns and promote public health. This is because, when the world is faced with a

significant threat, communication via various media means such as television, radio, newspapers, and social media is the only method to keep people informed and urge them to defend themselves (Suresh and Srinivasan, 2008; Mohsen et al., 2014; Munnukka et al., 2016).

H2 Informativeness positively enhances the effectiveness of public service advertisements.

2.4 Source credibility of advertising

A person's faith in the validity of a message communicated in public service advertising is referred to as credibility. When it comes to facts, credibility is a multifaceted concept that encourages people to trust communicators. The receiver's ability to ascribe actuality and substance to how they are experiencing and acknowledging the message sent to the general public (Hovland et al., 1953; Eisend, 2006). On the other hand credibility of information has been viewed and judged on the basis of its relevance (Wang and Soergel, 1998; Sternthal et al., 1978) in their study found that source trustworthiness increases the credibility of the source of information, which leads to a shift in respondents' attitudes (Mansour and Diab, 2016).

As World Health Organization (2020) is working with partner medical health professionals and countries to assess the necessary medical assistance and provide training to medical professionals in order to further reduce the spread of coronavirus. At the same time, the World Health Organization is collaborating with various media platforms around the world to raise awareness through public service advertisement (Mohsen and Luigi, 2021). To fight with coronavirus, it has become very critical for everyone in the world to raise awareness, according to World Health Organization (2020). The international community, along with India, has given a number of instructions to this purpose, particularly in the fields of mobility and travel.

As a result, disseminating information regarding the sources, causes, and prevention measures to the general people is critical. Coronavirus is a life-threatening respiratory disease that can be transmitted through the media (Nooh et al., 2020). Wogu (2018) emphasised the significance of media-based healthcare public service advertising and viewed these efforts as a reliable source of useful information (Tajpour et al., 2021).

H3 There is a positive and significant relation between attitude change and public service advertisements.

2.5 Attitudinal change

A person acquires these attitudes from several sources. Bagozzi and Yi (1989) found in their analysis that direct personal experiences, associations with family and peer groups, neighbourhoods, economic status and occupations, and mass communications as major and important sources of forming the attitude (Ekta et al., 2017).

In social psychology, however, there has recently been a resurgence of interest in the link between attitude and behaviour (e.g., Brannon, 1976; Liska, 1975; Schuman and Johnson, 1976; Fung, 2017). The increasing consensus appears to be that attitude is just one of several factors that influence behaviour. Yang (2020) discovered that modern

marketing and public service advertising have a significant impact on people's behaviour, which is useful in a variety of ways, particularly when it comes to social and health issues (Duffett, 2017).

To further affirm this, (Jones, 2012) the researchers investigated the link between public service advertisements and Generation Y's capacity to obey the rule. Public service advertisements, according to the researcher, are intended to benefit the public and assist them in dealing with any social or healthcare difficulties that may emerge, such as COVID-19. According to the findings of this issue's research, healthcare practitioners and organisations employ comprehensive techniques to support societal behavioural changes (Mihir and Mohsen Salem, 2022). Also affirmed by O'brien et al. (2020) as healthcare practitioners are also working very hard with local government to yield the Public Service campaigns that influence behavioural change, as they said.

In this case, it has been discovered that changing one's attitude and changing one's behaviour share the same goal. According to the preceding discussion, attitudes toward goals can predict multiple-act criteria. Similarly, if the attitudinal entity's objective and intervention aspects are the same as those of the behavioural entity (Tunio et al., 2021), attitudes toward acts can anticipate single-act requirements (c.f., Ajzen and Fishbein, 1974,) attitude-change tactics are widely used in big mass media projects, the impact of attitudes on smoking initiation and cessation is essential and school-based interventions (Bruvold, 1990).

H4 Source credibility positively enhance the effectiveness of public service advertisements

3 Proposed hypothesis

H1 Healthcare advertisements positively enhance the effectiveness of public service advertisements.

H2 Informativeness positively enhances the effectiveness of public service advertisements.

H3 There is a positive and significant relation between Attitude change and public service advertisements.

H4 Source credibility positively enhance the effectiveness of public service advertisements.

4 Research methodology

This research begins with a review of the literature in order to better understand the effectiveness of public service commercials in COVID-19 era in terms of other significant criteria. Taking all of the characteristics into account, a closed-ended questionnaire was created to collect relevant data from the target audience. With the support of professionals, a seven-point Likert scale questionnaire for measuring was created (Mohsen and Sonia, 2014). On a seven-point Likert scale, responses range from strongly agree to strongly disagree. The questionnaire was issued to Kanpur City

residents. The data was collected using a convenience sample method. After receiving responses from the respondents, necessary revisions to the questionnaire were made, and the questionnaire's reliability was tested. Furthermore, the researchers contacted 230 people, but only 200 of them were judged to be suitable for the study. After that, using multiple regression analysis, analyse the data and reach a conclusion.

4.1 Research gap

We observed a paucity of research on COVID-19 in India, notably in the realm of public service advertising. The current study aims to overcome this gap by identifying the numerous aspects of public service advertising that make it more effective in generating public awareness and educating people about this issue.

5 Analysis

All 200 respondents are included in this study. In Table 1, it is clearly shown that the mean score of Fac_1, i.e., healthcare advertisements is highest as well as standard deviation is minimum that means the influence of Fac_1 is highest in all the available four factors for study. Fac_3, i.e., attitude change is the second important factor in this study. Fac_4 and Fac_2, i.e., source credibility and informativeness also have a contributory role in developing towards public service advertising effectiveness with all above factors.

Table 1 Descriptive statistics

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. deviation</i>
Fac_1	200	1.89	7.00	4.9222	1.35285
Fact_2	200	1.00	7.00	4.4577	1.73864
Fact_3	200	1.26	7.00	4.8112	1.30637
Fact_4	200	1.00	7.00	4.7164	1.41968
Valid N (listwise)	200				

Table 2 Model summery

<i>Model</i>	<i>R</i>	<i>R square</i>	<i>Adjusted R square</i>	<i>Std. error of the estimate</i>
1	0.279 ^a	0.560	0.340	12.52263

Note: ^aPredictors: (Constant), Fact_4, Fact_2, Fac_1, Fact_3.

The value of 'R' (coefficient of correlation), i.e., 0.279, shows a good level of prediction for public service advertising. R square column shows the R2 value (also called the coefficient of determination), which is the proportion of variance in the dependent variable that can be explained by the considered independent variables. The value of R2 = 0.56, which means that the considered independent variable explains 56% of the variability of the dependent variable. That simply means model is predicting the significant relation (R2 = 0.56) between dependent and independent variable.

Table 3 ANOVA

<i>Model</i>	<i>Sum of squares</i>	<i>df</i>	<i>Mean square</i>	<i>F</i>	<i>Sig.</i>
1 Regression	9,442.652	4	2,360.663	14.380	.002 ^b
Residual	32,011.829	195	164.163		
Total	41,454.481	199			

Notes: ^aDependent variable: Public service advertising.

^bPredictors: (Constant), Fact_4, Fact_2, Fact_1, Fact_3.

The F-ratio in ANOVA, Table 3, checks the overall regression model is a good fit for the data. Table 4 illustrates that the considered independent variables (statistically significantly) predict the dependent variable, i.e., Public service advertising, ($F_{4,195} = 14.380, p < 0.05$). Therefore, we can conclude that the regression model is a good fit for the data.

Table 4 Coefficient

<i>Model</i>	<i>Unstandardised coefficients</i>		<i>Standardised coefficients</i>	<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>Std. error</i>	<i>Beta</i>		
1 (Constant)	1.972	3.963		0.702	0.000
Fac_1 (healthcare ad)	-2.020	0.737	-0.191	-2.740	0.007
Fact_2 (informativeness)	-0.805	0.545	-0.104	-1.478	0.005
Fact_3 (attitude change)	-2.056	0.658	-0.217	-3.125	0.002
Fact_4 (source credibility)	-2.2642	0.641	-0.281	-4.124	0.000

Note: ^aDependent variable: Public service advertising; ($p < 0.05$).

5.1 Estimated model coefficient

The general equation of coefficients predicts endorsers credibility from source attractiveness, trustworthiness, source expertise, similarity. Public service advertising = $1.972 + (-2.020 * \text{health awareness ad}) + (-0.805 * \text{informativeness}) + (-2.056 * \text{attitude change}) + (-2.2642 * \text{source credibility})$. This un-standardised coefficient shows that how much the dependent variable varies with a change in the independent variable.

5.2 Statistical significance of independent variables concerning endorsers and its credibility

If we test the independent variables separately, it shows the statistical significance relationship of each independent variable. If $p < 0.05$, we could say that the coefficients are statistically significant. At the same time, if $p > 0.05$, so we can say that the coefficient is statistically insignificant. The t-value and p-value are denoted in the ‘t’ column and ‘Sig’ column of Table 4.

Stepwise multiple regressions were adopted to test the hypothesis. Table 4 shows that the four-independent variable, i.e., source attractiveness, trustworthiness, source expertise

and similarity are significantly defining the dependent variable, i.e., credibility ($R^2 = 0.56$, *adjusted R*² = 0.34, $F = 14.380$, $P < 0.05$, $df = 4$).

Based on the above discussion, we can conclude that health awareness advertisement has a significant impact on increasing the effectiveness of public service advertisement. The strongest determinant of the in public service advertisements are health awareness advertisement ($\beta = -0.191$, $P < 0.007$), informativeness ($\beta = -0.217$, $P < 0.002$), attitude change ($\beta = -0.281$, $P < 0.000$) and source credibility ($\beta = -0.104$, $P < 0.005$). Therefore, the result shows that Hypothesis H1, H2, H3 and H4 are accepted.

Through the above discussion, we can draw the inference that all the four independent variables have a significant impact to increase the effectiveness of the dependent variable, i.e., public service advertising

6 Managerial implication

The results of the preceding research provide some key insights for marketing experts on the use of public service advertising at the COVID-19 in the context of social and health-related issues to raise awareness and modify attitudes about these issues among respondents in society. Marketers are urged to pay extra attention while building these campaigns that feature information connected to this topic in order to assure the efficacy of a public service commercial. People's attitudes about change are greatly influenced by the healthcare advertisement, its informativeness, and the source's legitimacy. As a result, the effectiveness of public service advertising can be improved by ensuring that target audiences can easily relate with their real-life problems and begin to adopt the message for their own benefit. Investment in marketing activities that strengthen people's involvement or focusing health awareness advertising campaigns at those respondents who are already emotionally concerned with these issues related to public service advertising can boost the effectiveness of public service advertising. However, as the current study's findings reveal, public service advertising is one of the most successful forms of advertising for raising public awareness and changing people's attitudes and health behaviours in order to effectively cope with the COVID-19 pandemic crisis. Many people's lives have been saved as a result of this.

As far as we know, there is no medication on the market that can cure the COVID-19 condition (Nadia et al., 2021). Scientists are working tirelessly to find a solution to this issue. Until we have a suitable answer to this problem, public service advertising in the form of healthcare advertising must play a critical role in raising awareness about this disease, because accurate information saves many lives. That is also a pressing requirement.

7 Contribution of the study

To summarise, public service advertising is both fascinating and perplexing. To begin with, it is used by a diverse range of advertisers for a diverse range of objectives, with a diverse range of possible outcomes. The current study focuses on the social side of advertising, with the goals of such advertising ranging from modifying behaviour to influencing how people think about COVID-19. The study's goal was to find aspects that could assist make public service advertising more effective at changing or altering the

target audience's behaviour. As a result, the effects of such factors were explored in depth. The results of these criteria would surely aid in the production and promotion of public service advertising that has the desired impact on its target audience.

8 Suggestions

Finally, researchers would like to make suggestions like, Different types of creative advertising messages should be utilised to capture people's attention, pique their interest, educate them, and encourage them to alter their minds about positive social change. For public service advertising to be more effective, the correct target demographic and media mix must be chosen. To change people's opinions, various social media and conventional media should be employed efficiently. To improve the effectiveness of public service advertising, it is critical to understand the wants and aspirations of the target audience in order to create more successful social advertising messages by categorising people's needs and goals for behavioural change.

9 Limitation

The serious limitation of this research is to complete the work in a limited time frame. In this research work only, few variables have considered for the study that may not sufficient to describe public service advertising effectiveness. The use of self-report questionnaires could be the study's principal weakness. Despite its utility in determining the subjective state of mind, disposition, or attitude of responders (Wallbott and Scherer, 1989), the most imperious limitation of this exploration is the generalisability of findings.

10 Scope for future research

Future research should concentrate on looking at the several other aspects that were not considered in this study. Variable like emotional, rational message appeal (Zhang et al., 2014; Grigaliunaite and Pileliene, 2016) and fear message appeal (Mostafa, 2020) in public service advertising to make it more effective, future studies can also consider other factors like using celebrity endorsers (Aziz et al., 2013; Menon et al., 2001) which can have a significant role in public service advertising effectiveness.

References

- Ajzen, I. and Fishbein, M. (1974) 'Factors influencing intentions and the intention-behaviour relation', *Human Relations*, Vol. 27, No. 1, pp.1–15.
- Aziz, S., Ghani, U. and Niazi, A. (2013) 'Impact of celebrity credibility on advertising effectiveness', *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, Vol. 7, No. 1, pp.107–127.
- Bagozzi, R.P. and Yi, Y. (1989) 'The degree of intention formation as a moderator of the attitude-behavior relationship', *Social Psychology Quarterly*, Vol. 4, No. 1, pp.266–279.
- Block, P. (2009) *Community: The Structure of Belonging: Easy Read Comfort Edition*, ReadHowYouWant.com.

- Brahmi, M. and Laadjal, A. (2015) 'The strategic choices of small medium-sized enterprises integration: evidence from specific economic territory', *AUDOE, Acta Universitatis Danubius. Oeconomica*, Vol. 11, No. 2, pp.254–271 [online] <http://www.journals.univdanubius.ro/index.php/oeconomica/article/view/2731/2399>, <https://www.cceol.com/search/article-detail?id=521810> (accessed 15 May 2021).
- Brahmi, M. and Sonia, Z. (2013) 'Transformations de l'économie mondiale, dernière crise financière et récessions économiques mondiales: mesures et précautions', *Strategy and Development Review*, Vol. 4, No. 7, pp.23–71 [online] <http://193.194.91.150:8080/en/article/7908>.
- Brannon, R. (1976) 'Attitudes and the prediction of behavior', in Seidenberg, B. and Snadowsky, A. (Eds.): *Social Psychology: An Introduction*, Free Press, New York.
- Bruvold, W.H. (1990) 'A meta-analysis of the California school-based risk reduction program', *Journal of Drug Education*, Vol. 20, No. 2, pp.139–152.
- Crosby, B.C. and Bryson, J.M. (2005) *Leadership for the Common Good: Tackling Public Problems in a Shared-Power World*, Vol. 264, John Wiley & Sons, Hoboken, New Jersey, USA.
- Debatin, B., Lovejoy, J.P., Horn, A.K. and Hughes, B.N. (2009) 'Facebook and online privacy: Attitudes, behaviors, and unintended consequences', *Journal of Computer-Mediated Communication*, Vol. 15, No. 1, pp.83–108.
- Duffett, R.G. (2017) 'Influence of social media marketing communications on young consumers' attitudes', *Young Consumers*, Vol. 18, No. 1, pp.19–39.
- Eisend, M. (2006) 'Source credibility: dimensions in marketing communication – a generalized solution', *Journal of Empirical Generalizations in Marketing Science*, Vol. 10, No. 2, pp.1–33.
- Ekta, S., Maheswarappa, S.S. and Sivakumaran, B. (2017) 'Nostalgic advertisement in India: a content analysis of Indian TV advertisements', *Asia Pacific Journal of Marketing and Logistics*, Vol. 29, No. 1, pp.47–69.
- Fung, M.S.K. (2017) 'An IMB model testing via endorser types and advertising appeals on young people's attitude towards cervical cancer prevention advertisement in Hong Kong', *Young Consumers*, Vol. 18, No. 1, pp.1–18.
- Gordon, R., Magee, C., Jones, S., Phillipson, L., Barrie, L., Gordon, R., Magee, C., Jones, S., Phillipson, L. and Barrie, L. (2012) *Effectiveness of 'Signs and Symptoms' Campaigns for Lung Cancer: A Rapid Review*, AHRA, Attn: Rapid Review, 490B Boston Post Rd., Suite 200, Sudbury, MA 01776.
- Gralinski, L.E. and Menachery, V.D. (2020) 'Return of the coronavirus: 2019-NCoV', *Viruses*, Vol. 12, No. 2, pp.1–8.
- Grigaliunaite, V. and Pileliene, L. (2016) 'Emotional or rational? The determination of the influence of advertising appeal on advertising effectiveness', *Scientific Annals of Economics and Business*, Vol. 63, No. 3, pp.1–30.
- Gupta, Y.K. and Sharma, S.K. (2015) 'Mass media for women empowerment', *International Journal of Science, Engineering, Communication Management and Humanities*, Vol. 1, No. 3, pp.19–35.
- Hovland, C., Janis, I. and Kelley, H. (1953) *Communication and Persuasion*, Yale University Press, New Haven, GT.
- Huh, S. (2020) 'How to train the health personnel for protecting themselves from novel coronavirus (COVID-19) infection during their patient or suspected case care', *Journal of Educational Evaluation for Health Professions*, Vol. 17, No. 10, p.10.
- Jones, J. (2012) *Do the Right Thing the Role of Public Service Advertisements on the Behaviours of Contemporary College Students*.
- Kaya, H.O. (2007) *Promotion of Public Health Care Using African Indigenous Knowledge Systems and Implications for IPRs: Experiences from Southern and Eastern Africa*.

- Kim, T.'T.' and Diwas, K.C. (2020) 'The impact of hospital advertising on patient demand and health outcomes', *Marketing Science*, Vol. 39, No. 3, pp.612–635.
- Lapierre, M.A., Fleming-Milici, F., Rozendaal, E., McAlister, A.R. and Castonguay, J. (2017) 'The effect of advertising on children and adolescents', *Pediatrics*, Vol. 140, No. 2, pp.152–156.
- Lee, N.R. and Kotler, P. (2011) *Social Marketing: Influencing Behaviours for Good*, SAGE Publications, Inc., USA.
- Li, R., Pei, S., Chen, B., Song, Y., Zhang, T., Yang, W. and Shaman, J. (2020) 'Substantial undocumented infection facilitates the rapid dissemination of novel coronavirus (SARS-CoV2)', *Science*, Vol. 3221, No. 6490, pp.489–493.
- Liska, A.E. (1975) *The Consistency Controversy Readings on the Impact of Attitude on Behavior*, Wiley, New York.
- Mansour, I.H.F. and Diab, D.M.E. (2016) 'The relationship between celebrities' credibility and advertising effectiveness: the mediation role of religiosity', *Journal of Islamic Marketing*, Vol. 7, No. 2, pp.148–166.
- Menon, K., Boone, L.E. and Rogers, H.P. (2001) *Celebrity Advertising: An Assessment of its Relative Effectiveness*, unpublished manuscript.
- Mihir, J. and Mohsen Salem, B. (2022) 'A mediation based analysis of emotional intelligence effect on cognition and consumer decision making', *International Journal of Public Sector Performance Management*, in press.
- Mohsen, B. and Luigi, A. (2021) 'Governance of abundant natural resources, mining and energy, and their economic impacts on developing countries: theoretical controversies', *International Journal of Public Sector Performance Management*, in press.
- Mohsen, B. and Sonia, Z. (2014) 'The employment policy in the mining industry: a critical study on gender discrimination', *Journal of Asian Business Strategy*, Vol. 4, No. 8, pp.98–107 [online] [http://www.aessweb.com/pdf-files/1-142-4\(8\)2014-JABS-98-107.pdf](http://www.aessweb.com/pdf-files/1-142-4(8)2014-JABS-98-107.pdf).
- Mohsen, B., Sonia, Z. and Bensalem, K. (2014) 'TIC, innovation et impacts sur l'analyse concurrentielle: leader Firme du Bassin Minier Tunisien', *International Journal of Innovation and Applied Studies*, Vol. 10, No. 1, pp.195–217 [online] <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.679.6710&rep=rep1&type=pdf>.
- Mostafa, M.M. (2020) 'Neural correlates of fear appeal in advertising: an fMRI analysis', *Journal of Marketing Communications*, Vol. 26, No. 1, pp.40–64.
- Muhammad, N.T., Erum, S., Naveeda, K. and Brahmi, M. (2021) 'Nascent entrepreneurs and challenges in the digital market in developing countries', *International Journal of Public Sector Performance Management*, in press.
- Munnukka, J., Uusitalo, O. and Toivonen, H. (2016) 'Credibility of a peer endorser and advertising effectiveness', *Journal of Consumer Marketing*, Vol. 33, No. 3, pp.182–192.
- Nadia, M., Salha ben S. and Mohsen, B. (2021) 'Impact of the health crisis COVID-19 on finance market and economic sectors: case of Italian Government measures', *International Journal of Public Sector Performance Management*, in press.
- Nicolini, V., Cassia, F. and Bellotto, M. (2017) 'Children perceptions of emotional and rational appeals in social advertisements', *Young Consumers*, Vol. 18, No. 3, pp.261–277.
- Nooh, H.Z., Alshammery, R.H., Alenezy, J.M., Alrowaili, N.H., Alsharari, A.J., Alenzi, N.M. and Sabaa, H.E. (2020) 'Public awareness of coronavirus in Al-Jouf region, Saudi Arabia', *Journal of Public Health*, Germany.
- O'Brien, M., Moore, K. and McNicholas, F. (2020) 'Social media spread during COVID-19: the pros and cons of likes and shares', *Irish Medical Journal*, Vol. 113, No. 4, p.52.
- Paul, S. and Singh, A. (2016) 'Coverage of health-related articles in major local newspapers of Manipur', *Journal of Education and Health Promotion*, Vol. 5, No. 1, p.3.
- Roy, D., Tripathy, S., Kar, S.K., Sharma, N., Verma, S.K. and Kaushal, V. (2020) 'Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic', *Asian Journal of Psychiatry*, Vol. 51, No. 1, pp.20–28.

- Sadati, A.K., B. Lankarani, M.H. and Lankarani, K.B. (2020) 'Risk society, global vulnerability and fragile resilience; sociological view on the coronavirus outbreak', *Shiraz E-Medical Journal*, Vol. 21, No. 4, pp.777–780.
- Schiffman, L.G. and Wisenblit, J.L. (2015) *Consumer Behavior*, Vol. 11, England Pearson Education Limited, Pearson Education Limited, 80 Strand, WC2R 0RL, London.
- Schuman, H. and Johnson, M.P. (1976) 'Attitudes and behavior', *Annual Review of Sociology*, Vol. 2, No. 1, pp.161–207.
- Sternthal, B., Phillips, L. and Dholakia, E. (1978) 'The persuasive effects of source credibility: a situational analysis', *Public Opinion Quarterly*, Vol. 42, No. 3, pp.285–314.
- Suresh, K.(K.) and Srinivasan, M.I. (2008) *Public Service Advertising: Some Issues and Campaigns*, Icfai University Press, No. 8-3-952/10/2 & 2/1, 2nd Floor, Smiline House, Sri Nagar Colony Main Road, Punjagutta, Hyderabad-500073, India.
- Tajpour, M., Salamzadeh, A. and Hosseini, E. (2021) 'Job satisfaction in IT Department of Mellat Bank: does employer brand matter?', *IPSI BgD Transactions on Internet Research*, Vol. 17, No. 1, pp.15–21.
- Tunio, M.N., Chaudhry, I.S., Shaikh, S., Jariko, M.A. and Brahmi, M. (2021) 'Determinants of the sustainable entrepreneurial engagement of youth in developing country – an empirical evidence from Pakistan', *Sustainability*, Vol. 13, p.7764 [online] <https://doi.org/10.3390/su13147764>.
- Vohra, J. and Soni, P. (2016) 'How do Indian mothers use feeding practices with children?', *Journal of Children's Services*, Vol. 11, No. 2, pp.283–299.
- Wakefield, M.A., Loken, B. and Hornik, R.C. (2010) 'Use of mass media campaigns to change health behaviour', *The Lancet*, NIH Public Access, Vol. 376, No. 9748, pp.1261–1271.
- Wallbott, H.G. and Scherer, K.R. (1989) 'Assessing emotion by questionnaire', in *The Measurement of Emotions*, pp.55–82, Academic Press, Cambridge, Massachusetts, USA.
- Wang, C., Horby, P.W., Hayden, F.G. and Gao, G.F. (2020a) 'A novel coronavirus outbreak of global health concern', *The Lancet*, Vol. 395, No. 10223, pp.470–473.
- Wang, P. and Soergel, D. (1998) 'A cognitive model of document use during a research project. Study I. Document selection', *Journal of the American Society for Information Science*, Vol. 49, No. 2, pp.115–133.
- Wogu, J.O. (2018) 'Vaccination against hepatitis B in Ghana: a pilot study', Vol. 9, No. 3, pp.1–4.
- Wood, M. (2012) 'Marketing social marketing', *Journal of Social Marketing*, Vol. 2, No. 2, pp.94–102.
- World Health Organization (2020) *Coronavirus Disease 2019*, 2019 March, p.2633.
- Xu, Z., Shi, L., Wang, Y., Zhang, J., Huang, L., Zhang, C. and Zhu, L. (2020) 'Pathological findings of COVID-19 associated with acute respiratory distress syndrome', *The Lancet Respiratory Medicine*, Vol. 8, No. 4, pp.420–422.
- Yang, K. (2020) *Online Behavioral Advertising: Why and How Online Customers Respond to It?: An Experimental Study into the Effects of Personalized Levels, Rewards on Click-Through Intentions towards Ads between Chinese and Dutch*, University of Twente, Drienerlolaan 5 7522 NB Enschede The Netherlands.
- Zhang, H., Sun, J., Liu, F. and Knight, J.G. (2014) 'Be rational or be emotional: advertising appeals, service types and consumer responses', *European Journal of Marketing*.