
AN ASSESSMENT OF SOCIAL IMPACT OF VISUAL COMMUNICATION: A CASE STUDY OF SELECTED GRAPHIC VISUALS FOR CORONAVIRUS ENLIGHTENMENT CAMPAIGNS IN NIGERIA

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ABSTRACT

This paper assesses the impact of graphic visuals in vividly communicating social issues to the public. Socially responsible graphic visuals focus on exploring contemporary issues that focus on humanity. The paper enunciates the role of graphic visuals in conveying essential information aimed at shaping social behaviours in a period of health crises. This study evaluates the impact of selected graphic visuals developed by the design unit of Nigeria Center of Disease and Control (NCDC) to campaign against the spread of coronavirus pandemic in Nigerian communities. The visuals were categorized into areas of information dissemination, education, readiness, response and prevention. The selected graphic visuals were subjected to the assessment of respondents totaling two hundred (200) using a closed questionnaire. The data was analysed with the Statistical Package of Social Science. These visuals were further analysed using content analysis of the art historical method. Results showed that the developed graphic visuals played a central role ineffectively reawakening the consciousness of the populace in acknowledging the existence of the virus in Nigeria and the appropriate ways of protecting themselves from it.

Keywords: Coronavirus, Graphic Visuals, Communication, Public Health, Enlightenment

Accepted Date : 20 November, 2020

Introduction

The contextual discourse around social design often acknowledge the intrinsic capabilities of graphic visuals in influencing thoughts and actions. Graphic design leverages on two significant visual elements which are text and images. While text constitutes all form of typography, images could be photographs, cartoons or drawings. All these could be outlined, texturized, coloured and made attractive using other visual elements embellishment for effective display on diverse visual communication media. Visual solutions can sway, inform, identify, stimulate, enhance, unify, brand, evoke and convey different meaning (Landa, 2011).

Graphic visuals are forms of social languages that transcend cultures and used for sharpening the behavioural patterns and societal values. Lifestyles are communicated and exemplified in the constructs of visual communication is today fast taking precedence

over verbal communication. Fundamentals of evolution in human societies were anchored on in-depth understanding of the environment and interaction with other cultures. The National Education Association (2001) asserted that Western civilization is reliant on visual culture, visual artifacts, and visual communication as a medium of dialogue that evolvesthe socio-cultural identities. Socially responsible visuals are focused on exploring contemporary issues that shifts towards humanity.

Visual designers are saddled with the profound responsibility of creating graphic visuals that enormously influences how people live their lives. Frascara (1988) argued that graphic design as a practice goes beyond the aesthetic considerations to communicate efficiently. Icofrada (2011) establish the capacity of graphic designers to coherently organize information visually to enhance audience understanding in the following:

“Graphic design practice is an interdisciplinary, problem-solving activity, which combines visual sensitivity with skill and knowledge in areas of communications, technology and business. Graphic design practitioners specialize in the structuring and organizing of visual information to aid communication and orientation.”

Visual compositions are effective in communicating concise, creative and memorable information that strikes the audience mind better than textual information. Visual communication is an essential component of disaster management which centers on focused and comprehensible circulation of information to the public. Disseminated information in visual constructs are proven to be persuasive in accentuating ideas based on logic and emotion. Communication design language are anchored on the intricacies of human interactions with his environment which are guided by cognition, socio-cultural inclinations and psychological desires.

The impact and influence of culture on visual language had been identified to reflect representative cultures (Nisbett, 2003). Irrespective of the culture, the Western outlined principles and its elements are pronounced in works across cultures (Blankenship, 2005). The inter-twined and differential as well as some of these changing cross-cultural identities abound on the web (Singh & Baack, 2004; Singh *et al.*, 2006). The effect of these related and relatively divergent design practices has been traced to the influence of globalization (Scherer, 2013; Murdoc-Kitt and Emans (2014). Therefore, in order to accommodate wider readability, the common norms are adapted by the Nigeria Center for Disease and Control in the campaign against the world ravaging coronavirus pandemic.

The Nigeria Center for Disease and Control engaged in aggressive awareness campaign across the popular media channels to sensitize the public on readiness, prevention, response and recovery from the COVID-19 pandemic. This agency consistently relied on visual aids as viable medium of raising public awareness on keeping safe and healthy during the crisis. This study therefore assesses the social impact of visual design of the

NCDC as a means of information dissemination for enlightenment campaign as a way of continuing the further spread of Covid - 19 also known as corona virus pandemic in Nigeria.

Historically Overview of Graphic Visuals in Public Health

Historically, graphic visuals have been utilized in warning and sensitizing the public on healthcare issues. Visual communication permeates the human mental filters irrespective of literacy level. Hammond (2009) noted that pictorial warnings are essential in disseminating health information to individuals with low level of education. Pictorial warnings remain a cost-effective medium of sensitizing smokers and non-smokers on dangers of tobacco smoking. Studies have established that pictorial warnings have made smokers consider the health risk and are more likely to quit in countries with high and low level of literacy. Fong, Hammond and Richman (2009) posited that pictorial warnings are key important factors in encouraging smokers to quit and linked with the surge in the use of effective cessation services including toll-free telephone “helplines”. A New York University Psychologist, Jerome Bruner carried out studies which showed that people retain 10% of verbal information and 20% of what they read, but 80% of what they see and participated in (Martin, 2004).

The outbreak of Corona Virus (Covid-19) in China and the consequent vicious spread of the virus across the world has made the virus a global pandemic. This monumental global health crisis necessitated the need for accurate and robust public health communications. Imperatively, lifesaving information are disseminated through media platforms to improve public awareness of the pandemic and ways of flattening the transmission of the infection. Deighton (2020) buttressed the relevance of graphic visuals in public health sensitization in the following:

“There was a news release cautioning Indian cholera symptoms issued in 1831, and malaria warning posters from the dark days of 1940s wartime. Modern infirmities were addressed too: the colorful graffiti painted on Liberian walls that enlighten the less educated on the symptoms of Ebola, and warnings of the late 20th century's

principal medical menace”.

Visual Communication and Sensual Sensations.

Broadly speaking, art as a skill can be explained through the power of forming and also by study, observation and thought (Mills, 1965). This creative venture is expressed using the elements and principles of arts which include lines, colour and texture among others in a rhythmic manner that evoke feelings of pleasure. Researches have shown that the influence of visuals' on behavioural response are primarily psychological. Studies conducted by Ekman (1972); Ekman and Friesen (1975) suggested that visual images and facial expressions are informative powerful stimuli. Stimulus activates nerve cells in human sensory organs (Sight, hearing, taste, smell, touch). Feelings are bodily responses to stimuli and convey meanings. Sensations are raw data that the brain makes meaning from, stimulus activates our senses; a low level response (Visual Communication). Perceptions are formed after the reception of stimuli. Hall (1973), posited that images and texts differ in obvious anticipated syntax, competing for meaning, verbal information direct in gaudiences on the mode of interpretation and mental processing the visual information. Coherent visual communicative messages are embodiments of logical and representational connection between sensual and perceptual elements.

Methodology

The research design of this study employs the exploratory survey method as well as a content analysis of the historical format. Selected visual designs created by the Nigeria Center of Disease Control posted across popular digital platforms to sensitize the public. The graphic visuals are segmented into three phases in the areas of readiness, prevention and response. Visuals were analysed and subjected to the evaluation of respondents whom were selected at random. The population of respondents are two hundred (200). The population were selected at random and exposed to the graphic visuals.

Demographics of Respondents

The population of respondents are two hundred (200) constituting of 93(46%) male and 107 (54%) female. The respondents are within the age range of (20–40) years and (40-60). 82 (41%) are (20-40) years and 118(59%) are (40-60).

Gender

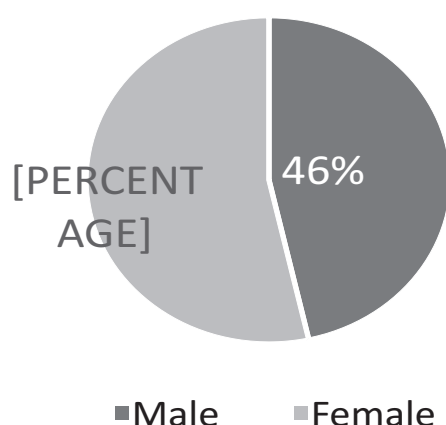


Figure 1:Demography of Respondents Age Descriptive Statistics

Statistical analysis utilized five (5) point Likert scale formats Strongly Agree, Agree, Undecided, Disagree and Strongly Disagree to collect data from the population. The data collected was analyzed using mean. The nominal scores and records were attained using Likert scale model: Strongly Agree =5, Agree=4, Undecided=3, Disagree=2 and Strongly Disagree=1. These were

calculated as $5+4+3+2+1 = 15/5 = 3$ (Likert Scale Criterion). The mean is compared with Likert Scale criterion above (Adepeko, 2016). If mean is equal to or above (greater than) the Likert criterion (3.0) then the item is accepted and if the mean is lower than the Likert Scale criterion of (3.0) then the item is rejected. The standard deviation values were also generated.

Results and Discussions

Items	N	Mean	Std. Deviation
1. Plate 1	200	3.8	.693
2. Plate 2	200	4.1	.854
3. Plate 3	200	3.5	.454
4. Plate 4	200	3.8	.210
5. Plate 5	200	2.8	.573
6. Plate 6	200	4.2	.501
Valid N (listwise)			

Readiness



Figure 1a: Graphic Visuals Communicating the Existence of Covid - 19 in Nigeria
Source: Nigeria Center for Disease Control

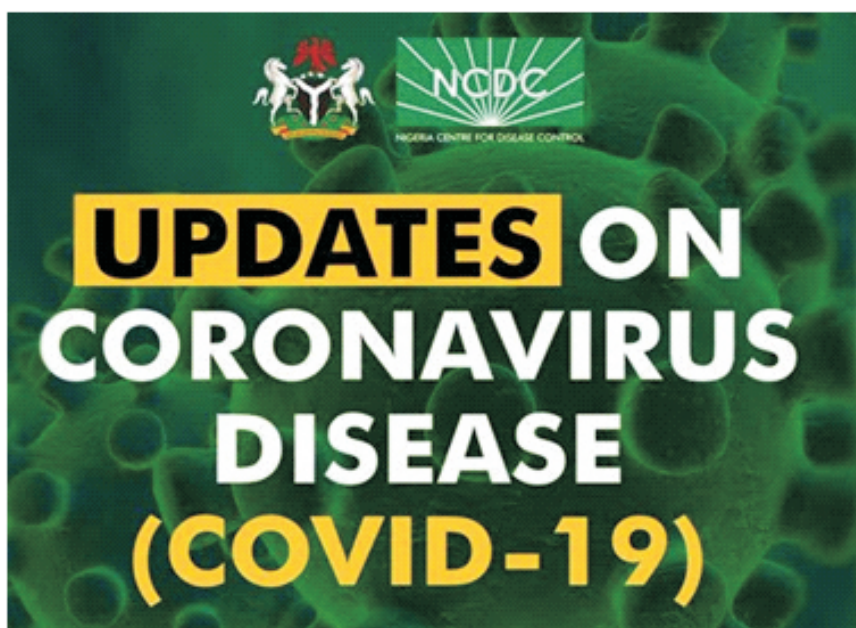


Figure 1b: Graphic Visuals Communicating the Existence of Covid - 19 in Nigeria
Source: Nigeria Center for Disease Control

These two graphic visuals (See Plate 1a and b) communicate the reality of coronavirus disease and confirms the first case in Nigeria by the Nigeria Center for Disease Control (NCDC). The textural background underlining the two graphic visuals are embedded with the molecular structure of COVID-19 and the greenish colour that fades into the overlapping molecular structures of corona virus in the background of the design symbolizes Nigeria.

The choice of the colour was influenced by the colour of the Nigerian flag. Most of the respondents agreed that these two visuals raise public awareness and mental alertness to the virus (Mean=3.8). Although some of the respondents doubted this information based on their primordia sentiments hinged on the erroneous presumption that the virus does not exist.

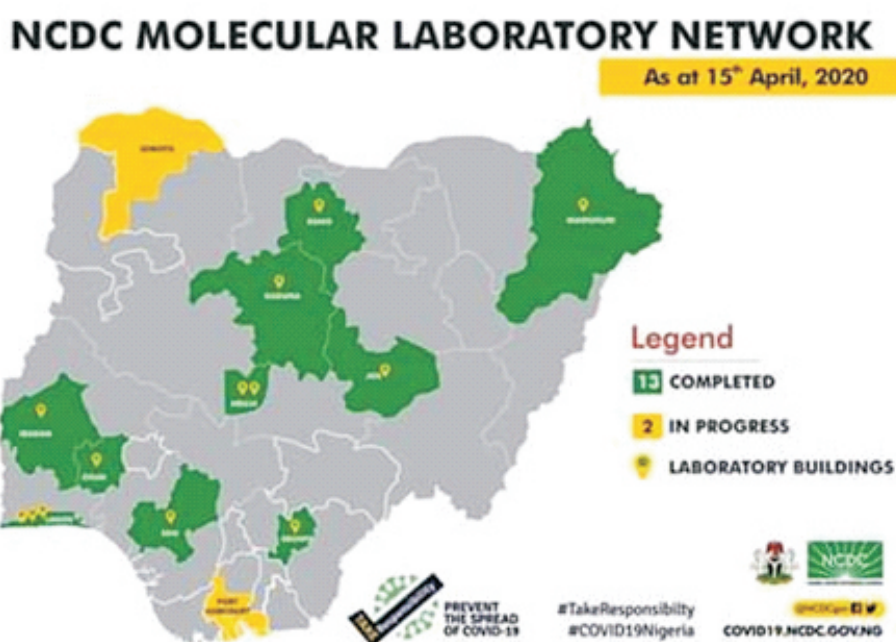


Figure 2: Map Showing location of NCDC Molecular Laboratory in Nigeria
Source: Nigeria Center for Disease Control

This is a graphic visual that indicate the readiness of Nigerian Center of Disease and Control to effectively combat the spread of the virus across the country. The World Health Organization protocol of COVID 19 virus stipulates continuous testing, isolation, treatment and retest. Therefore, the visual shows locations where the molecular laboratories are situated across the geographical regions of the country. Green colours on the displayed Nigerian map represents (See Plate 2) the areas where there are completed laboratories while

the patches of yellow colours represent areas where the molecular laboratories are under construction. The respondents agreed that this particular visual instill confidence into the public consciousness of government capability to contain the virus (Mean 4.1). Hammond (2009), holds that the philosophies in social and health psychology, reinforced by empirical studies, indicate the relevance pictorial images over text based information in health sensitization and enlightenment.

Response

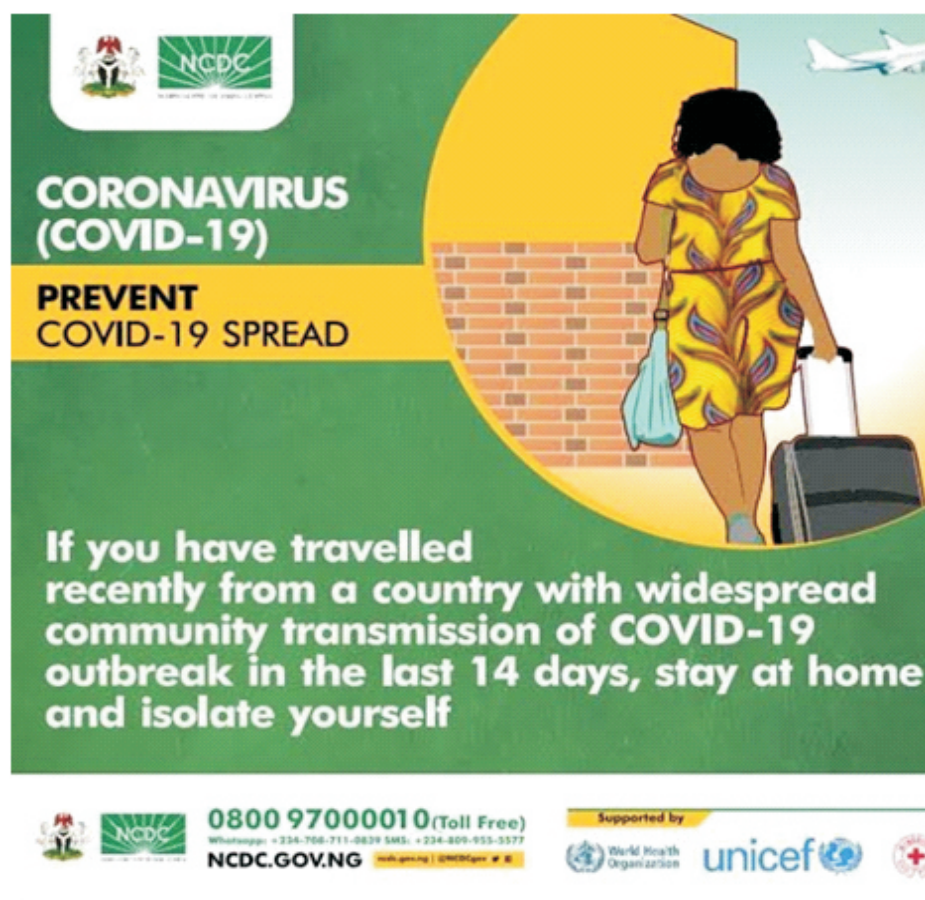


Figure 3: Poster Design Encouraging Travelers to Self-Isolate
Source: Nigeria Center for Disease Control

Having realized that Coronavirus is a disease that can only be imported by human carriers that have visited countries where the infection is viral, travelers coming into the country during the period were encouraged to self-isolate for fourteen days (14 days) to know if they have the symptoms of the infection. The incubation period of this infection is 14 days according to the World Health Organization (W.H.O) regulations. Therefore, this

graphic visual by NCDC is aimed at sensitizing the people on doing the needful. This graphic visual shows a traveler clad in a typical Nigerian fabric known as Ankara just entering the country via the airport rendered in clipart (See Plate 3). The respondents agreed that this visual actually awakens the consciousness of travelers into the country from foreign countries to self-isolate to avoid spreading the infection unknowingly (Mean: 3.5).

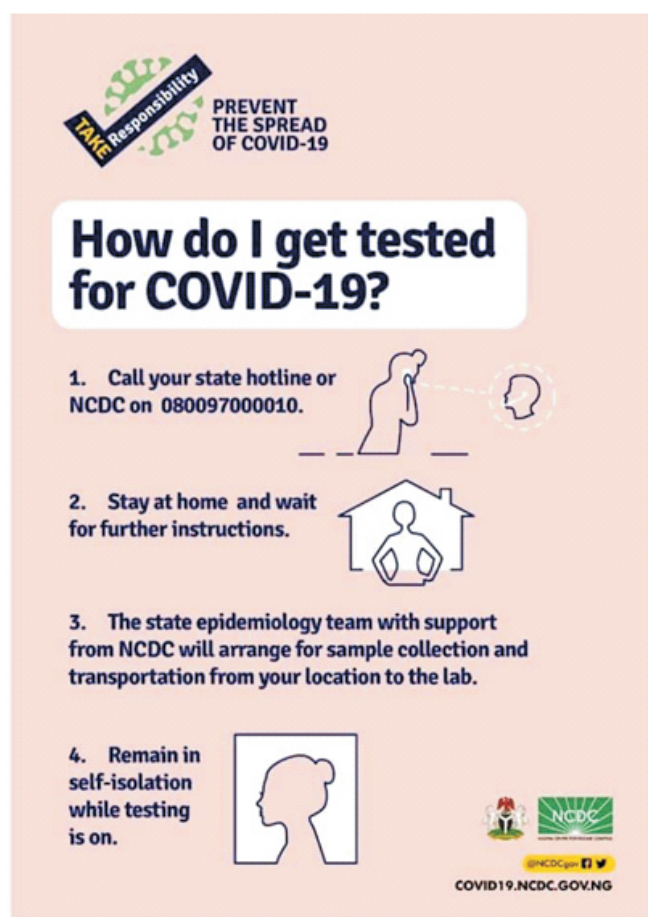


Figure 4: The process of getting a NCDC Test
Source: Nigeria Center for Disease Control

The public are directed on the procedures of getting COVID-19 test in this graphic visual (See Plate 4). This graphic visual communicates explicitly with visuals represented in notation which are reductive pictorials that captures the essence of the implied subjects. The notations are supported with corresponding texts to accentuate public comprehension of the graphic design visual. Respondents asserted that this graphic visual appropriately describes the process of being tested by Nigeria Center for Disease and Control (Mean: 3.8) and measures to take during the period of the test.



Figure 5: Design on Hand Washing and Hand Sanitization
Source: Nigeria Center for Disease Control

Frequent washing of the two hands is mandatory to minimally reduce the transmission of the virus from person to person or from touching contaminated surfaces. Scientists have proven that the COVID-19 virus infects people when contaminated fingers get in contact with the mouths, nose and eyes. Therefore, consistent washing of hands with soap or sanitizer purifies the hands against the virus as enunciated in the texts and visual on the poster in Plate 5. According to the respondents the clipart visual on the poster is not explicit and comprehensive (Mean: 2.8) in effectively communicating the appropriate method of washing the hands to kill Corona Virus. Studies found that visuals must be descriptive and corresponds with the accompanying story to ease understanding and memorability (Levie and Lentz, 1982; Levin, 1989).



Figure 6: Advisory on the Use of Cloth Face Mask
Source: Nigeria Center for Disease Control

This visual demonstrate appropriately the usage of face masks which is critical to the prevention and spread of COVID-19 (See Plate 6). Specifically, the visual focuses on advising the public on the correct use of cotton textile material mostly utilized to locally produce face masks in Nigeria. However, to ensure that the mask is effective in protecting users against the virus, Nigeria Center for Disease and Control promoted this visual aid to guide the public. The respondents noted that this particular graphic visual is instructive and informative on the usage of cloth face masks (Mean: 4.2). Boldness of the textual information also contribute enormously to the clarity of the graphic visuals, this helps to drive home the essence of the message being disseminated.

Fahmy (2004) stressed that captions play crucial roles in establishing the arrangement of visuals, which impact cognition and mental interpretation.

Content Analysis of the Layout, Type and Images of the Visuals

In all, the success of the visual campaign is dependent on the level of visual literacy which is made possible with the simple layout format with attractive plain colour, bold and conspicuous text and image design using aesthetic forms. This include simple layout, plain colour, bold and well-spaced type as well as recognizable and distinct images. In evaluating the design layout, colour, types and images of graphic visuals revealed some

contrasting and contemporary features that simplified and harmonized the text and image contents with the background in order to bring about receptive appeal that enhances its understanding. Plate 1a and b are awareness visuals, it revealed the confirmed case of the first contraction of coronavirus disease in the country. The layout visuals employed centralized alignment. The Nigeria Coat of Arm and NCDC logo are placed on top, this runs through the entire visuals. The background colour for Plate 1a comes in b dark-green with the top darker than the lower part. Yellow ochre was used as background for "First case" and "Confirmed" and the text in black by way of emphases, while other font types appeared in white to make the message very conspicuous.

The layout for Plate 1b which highlights the updates on the disease has symmetrical alignment. It has a dark-green scheme and a water-mark of coronavirus image. "Updates" in black and bordered with yellow, while yellow was also used for Covid-19. Other texts run in white. Plate 2 is the map showing completed NCDC Molecular Laboratory Location in Nigeria in green, states in yellow while emerging centres are indicated in grey. In Plate 3 is a poster design canvassing for the need to prevent the spread of Covid-19. The layout employed left type alignment with the female figure arriving from a journey. Other images include aircraft at the top right of the poster in white, while the figure's dress is represented with yellow, grey and brown and a light blue handbag hung on the left shoulder while she pulls a box behind.

In Plate 4 highlights the procedure of getting tested for Covid-19. The poster layout was aligned to the left with blue texts and accompanying illustrated images summarizing the texts. First is the free line to call. Second is the need to wait until instructed further. Third is the need to self-isolate while awaiting the NCDC's visit for sample collection and four indicates the need to remain in self-isolation while testing is going on. Plate 5 emphasizes the importance of hand washing or sanitizing regularly in blue text on light-yellow background. The layout has left text alignment, at the lower portion, is a hand-washing illustration in blue and on white background. The coat of arms and the NCDC logo appears on the bottom right.

Plate 6 emphasizes the use of face mask which must be cotton fabric. The poster has a simple layout and a green colour scheme with white types in left alignment. The image, a head profitable lighter than the background while the face mask is represented in lemon green knotted on the end of the head and the back of the neck.

Conclusion

Graphic visuals represent a non-verbal means of communication which is effective in passing essential and critical information to the public in managing emergency situations. Inherently, visual languages are transcending the barriers of mental cognitions in accentuating easy processing of publicized information. The sensual sensations transmitted from viral visual information influences the perception of the target audience. Graphic visuals permeate socio-economic class in disaster management literacy. There is an increased level of human comprehension of visual messages in comparison to literally constructed public information. Graphic visuals have a strong swaying impact on the target audience and enhances mental recall. Persistent mental recall is an essential component of public health communication campaigns. Mental recalls often shape human behaviour as it relates to his interaction with the immediate environment in nurturing resilient communities to the ravaging coronavirus pandemic. Effective visual communication strategies during in period of health crisis are preventive measures fundamental in reducing the level of public vulnerability to the crises.

In summary the study highlighted the impact of graphic visuals as tools for the dissemination of information and control of coronavirus pandemic. Furthermore, the awareness, the danger of contacting the disease and its consequences has become common through the various enlightenment as a requirement of the various visuals as well as the deliberate measures to staying safe through the observance of the various preventive measures as a means of improving public health.

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