

**THE ROLE OF HEALTH COMMUNICATION IN SOCIAL AND
BEHAVIORAL CHANGE: A CRITICAL ANALYSIS OF COVID
19 CAMPAIGNS WITH SPECIAL REFERENCE TO LUCKNOW
DISTRICT OF UTTAR PRADESH**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY**

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MARCH, 2026**

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OF UTTAR PRADESH**

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Submitted

**In partial fulfillment of the requirement of the degree of Doctor of Philosophy
in Mass Communication, Mizoram University, Aizawl**

CERTIFICATE

I certify that the thesis entitled **“The Role of Health Communication in Social and Behavioral Change: A Critical Analysis of Covid-19 Campaigns with Special Reference to Lucknow District of Uttar Pradesh”** submitted to Mizoram University for the award of the degree of Doctor of Philosophy in Mass Communication by **Riya Maurya** bearing **MZU Regn. no. 2200201** and **Ph.D. Regn. No. MZU/Ph.D./1874 of 30.08.2021** is a record of research work carried out during the period of 2021-2025 under my guidance and work carried out under my guidance and supervision, and that this work has not formed the basis for the award of any degree, diploma, associateship, fellowship or other titles in this university or any other university or institution of higher learning.

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I **RIYA MAURYA**, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or to do the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

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ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my supervisor, Dr. Dheeraj Kumar, Assistant Professor in the Mass Communication Department, Mizoram University. My academic progress has been greatly aided by his constant dedication to excellence, conscientious support, and strong work ethic.

I want to express my gratitude to Prof. Dr. V. Ratnamala, Head of the Department of Mass Communication at Mizoram University, Prof. (Dr.) Irene Lalruatkimi, Dr. Lalremruati Khaingte, Dr. Indira Devi Nongmaithem, Dr. Sayan Dey, Dr. William Lalramhmachhuana and Dr Jenny Lalmuanpuii for their contributions towards the completion of this study. They have consistently supported and encouraged me in this endeavor.

I also want to express my gratitude to Prof. Kanagaraj Easwaran (Social Work, MZU) for his immense guidance as a RAC member. I would especially like to thank Prof. & Head, Pavitra Srivastava in Department of Advertising and Public Relations, Makhanlal Chaturvedi National University of Journalism and Communication and Dr. Ruchita Sujai Chowdhary of Khwaja Moinuddin Chisti Urdu Arabi Farsi University and for their consistent support during my Ph.D. journey.

I am equally grateful to my former colleagues, Dr. Vinay Kumar, Dr. Amit, and Dr. Alok Jha, whose collaboration, insight, and camaraderie were instrumental during various phases of my academic work. Their mentorship and friendship have truly shaped my research experience.

I would also like to extend my sincere appreciation to my fellow researchers, Mr. Anuj, Mr. David Chhunthang, Ms Sweta Rani, Mr Anshul Chauhan, and Mrs Chitralekha Aggrawal, Dr. Ananth Perumal. Along to my hostel fellow mates Ms. Nistha Khana, Ms. Ankita Mishra, Ms. Moushumi Santlami and Ms. Moupriya Dutta.

Also, to my dearest friends Shrabanika, Shivani and Shubham for their unwavering support and direction during the course of my Ph.D .

My sincere gratitude is extended to each and every participant in this study; their contributions have been invaluable.

I want to express my sincere gratitude to my parents, Shri Rudra Narayan Maurya and Sunita Devi Maurya and siblings Rupesh, Dipti, Saurabh, Shashank, Henna, Divya and Uday for their steadfast love, encouragement, and support. In addition to my friends, fellow hostel residents, and everyone else who supported me during the highs and lows of this inspirational trip, I am thankful to all of the research academics for their unwavering encouragement. Above all, I am thankful to God for his love and for helping me grow into a hardworking, and kind person.

(RIYA MAURYA)

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LIST OF ABBREVIATIONS

1.	Covid-19	Corona virus disease of 2019
2.	IEC	Information Education Communication
3.	BCC	Behaviour Change Communication
4.	KPIs	Key Performance Indicators
5.	SBCC	Social and Behavioural Change Communication
6.	WHO	World Health Organisation
7.	SARS-COV-2 Virus	Severe Acute Respiratory Syndrome
8	TV	Television
9	FMCG	Fast Moving Consumer Goods
10	HBM	Health Belief Model
11	ECDC	European Centre Disease Prevention
12	GDP	Gross Domestic Product
13	ICU	Intensive Care Unit
14	ICCC	Integrated Covid Command and Control Room

CHAPTER-ONE

INTRODUCTION

1.1 Prologue

Health is the significant constituent of life, for a healthy lifestyle and sound growth of any individual, it serves as a dynamic balance between a human and their surroundings, resulting as an important factor for the development of a nation. However, with rapid technological advancement and modernization, people are compromising on their health as depicted in recent studies. Along with the growing ease of life and comfort level is adding more risk to it, alarming the significance of health communication in the present World.

This chapter presents conceptual analysis based on secondary sources of information, highlighting the importance of communication during public health crises, the role of media in health promotion, about COVID-19 pandemic and communication strategies in the nation's development; and emphasizes the overall significance and relevance of the study.

1.2 Health Communication

Health communication refers to the dissemination of information to the target audience with the tendency to bring the required behavioral and social change, encompassing information, education, and the distribution of health-related policies, initiatives, and associated measures. It is the process of spreading health-related information for the benefit of mankind through initiatives like campaigns, orientation, training, and educational activities. Health communication includes a range of techniques such as written, spoken, digital, and mass media methods used to educate, motivate, and enable individuals and communities to make better health decisions, while also playing a vital role in influencing and transforming people's attitudes and behaviours toward healthier practices.

According to Kreps (1988, p. 238), health communication is "the central social process in the provision of healthcare delivery and the promotion of public health."

The most crucial tool for health promotion is relevant health information that can encourage people to adopt healthy habits and hence make decisions. Communication is the only way to obtain appropriate health information. People can actively participate in the health care system, at home, and in the community when they have access to timely, accurate, persuasive, and pertinent health information (Kreps & Neuhauser, 2015). The primary goal of health communication is to promote awareness, manage health risks, and improve societal well-being. While effective strategies in health communication involve delivering detailed, engaging, and fact-based messages to encourage positive health behaviors and attitudes.

According to Schiavo (2007), key characteristics of health communication include being audience-centered, where communication strategies are designed with the audience's needs and perspectives in mind. It is research-based, relying on data and evidence to shape messages and strategies. It also integrates knowledge and approaches from various fields such as public health, psychology, sociology, and communication. The process is strategic and focused on achieving specific health-related goals, emphasizing the continuous management and improvement of communication efforts, with creativity-driven, using innovative and engaging approaches to capture attention and communicate effectively. It is tailored to specific audiences and media, ensuring that messages are relevant and delivered through the appropriate channels. The approach is focused on relationship building, fostering trust and collaboration between communicators and their audiences. Health communication is aimed at behavioral and social change, striving to influence attitudes, behaviors, and practices to improve public health outcomes.

Studies by the World Health Organization (2003), O'Sullivan et al. (2003), and the Health Communication Partnership (2005) highlight systematic health communication programs which are most effective when linked to expected behavioral and social outcomes. The field of global health communication is hence expanding rapidly, incorporating various approaches such as interpersonal communication, community mobilization, and advocacy (Haider, 2005; Waisbord & Larson, 2005).

In contemporary times, the notions, definitions, dimensions, and determinants of health are all evolving. It is legitimate to assert that people's health is a measure of their overall wellbeing.

The WHO, 1948 defined health as a state of complete bodily, social, and mental well-being, not just the absence of disease or disability. Since health is a core human right, everyone should have access to basic health resources. A person's health is influenced by a wide range of elements, such as personal characteristics and behaviors, the physical and social surroundings, income levels, and life events. WHO is therefore curious about how the public perceives health in light of changing population demographics, disease types, increased life expectancy, and improvements in medical treatment.

Factors of Health Communication

1. Messages framing and content, including their vocabulary, lucidity, and capacity for engagement.
2. Sources and information carriers, encompassing both official and informal sources
3. Features of both the platform and its users.
4. Timing of communications.
5. Volume of communications, comprising the quantity of messages sent and received again.
6. Impact of critics and supporters on platforms, such as self-governing social media agents (bots).

1.3 Health Education in India

The most effective ways to keep significant health issues on the public agenda and to educate the public about health concerns is possible through health communication. The public's knowledge of certain facets of both individual and communal health, as well as the significance of health for development, is raised by the use of mass and multimedia media and other technology advancements to distribute helpful health information (WHO, 1948). With all this there is crucial factor for health education, it consists of intentionally created learning opportunities that incorporate

communication in some way and are intended to enhance health literacy, which includes knowledge improvement and the development of life skills that promote both individual and community health (Nutbeam & Kickbusch, 1998). According to Griffiths, 1972, Health education addresses not just persons and their households but also the organizations and social situations that hinder or promote the attainment of optimal health.

Social Media has huge importance in attaining health education, its interactive features have made information more accessible in the modern era. Here, users interact, build, share or trade knowledge and concepts via online or cloud-based virtual communities and networks.

Social media has the potential to spread information that aids in the holistic improvement of individuals' health. There are several actions that can lessen a disease's impact or spread by promoting suitable preventive measures about the specific disease, outbreak, pandemic or any other unexpected outburst in the country. It also serves as a forum for discussion on striking a balance between maintaining individual liberties and safeguarding public health, as well as generating public demand for transparency regarding the extent of an outbreak and its routes of transmission.

For groups with a variety of disabilities or those experiencing social or geographic isolation, social media can significantly improve social connectedness and well-being (Arora & Grey, 2020). Mass media communication with social and health issues is not a new development. Historically, societal values have been disseminated and adherence to them encouraged through the various mass media platforms. Specifically, organized initiatives to disseminate information on drugs, alcohol, and tobacco have long been ingrained in American society (Wallack, 1981).

Edutainment, health journalism, media advocacy, interpersonal communication, organizational communication, risk communication, social communication, and social marketing are some of the domains that fall under the umbrella of health communication. It can take many different forms, ranging from traditional and culturally unique forms like storytelling, puppet shows, and music to mass and

multimedia communications. It might be integrated into already-existing communication media, like soap operas, or it could take the kind of covert health messaging. The goal of health education is to improve people's and populations' condition through proper communication. The mass and multi-media transmit a large portion of contemporary culture, which can have both beneficial and detrimental effects on health. Research demonstrates that in some situations, theoretically facilitated health outreach programming can lead to long-term healthy living by increasing awareness on health issues, reinforcing health messages, and motivating people to learn more.

Health Communication is an essential part of the nation's healthcare system and helps in connecting the gap between the diverse population and healthcare providers. While providing medical information alone is insufficient in a nation with the highest population, diverse languages and customs. In India, a health communicator negotiates trust, understanding, and change in addition to translating information. They serve as the crucial channel between health systems and the various communities that they want to serve, making everyone understand the crucial information. Health communicators are the unseen heroes, behind India's most effective health campaigns, whether they are busting myths about immunizations in a tribal community or eradicating the stigma associated with mental health in traditional urban neighborhoods. The outstanding achievements in public health campaigns show how powerful and successful can be health communication. The Covid-19 vaccination program and the elimination of smallpox and polio are prime instances of how smart health communication can be applied for the benefit of the general public (Kumar, 2024). The message must be integrated into regional languages, customs, and beliefs. India has taken significant steps and come up with various strategies and initiatives for affective health communication approaches.

1. **Public Health Campaigns:** The effective campaigns like the polio eradication effort and the COVID-19 vaccination program have proven the value of health communication. Through mass media, community engagement, and cultural knowledge, these programs have reached a diverse audience (Kumar, 2024).

2. **Digital Health Communication:** The access to healthcare has been transformed by the growth of telemedicine and digital health platforms, particularly in rural areas. This change improves communication between patients and healthcare providers and is a component of India's digital health renaissance.
3. **Community-Oriented Approaches:** The efficacy of holistic communication techniques that integrate behavioral change, public education, and social norm adjustments to improve health outcomes has been shown by initiatives such as the Swachh Bharat Abhiyan (Joshi, 2024).
4. **Patient-Centric Communication:** There is a growing emphasis on involving patients in healthcare decisions through transparent and accessible communication channels. This approach is crucial for improving patient satisfaction and health outcomes

1.4. COVID-19: An Overview

On March 11, 2020, the World Health Organization (WHO) categorized the SARS-CoV-2 virus epidemic, also known as COVID-19, as a serious worldwide threat and a pandemic. Since then, there were various reports of an increase in COVID-19-related infections and fatalities (WHO, 2020). Social media and the mainstream media widely distribute this COVID-19 information, particularly during the early stages of pandemics around the world. Additionally, they concentrate on infection and its dissemination, which elicit different attitudes and levels of awareness in people (Intan Siti Nugraha; & Haq, 2021). The huge Covid-19 immunization effort, which received international recognition, is the most recent example of how health communication has enhanced public health. The volume of false and misleading material increased along with the Covid-19 wave (Kumar, 2024).

Initially, India was expected to be at high risk because of the COVID-19 pandemic, despite the low number of COVID cases. Dense populations made SARS-CoV-2 more likely to spread, particularly in metropolitan areas. On the bright side, it was predicted that a disease that primarily affects the elderly would not cause large mortality rates among India's comparatively youthful population, with 65% of the

country's population under 35 and only 6% over 65. By contrast, 10% of the Chinese and 22% of the Italian population are over 65 years old (Dong et al., 2020) .

In response to COVID-19, the Indian government screened incoming passengers on planes from East Asia. The Indian government had also imposed a strict shutdown, as a consequence, the abrupt lockdown severely impacted the urban informal areas and migrated workers; they were left without jobs and were unable to travel back to their hometown. However, it had been challenging to implement social distancing and masking universally. In many low-income neighborhoods, where people are crammed into homes and into public areas, physical distance is impractical. Schools, colleges, movie theaters, houses of worship, and the majority of other public meeting spots were also closed considering the situation occurred because of the mass spread of the virus.

The shutdown was necessary to purchase time for the eventual surge of cases. Approximately 1.9 million hospital beds, 95,000 intensive care unit (ICU) beds, and 48,000 ventilators were available in India at that time. In an optimistic scenario of COVID-19 burden, 270,000 ICU beds were required (Kapoor et al., 2020).

In order to administer COVID-19, the Uttar Pradesh government established a core team known as "Team-9," which consisted of ministers and top officials. They were instructed to turn on the public address system and restart the Integrated Covid Command and Control Room (ICCC). It was established in response to the sharp increase in instances during the early stages of Corona in China and other nations. The Uttar Pradesh government did extensive monitoring of the novel COVID-19 strain, along with the genomes of any newly discovered cases that should be sequenced. Elderly people and those with severe, terminal illnesses were given extra care (PTI, 2022). The COVID-19 period, had witnessed rapid development in its hospital infrastructure in many states of the country, encompassing Uttar Pradesh to deal with the increasing number of patients as continuous efforts were also made to ensure that paramedical staff, doctors, and essential medical equipment were available and functioning properly.

However, the state faced challenges, as with a very large population, which placed pressure on the healthcare system, during the peak of the pandemic. In many rural areas, there was still a shortage of trained medical staff and limited access to advanced medical facilities. Transportation problems, lack of awareness, and unequal distribution of resources also made it difficult for some people to receive timely treatment. These issues showed that, along with infrastructure development, continuous improvement in healthcare management and communication is necessary to deal with public health emergencies more effectively (Srivastava, Pal, & Kumar, 2022).

1.5. COVID-19: Communication, Campaign and Vaccine Hesitancy

The COVID-19 pandemic tested the public health system's ability to manage a new and complex virus, requiring measures like staying home, prolonged masking, and multiple vaccinations (Albarracin et al., 2024). Its rapid worldwide spread raised public concerns, and the many uncertainties surrounding the virus led to widespread panic. The mass media became the primary source of information about the novel coronavirus, much like it did during previous pandemics such as SARS (2003), H1N1 (2009), and MERS (2012).

Media played a crucial role in tracking the pandemic by providing real-time updates and risking their own safety to report news. In today's world, mass media serves as a vital platform for public health communication, healthcare education, and social distancing measures while maintaining social connections. It is also essential to examine how the pandemic has impacted media and mass communication. During the COVID-19 pandemic, communication became even more crucial globally. In order to share accurate and current information on the virus, testing procedures, preventative strategies, vaccine distribution, and other important information, communication was essential. To promote vaccine uptake, address vaccine hesitancy, and inform the public about the value of vaccination in managing the pandemic. Also, healthcare organizations and public health agencies use plenty of platforms and methods, such as social media, public service announcements, community engagement, and partnerships with influencers and celebrities (Sathaye, 2023). For

instance, more people participated in the COVID-19 immunization campaign when it was offered as a shared responsibility (Joshi, 2024).

Vaccine hesitancy is described by the World Health Organization (WHO) as ‘a delay in acceptance or refusal of vaccine despite the availability of vaccination services (WHO, 2015). It is thought that vaccine reluctance and misconceptions are exacerbated by inadequate health communication between the public and specialists. Several carefully thought-out tactics must be implemented to inform and boost their confidence and to combat vaccine reluctance. To achieve this counterattack strategy, three key players must cooperate such as, the people, the community, and the government. Healthcare providers establish a courteous and trustworthy relationship with parents who refuse vaccinations by clearly communicating the advantages of immunizations, their low risks, and the repercussions of not getting them.

In the case of smallpox and polio, in some underprivileged areas and among religious minorities, vaccine reluctance was very common. Misinformation and obstacles to accessibility made this worse. Extensive marketing saved the day once more. They were started at the grassroots level by enlisting well-known figures (Kumar, 2024).

Concerns about side effects, the effectiveness, and safety of the vaccines, whether or not their children should receive too many shots at once, and whether or not they will be able to build immunity naturally through illness were some of the factors that were found to be responsible for vaccine hesitancy (Joslyn Panting et al., 2018).

1.6. Statement of Problem

The novel Coronavirus brought major changes in the normal lifestyle of people. COVID-19 awareness and healthy changes in people's daily habits have played a very positive role in declining COVID-19 patients. But the Health news coverage of mainstream media is not up to mark. The Centers for Disease Control and Prevention (CDC), United States has released a notice about the social upheaval caused by COVID-19. It recommends people take a break from the mainstream media as it is causing more mental problems. The mainstream media through their news stories is arousing anxiety and panic among readers rather than providing contextual information related to health. In India, the poor continue to have limited access to

basic health determinants as well as government-funded curative services during illness (Banerjee et al., 2012).

Health campaigns with more widespread use have proved highly effective in raising COVID-19 knowledge among the rich population. However, this mode of communication lacks effectiveness in populations, resulting in these residents having little access to vital COVID-19 information. This study will explore how the COVID-19 Health Campaign has been effective for people living in urban informal and formal settlements regions and the health campaign could serve as a tool for disseminating awareness and bringing Social and Behavioral change among people. The goal of the study is to understand the impact related to the COVID-19 health campaign at the grassroots level of Lucknow City, Uttar Pradesh. The researcher had used Qualitative and Quantitative approaches for the study.

1.7 Significance of Study

The significance of this study lies in its examination of the relationship between media access, socio-economic status, and health communication during the COVID-19 pandemic, particularly how different segments of society interact with health messages. By exploring how media access and literacy impact the reception and understanding of health communication, the study contributes valuable insights into how public health campaigns can be more inclusive and effective.

The research emphasizes the importance of tailoring communication strategies to different socio-economic groups, recognizing that the effectiveness of media messages depends on the audience's access to technology and their socio-cultural context. This understanding can help improve the design of health campaigns, ensuring that they resonate with diverse communities, especially those that are marginalized or have limited access to mainstream media.

Furthermore, the study underscores the long-term importance of media in influencing behavior change and social norms. It provides a basis for refining strategies that can promote sustainable health practices, even after the immediate health crisis has passed. The findings highlight the need for ongoing, context-sensitive communication that adapts to the evolving needs of different populations.

Overall, the significance of this study lies in its potential to inform future health communication efforts by offering insights into the ways in which media and society interact and how these dynamics can be harnessed to promote public health equity. The study emphasizes the need for communication strategies that are accessible, relevant, and equitable for all societal segments.

CHAPTER TWO

REVIEW OF LITERATURE

2.1. Introduction

A detailed analysis of the literature in relation to all potential subfields of the research topic is presented in this chapter. All the literature has been carefully evaluated related to the subject function based on health communication. To gain some understanding of the current research, it was necessary to review the literature relating to the COVID-19 Campaign to Behavioral and Social Change through Various Mass Media platforms. The depiction of health communication in various news publications, TV shows, radio programs, and on social media sites like YouTube was examined in detail in several study papers, essays, and books. This chapter highlights brief history of Health Communication in India, Health Medium, COVID-19 Behaviour acceptance and influence of Medium.

2.2. Health Communication: Brief History of Health Communication in the World and India

Health communication has developed from ancient oral traditions and written records into a sophisticated, interdisciplinary field utilized in public health, medicine, and global campaigns today. Ancient humans shared oral knowledge on health, cooking, and treatment as a foundation for organized health communication.

The history of health is traced back to countries like Egypt, Greece, and India, where information about health was passed from one generation to another using methods of spoken teachings, cultural practices, early medical writings and even the religious beliefs including the traditional practices were inscribed with the information such as hygiene, diet, and ways to stay healthy. The Greek physician Hippocrates focuses on the important aspect of maintaining good health through proper diet, cleanliness, and a healthy environment (Thompson, 2014). In India, ancient medical texts such as Charaka Samhita and Sushruta Samhita provided detailed explanations about disease prevention, healthy living, and the interaction between doctors and patients (Kreps,

Bonaguro, & Query, 1998). These early sources show that communication about health has been an important part of society since ancient times.

The outbreak of the Black Death in Europe between 1347 and 1352 is also the important aspect while discussing the historical roots of health communication. Although the concept of health communication developed much later in the twentieth century, the responses to the plague show early forms of organized communication about disease. During the epidemic, authorities and physicians attempted to inform communities about the spread of the disease and encouraged measures such as isolation and quarantine. Cities began introducing sanitary regulations, observation stations, and isolation facilities to control infection, the required dissemination of information and instructions to the public, reflecting early attempts at communicating health-related messages to society, making it an important precursor to modern health communication practices (McGovern & Ross, 2022).

The major emphasis was given to health promotion and education, focusing on behaviour and societal change. Studies indicate that the AIDS response started in the 1980s, when prevention through targeted social and behavioral change was the only accessible strategy due to the lack of antiviral treatment. The process then moves on to Behavior Change Communication (BCC), Social and Behavioral Change Communication (SBCC), Information, Education, and Communication (IEC), and, more recently, Risk Communication and Community Engagement (RCCE) (Chacko & Jose, 2023). This made a substantial contribution to the development of the health communication area. As it was commonly used, IEC focused on providing information to a target with the implicit belief that after learning the truth, individuals would reduce their harmful or damaging behaviors and instead adopt desired good behaviors. Proponents of the BCC admitted that information is vital but, in most circumstances, insufficient. BCC use context-specific formative research to identify the motivators, barriers, and facilitators of behavioral change and then reacts with a few strategies aimed at motivating individuals to change their behaviour (Gupta et al., 2021). The target population must be given top priority when designing public health campaigns, and culturally relevant content and delivery methods must be used. Instead of using cliched or repeating strategies, these ads must be flexible

enough to adjust to changing population demands and health-related behaviors. Developing responsive and timely campaigns that tackle important public health problems should be the main goal. In the modern world, practical and tailored techniques are more pertinent, even while theories like framing and agenda-setting offer insightful information. Behavior Change Communication (BCC), uses customized, culturally relevant communication techniques to try to bring about long-lasting behavioral changes. The concepts of IEC and BCC are combined in Social and Behavior Change Communication (SBCC), which emphasizes social norms, community involvement, and group efforts. By educating people and motivating them to adopt healthier behaviors in their social surroundings, this integrated approach creates a comprehensive framework intended to promote long-term transformation (Joshi, 2024).

India accounted for 60% of all smallpox cases worldwide in the 1960s. With the availability of vaccines, widespread immunization proved difficult because of injection anxiety, cultural norms, and the high annual birth rate. With posters highlighting the advantages of vaccinations in regional languages, the government launched a significant marketing effort. Healthcare personnel received training on how to deliver the vaccines, and door-to-door campaigns were conducted to identify new cases. Information on new cases was also rewarded with money. The campaign was promoted through a variety of media, including radio stations, television commercials, newspaper ads, and loudspeakers, but word-of-mouth was the most successful strategy. India was deemed smallpox-free by 1977.

In a similar vein, the elimination of polio through constant information sharing through many channels and vigilant surveillance highlights the need for efficient communication. The slogan "Do boond zindagi ki" (two droplets for life) was used in numerous television commercials featuring well-known people urging parents to vaccinate their children against polio. Such strategic use of media and interpersonal communication reflects the principles of Health Communication within the framework of development support communication.

Collaborations with the media produced radio commercials that were much more well-liked by distant and migrant communities. These media appearances also assisted in identifying new cases and refuting false information. India was proclaimed polio-free by 2014 (Kumar, 2024).

This study explores the effectiveness of health communication in India in raising awareness during a pandemic and the transmission of health information during COVID-19. During the Pandemic phase, the Credibility and confidence of Journalists among the audience will view a messenger as a reliable one. To clear up misunderstandings and false information about COVID-19, Mr. Lav Agarwal, Joint Secretary, Ministry of Health and Family Welfare, provides journalists with a daily briefing on the situation in India. Identified the group that will be impacted by the lockdown, which includes many daily wage laborers and employees working in unorganized industries. Advertisements, leaflets, and do's and don'ts about corona were distributed by the individual state governments. Another significant breakthrough was the creation and installation of mobile apps that not only indicate the high light infection rate but also find the infected. Many film stars, including actor Akshay Kumar, appeared in a special video to battle corona, titled "badalkar apna vyavahaar kare corona par war" (We are going to go on with our lives). Telugu, Tamil, and Kannada actors also appeared in the video (Shameer, 2020).

2.3. Components of Health Communication

The European Centre Disease Prevention and Control (ECDC, 2020) has defined the six components of Health Communication.

- i) **Risk Communication:** It is an ongoing process of communicating with a large audience about the intended results of behavioral attitudes and health. The main goal is to enhance public awareness of the effects and methods of addressing environmental and health issues by involving communities in discussions about these issues. It can be about specific health-related choices, such as the perceived hazards of immunisation, or it can be about behaviours, such as the risks of sexual behaviour. This

method necessitates a thorough awareness of the distinctions between the many dimensions and models of behavioural sciences.

- ii) Crisis Communication: In the face of an unexpected event, a reactive communication effort is required. It is frequently unpredictable and unexpected, emerges rapidly, follows an uncontrolled path, and elicits uncontrollable reactions. Direct, honest, and continual engagement with the audience is still required for effective crisis communication. The message, the moment of its announcement, and the media employed are all kept in mind. Some popular suggestions for improvement include:
- Allow no time for a delayed reaction.
 - Do not renounce proactive action or accept inaction.
 - Do not allow a lack of preparedness to prevent you from communicating in a crisis.
 - Do not disregard the demands and expectations of traditional mainstream media.
 - Allow for no gaps in communication with external partners and stakeholders.
 - Do not tolerate a lack of internal communication in health-care systems or organisations.
 - Allow no information chaos.
 - Do not minimize the complexities of audience diversity.
 - Encourage comprehensive elaboration and proactive planning of prospective crisis communication acts as a critical component in eliminating the unexpected nature of a crisis and maybe preventing or at least avoiding its uncontrolled course

- iii) **Outbreak Communication:** One of the techniques that can help achieve the public health aim of bringing an outbreak under control as early as feasible with as little social damage as possible is efficient outbreak communication. The guidelines mention the following key elements for epidemic communication practice: Trust; early announcement; transparency; public understanding; and planning
- iv) **Health Literacy:** It is defined as an individual's capacity to obtain and apply health-related knowledge efficiently in order to preserve and enhance their health. Although literacy can aid in understanding and communicating health-related information and concerns. A person can be literate but still have poor health literacy. The Health Resource and Service Administration (HRSA, 2010) defines as "the degree to which individuals have the capacity to receive, process, and understand fundamental health information and services required to make good health decisions".
- v) **Health Education:** Educating people about healthy behaviors and lifestyles is one of health education's main goals. It aims to have a positive impact on an individual's health-related behaviors, attitudes, and knowledge. During this process, people learn how to take care of their own health as well as the health of others. Initiatives can focus on either improving present medical issues or preventative education (e.g., preventing people from developing particular diseases or teaching them how to live with a condition) through any mix of organized learning activities.
- vi) **Health Advocacy:** Advocacy is one technique for increasing individual and community access to quality health care and public health services. For a particular public health goal or program, political commitment, policy support, social acceptance, and system support can be obtained through a mix of individual and social actions. It focuses on the educational aspect, recognising growing public health issues that need to

be addressed. It includes compiling data on current public health practices, keeping an eye on relevant laws, and providing feedback on how particular policies impact communities and local groups. Additionally, it might help guide the course of health policy activities.

2.4. Digitalization of Health Communication

In the study *Digitalization of Health Communication: History and Current Scenario* (Pervez et al., 2022) researcher has analysed the role of digital media in promoting health communication. It states that using Digital communication, where feedback is rapid and all members of society, as well as policymakers, are engaged on a common communication platform, makes proper implementation of plans and policies easier. A two-way flow of communication will assist policymakers in understanding the larger societal challenge giving them a framework to adjust or fine-tune their policies and strategies.

According to the Digital Health Report (Dhingra & Dabas, 2020) it recognizes that digital health has the potential to significantly improve health outcomes if sufficient investment is made in governance, institutional, and workforce capacity to enable the changes in digital systems and data use training, planning, and management that are required as health systems and services become more digitized. According to national goals that outline a vision for the digitalization of the health sector, digital health may improve the efficiency and cost-effectiveness of care with this crucial investment in people and processes, opening the door for new service delivery business models.

The idea of a rural Indian farmer using a smartphone to get medical advice from a doctor hundreds of kilometers distant would have been written off as science fiction ten years ago. The rapid advancement of digital technology is driving a renaissance in India's healthcare sector, which is experiencing a profound shift. Once limited to the outside of healthcare, telemedicine has emerged as a major force, transforming the interaction between patients and physicians. For millions of people in isolated communities who previously had no access to high-quality healthcare, this

is now a lifeline rather than a luxury for the tech-savvy metropolitan elite. Telemedicine makes it possible for a slum resident on the outskirts of the city with a chronic illness to receive specialist care that was before unthinkable.

2.5. COVID-19 a global Pandemic: The result in Behavioural and Social Change

Health Behavior is defined as any action undertaken by an individual with the objective of enhancing, safeguarding, or maintaining health, irrespective of the actual or perceived state of health, and regardless of whether such behavior ultimately proves to be effective. Health and risk behaviours are frequently linked in groups in a more complicated pattern of behaviour known as lifestyles (Nutbeam & Kickbusch, 1998). The research examines various preventive factors pertaining to COVID-19, encompassing attitudes regarding COVID-19 vaccination and social distancing, perceived adherence to mask-wearing within the community, as well as prior related behaviors (e.g., vaccination and previous social distancing) that modulate intentions towards COVID-19 vaccination and social distancing practices.

The regression analysis discovered that more positive sentiments toward vaccinations in general related to a higher intention to be vaccinated. Living in a place where people did not frequently wear masks and had not had an influenza vaccination in the previous 12 months, on the other hand, was adversely related with vaccination intentions. Living in a rural or small town, being African American, female, and identifying as conservative were all connected with a lower likelihood of receiving a vaccine. The same result was found doing regression analysis of social distancing (Lama et al., 2022). One such international study targeted at adults over the age of 18, inhabitants of Portugal, users of health centre clusters having internet connection, and a Facebook social network account were surveyed for COVID-19 behavioural adaptations.

The result shows that the vast majority of participants (97.2%) identified wearing a face mask as the primary method of preventing covid-19, followed by social distancing (94.9%), hand cleanliness (94.4%), and respiratory etiquette (70.6%). Participants who chose "other" indicated isolation was a preventive method for this disease (Garcia & Eiró-Gomes, 2021). The FGD's based study done in Nigeria

reflects that mostly people have preferred TV channels rather than local radio station for listening COVID-19 related news and has also motivated for adopting behavioural changes like maintain social distancing and avoiding handshakes. Also, few have never watched TV or listened to radio to keep themselves stress free from COVID-19 based news.

The researcher also conclude radio is no longer in much use even in rural areas as they have access to Cable TV with constant power supply (Ngonso & Chukwu, 2021). Despite of various attempts to slow down the spread of COVID-19 in Ethiopia, new cases were still being reported. The researcher conducted community-based mixed-method cross-sectional study with community's knowledge, perception, and behavioural responses, together with health communication, to combat the destructive repercussions of the outbreak.

The major finding of this study is 58.5% of the participants had strong understanding of COVID-19, and most of respondents (97.8%) learned about it from broadcast media. In terms of information sources, 94.4% got their news from TV, 43.9% from the COVID-19 prevention team, 43.2% from Facebook, 15.8% from YouTube, and 13.9% from print media, which is newspapers, showcasing that the larger number of respondents (91.8%) received the vital information about COVID-19 daily (Yalew et al., 2021). In addition, 54.3% of respondents responded with good behavioural change to COVID-19. The researcher concluded that behavioural responses to COVID-19 in this investigation were not very strong. The community's knowledge and perceived self-efficacy must therefore be increased continuously. Possessing sufficient information of COVID-19's route of transmission, symptoms, and prevention could lead to more appropriate behavioural responses to COVID-19 (Yalew et al., 2021).

While the Jordanian study on 2555 respondents determined the extent to which promotional health programs employing public mass media channels aid in advancing public health knowledge and behavioral societal change in the face of the COVID-19 pandemic (Al-Dmour et al., 2022). The findings indicate that public awareness campaigns are the most efficient and successful means of communicating

with a broad segment of the general population in order to inform them about the Corona Virus Pandemic illness. Jordanian public television is the most effective medium, followed by the Ministry of Health (website, Facebook page), News websites, and radio stations, which had the greatest significant relative effects, while printed media had the least (Al-Dmour et al., 2022).

In terms of public health, it is improbable that simply delivering statistically and scientifically accurate information and enforcing actions will result in adherent behaviour. The public must be provided with information in such a way that their heuristic decision-making results in the change in behaviour that public health campaigns seek. Narration and storytelling are two methods for assisting heuristic decision-making. Metaphor, like 'bursting your isolation bubble' or 'a wave of COVID-19 cases overwhelming healthcare,'. It is another great method for representing concepts in a tangible and memorable way (Kearns & Kearns, 2020). While websites such as Heuristics are mental shortcuts that can aid in probability calculations and issue resolution, according to the Decision Lab, 2022. Though they can be effective for making snap decisions and reducing cognitive strain, these generalizations, or rules of thumb, usually lead to irrational or inaccurate conclusions.

The Ministry of Health's Institute for Health Behavioural Research, 2008 identified numerous key characteristics connected with vaccine reluctance among Malaysian parents (Joslyn Panting et al., 2018). This includes that there is a lack of understanding regarding the benefits of vaccination. Along affordability, accessibility, and availability problems.

Furthermore, (WR et al., 2017) researcher has already identified two additional elements related with vaccine hesitancy, namely: if the vaccine is "halal" or is prohibited to Muslims and distrust in healthcare professionals and the government. To put forth workable ideas for risk and public health communication that will improve existing advice and cut through the infodemic, promoting accessible, dependable, usable, and inclusive communication. The guidelines aim to promote

wellbeing and long-lasting behavior change by meeting the basic psychological needs of people for autonomy, competence, and relatedness.

The researcher used the Self-Determination Theory (SDT) along with ideas from philosophy, psychology, and human-computer interaction to better understand human motives and behaviors (Porat et al., 2020a). Along the researcher has formulated five useful recommendations for risk and public health communication that will help people stay healthy and make long-lasting behavioural changes while navigating the infodemic: Create a health care environment that supports autonomy; offer choice; use bottom-up communication techniques; foster solidarity; and, be open and honest about uncertainty (Porat et al., 2020b). The most people practised self-exclusion in their homes, it created empathy on a greater scale among family members. This Social cause contributed to psychological issues and violence through fostering interpersonal disparities, both verbal and physical altercations. Additionally, spending a lot of time at home may cause depression, laziness, and a worsening of other mental conditions like hypertension, stress, and anxiety (Yoosefi Lebni et al., 2021).

The Covid-19 pandemic has had an impact on how individuals interact with one another. It has massively impacted on the students and working personnel. To put off the spread of COVID-19 and reduce health hazards for students, instructors, and non-academic staff, Governments around the world have shuttered educational institutions from the pre-primary to the tertiary level. Around 300 million students were impacted by nationwide school and university cancellations in mid-February 2020, students whose education has been disrupted can be tracked using enrolment data published by the UNESCO Institute for Statistics.

The best strategy to prevent the virus from spreading is social isolation, according to public health experts. New platforms for inter- and intersocial communication, as well as new tools for psychological treatment and support that mimic the multisensory experience of in-person interaction (such as virtual reality, holograms, and serious games), are being developed to overcome the limitations of human interaction based on digital devices. The next generation of psychotherapists is also

receiving training on how to use online devices and apply their adaptive and personal skills. This has led to the biggest social change, where people are shifting from real world to the virtual one (Saladino et al., 2020).

2.6. Fear Appeals and Infodemic in COVID-19 Campaigns

Scare tactics, also called fear appeals, have been widely applied to encourage specified preventive actions. In the period of Pandemic, to convince individuals to physically distance themselves, a health communication campaign among health care professionals was to develop television commercials depicting a fake hospital overcrowded with patients coughing up blood, fainting in hallways, and wailing in pain (Stolow et al., 2020). This provides no actionable information for physical separation and filled advert with exaggerated inaccurate information on COVID-19 symptoms. The researcher is believed that fear appeal tactics for COVID-19 may not only be suitable in changing behaviour but may also be hazardous by intensifying already existing pandemic stress, resulting in an unexpected backlash of negative behaviours (Stolow et al., 2020). Furthermore, COVID-19 fear appeals focus solely on the individual's action while ignoring very influential extrinsic elements on which behaviour adoption is dependent. Here, researcher recommends using evidence-based health communication to target the requirements of a specific community, assist individuals in understanding what they are being asked to do, explain step-by-step how to accomplish preventative behaviours, and consider external elements needed to boost behaviour uptake (Stolow et al., 2020).

The media coverage of the COVID-19 pandemic as postage from health officials regarding health information to decrease anxiety and stress among the audience by regular postage of information on social media platforms like Instagram, Facebook, Twitter. Many works and contributions have been done by international organisations, government bodies and social media companies to combat the infodemic.

The WHO, 2020 has also launched the portal called Myth Buster to combat false news. Google has also created the SOS alert on COVID-19 in various languages and has assured the WHO websites and its social media sites would be first source of

information for public to view the information while using Google as search engine. While elaborating 12 Item Infodemic Response check illustrated about during the time of crisis social media platforms can sponsor posts of Health officer to elucidate the authentic guidance to the masses and assuring that information coming from reliable source. Also sharing personal experiences and real stories motivated individuals in taking respective safety measures. Sharing the concept that media companies should design campaign effectively for influencer and different role model, this would help them in presenting information to audience in a novel way for upcoming health issues (Mheidly & Fares, 2020).

To combat the problem of false information, a systematic way out is required, the study based on Malaysia by (Zainul, 2022) suggest that to ensure resource efficiency and timely debunking of "viral" misleading information a proper collaboration and cooperation are required between the a number of governmental official and non-government fact-checkers. Coordination between the two parties can include the following: Creating a "common pool" of potentially incorrect information discovered by the fact-checkers, as well as those who were flagged by the general public; and Cross-posting of the respective outcome's fact-checking to guarantee the greatest possible reach. The publication language of the fact-checks must also be considered. As it is, most fact-checks are released either in in their local language or English, an effort must be made to translate them into the of majority spoken languages.

2.7. COVID-19 and the need for Health Journalism

COVID-19 has a negative impact on mental health, along with physical disturbance. Virus not only impact on the physical health of people who are afflicted, but also the mental health of the entire population (Stainback et al., 2020). The (Centres for Disease Control and Prevention 2020) recommends taking "breaks from watching, reading, or listening to news articles" as one strategy to cope with a tragedy on its Web site under "Taking Care of Your Emotional Health." Hearing about the problem and seeing photographs over and over can be unpleasant." COVID-19 is also likely to influence mental health, according to scholarly criticism, particularly as a result of news press coverage (Garfin et al., 2020). In the field of Health Reporting Status, a

study conducted in Iran highlights the crucial side of health Journalism. Journalists are framing health stories with a lack of knowledge and special training. Therefore, it is advised that the nation focus on creating and implementing training programs in close coordination with the Ministry of Health's educational division and media experts in the Islamic Republic of Iran. This study also highlights the serious concern toward health journalism in the global sphere (Keshvari et al., 2018).

To fight the battle with Pandemic, robust health Journalism is necessary. Thus, Health Journalism needs to be improved. In a nation like India, where people consume a lot of media but have poor levels of health literacy should focus more on credibility, Quality, and relevance factor. Writing and editing health stories with full-time, highly educated reporters and subeditors. Fact-checking will be required of newspapers and television stations, particularly to debunk fake news, misinformation, and disinformation on health-related topics. People and communities can be empowered with 'news and information literacy' by using the media to engage with them. This will assist people in combating the infodemic on their own, as well as reinforce people's faith in the media (Sharma et al., 2020).

The media response to the COVID-19 pandemic reflects a fundamental misunderstanding of the scientific process by the general public and fosters a narrative that too often blames people for structural imbalances. Simply doing good science is not enough. To combat these issues Schools and colleges of public health might reconsider their curricula and place a larger emphasis on health communication. Along proper training is required for the public health students, how to communicate scientific findings strategically, effectively, and compassionately to the general public. The COVID-19 pandemic has heightened the need for more rigorous health communication training. The accredited organisations have consider tightening their standards around the ability to meet the crisis of COVID-19 (Mandelbaum, 2021).

During the COVID-19 pandemic, researcher compared and examined the procedures used in developing health communication materials for pregnant women in Madagascar and for primary school students in Japan. In this study two field

experiences in various socioeconomic contexts were compared to identify typical methods for creating resources for communication and a health crisis. This study's retrospective empirical design demonstrates that, in field practice, a lack of research rigor can occasionally be a strength. Three methods for creating communication materials during a health emergency were similar in these two field experiences in Madagascar and Japan. Both situations produced timely, visually beautiful, and culturally appropriate items that were disseminated via established channels.

As a result, of analysis, researchers discovered striking similarities in the two development processes. The two instances demonstrate how teamwork and iterative processes can lay the groundwork for an immediate communications response in a medical emergency.

When a crisis develops, such cooperation cannot be immediately established. A fundamental tenet of disaster preparedness should be done in these networks of trust between experts and the community (Benski et al., 2020).

To handle the tough situation of a national health emergency, effective health communication has to play a vital role. Handling uncertainty and fear is one of the biggest challenges. The research-based on effective health Communication clearly states that the tough situation of COVID-19 can easily be tackled by the proper flow of Health Communication (Finset et al., 2020). To lower the danger of COVID-19 in the community, we must focus on the most effective techniques for ensuring behavior change, both on an individual and communal level. The relevant behavioral adjustments to combat the pandemic are now widely recognized: Regularly wash your hands! Cough in your elbow's tissue! Social distancing: Keep your distance! Clean surfaces! Do not touch your face! Many of these suggestions necessitate altering previously established behavioral patterns. Knowing is not the same as doing, as we all know. Thus, more attention should be paid to the behavioral perspective to achieve the desired change in the audience (Finset et al., 2020).

2.8. Long-Lasting Effect of Campaigns & its elements

In a Campaign, Jingles, and slogans play a very important role. As jingles are easy to remember, catchy, and come in the form of music, rural people are more likely to

pay attention to the message. The paper studies the impact of jingles in to fight against Covid 19 among rural dwellers. When asked by respondents of the rural population, why is the jingle especially suitable? 80 percent of respondents stated that print media products (Newspapers and magazines) are more expensive and rarely reach rural areas, while 20 percent believed that jingles, with their messages, can be easily heard on the radio or television, both of which are readily available in their area (Leader Stanley, 2020).

A study based on qualitative evaluation of One Love campaigns. This campaign was highly contributed towards the reduction of HIV incidence and to prevent multiple sexual relationships among men and women belonging to the ages of 16 to 55 in southern Africa. The researcher highlights that respondents who were exposed to these campaigns reported varied changes from their attitudes and intentions to the actual change in their behaviour, this is been witnessed from reduction in the number of sexual partners, alcohol use, unsafe sex, domestic violence and motivated towards condom use, unsafe sex, proper communication in relationships, HIV testing, intergenerational and transactional sexual relationships.

The study also concluded that campaign has a great impact on people as it becomes the part of discussion at collective as well as interpersonal level, comprising discussion in communities and small groups such as in between couples. Apart from dialogue and debate it facilitates the uprising of individual and collective behaviours, thus resulting in sustained behavioural and Social Change (Jana et al., 2015).

Social advertisements help very largely to improve awareness in society. Whenever we talk about Polio, we think of the "Do boond Jindagi hai," which was marketed as a brand ambassador by Amitabh Bachchan (a prominent film actor) and featured some good persuasion words spoken by him regularly. If the timings for polio drops aren't communicated regularly, diseases like Polio will never be controlled. To combat the significant problem of Pulse Polio, initiatives like "Do Boond Zindagi Ki" and "Polio Sunday" were created, with the help of which we were able to do half of the promotion for free, and the other half was left. These are the Pulse Polio

Program and plans that will provide youngsters the chance to be Polio-free (Arora, 2019).

Word of Mouth plays an important role in disseminating health information. An empirical study with special reference to women's malnutrition represents that they find media sources helpful, 60% of female respondents still rely on word-of-mouth to obtain information about how to avoid and control malnutrition.

Their findings also reveal rural areas are more inclined toward Radio for getting health-related information. The most surprising "Health Communication" terminology is new for the people of the rural Lucknow area (Padhy, Mahendra Kumar, 2017). During Indian independence, slogans served as a means of communication and intellectual instruction, paving the path for Indians to unite despite the diversity of their civil and social lives. Slogans have played a massive role in forming the public sphere to share ideologies and build strength. During the British raj Slogans at Indian Independence acted as a vehicle for communicating ideological teaching which resulted in uniting the Indians. It evokes the patriotic feeling of Indians united all in the thread of the same goal. Slogans prove to be one ultimate powerful tool in attaining Indian Independence (Raj, 2007).

2.9. COVID-19 impact on formal and informal settlement region of India

COVID-19 hit both formal and informal urban areas across India hard, but its impact was especially harsh on people living in slums. The pandemic made existing inequalities worse and created new struggles for the urban poor. In overcrowded slum areas, where homes are packed closely together with poor ventilation and limited access to clean water or toilets, staying safe or maintaining social distance was nearly impossible. Many people working in the informal sector lost their jobs during the lockdowns, which pushed families who depended on daily wages into hunger and deeper poverty (Report, 2021).

Women and minority communities suffered even more, as they faced multiple challenges at once job losses, increased household responsibilities, food shortages, and a rise in domestic and gender-based violence. Mental health problems also grew, but there was little attention given to emotional or psychological support as the focus

stayed mainly on providing basic services. The lack of proper addresses, insecure housing, and frequent evictions made it very difficult for slum residents to receive government aid. Even though community groups and NGOs stepped up to help with food, medicine, and relief, many people still slipped through the cracks. Some government programs, like the PM SVAnidhi scheme for street vendors, tried to provide financial help, but a large number of informal workers were left out because they didn't have proper identification or official recognition (Snyder et al., 2014).

During the second wave of COVID-19, formal high-rise communities also faced significant outbreaks as the virus spread quickly through shared spaces like elevators, corridors, and common facilities. Although residents in these areas had better housing, sanitation, and access to healthcare, the lockdowns still brought their own set of challenges. Many families struggled with stress and loneliness due to social isolation and the sudden loss of domestic help, which disrupted daily routines. Economically, the impact was noticeable but not as severe as in informal settlements. People with formal jobs or stable contracts were able to manage better, especially those who could work from home. Moreover, strong urban governance, organized housing societies, and better infrastructure in these communities made it easier to access healthcare, vaccination drives, and social support services during the crisis.

2.10. Psychological Impact of COVID-19

Along with Virus propagation, the pandemic has hindered their emotional, behavioural, and psychological health. The precautionary measures to prevent the spread of diseases, such as social distance, social exclusion, and quarantine all have impacted the psychological disorders that result from the behaviour of the population. Several mental and emotional problems including fear, anxiety, sadness, and suicidal thoughts include both the pandemic itself and the precautions that were taken. Vulnerable groups should receive special consideration on both on the prevention of the negative emotional effects of the pandemic, but also to offer the essential support. The Governments and health organisations should coordinate strategies to reduce the COVID-19 pandemic's mental toll by offering providing emotional support to the entire populace, but especially to the people who are weak

(Pedrosa et al., 2020).

During the initial phase of COVID-19, traditional and new media worked together to inform a large audience about the epidemic and global crisis. Even after two years of the coronavirus, several health organizations continue to update and warn netizens and citizens about the pandemic. Along the way, conventional media has delved deeply and reached out to a diverse range of audiences. The study shows that people preferred source for news is New Media (26.3%), followed by Television (22.2%) and then radio (1%) whereas for COVID-19- related news people relied on (52%) of television news channels followed by (48%) people prefer New Media (Tarun Goma, Dr. Ram Pandey, 2020).

The COVID-19 pandemic has demonstrated the negative side of media, including how misinformation spread through social media and other digital platforms is causing as substantial a risk to worldwide public health as the virus itself. According to a study on the dissemination of COVID-19 information on social media, 43.9% of both male and female respondents prefer to share "scientific" information. This finding appears to contravene the general trend on social media, where the most popular content is amusing, engaging, and emotional.

Moreover half (59.1%) of Gen Z and Millennials polled are "extremely aware" of and can recognize "false news" about COVID-19 and approx. (35.1%) simply ignore the post (Wunderman Thompson APAC, 2020). Twitter, Facebook, Google+, YouTube, Instagram, LinkedIn, Storify, Foursquare, Vine, Ello, and Periscope are the current social media outlets used by WHO headquarters. All six WHO divisions have a Twitter and Facebook presence, and many country offices are developing the capacity to do so as well. WHO may drive traffic to the WHO website where more thorough and reputable content can be accessed by participating in social media conversations and spreading credible information through social media. The World Health Organization's main social media outlets, Twitter, and Facebook, now reach nearly 6 million subscribers daily with health information ("WHO | Social Media," 2017).

COVID-19 has a negative impact on mental health in the United States. Researchers

have explored how the virus impacts not just the physical health of people who are afflicted, but also the mental health of the entire population (Stainback et al., 2020). To fight the battle with Pandemic, robust health Journalism is necessary. Thus, Health Journalism must be enhanced, particularly in countries such as India, where mainstream media usage is high, but health education is poor. It should focus more on credibility, Quality, and relevance factor. Fact-checking will be required of newspapers and television stations, particularly to debunk fake news, misinformation, and disinformation on health-related topics. Good writing and editing needed on health stories with full-time, highly educated reporters and subeditors. This will help people and communities recognize news stories and will enhance information literacy by using the media to engage with them. This will assist people in combating the infodemic on their own, as well as reinforce people's faith in the media (Sharma et al., 2020).

2.11. Theoretical Framework

2.11.1. Semiotics: The Study of Visual Language and Signs

The scientific study of signs and sign systems, known as semiotics (or semiology), defines a text as well as the text itself and its meaning. The principles, methods, and terminology of communication study are now firmly rooted in the theories of the pioneers of semiology and semiotics, including the Swiss linguist Ferdinand de Saussure (1857–1913), the American philosopher and logician Charles Peirce (1834–1914), and the French cultural critic Roland Barthes (1915–80) (Watson, 1998). According to De Saussure, language is a "profusion of signs." This theory says communication and behavior are all assemblies of signs that are controlled by codes or sets of laws. Through careful observation and analysis, these signs can be used to discern meaning. De Saussure defined Valeur as the interaction between signals, or the relationship between them, as the factor that determines meaning. With the accuracy of a surgeon, semiology favors a more microscopic approach, frequently breaking down texts and the language they are written in. Semiology also makes it possible to use the same analytical techniques to study communication at all levels, including interpersonal, group, organizational, and mass communication (Saussure,

2017). The Swiss linguist Ferdinand de Saussure was unquestionably the other pioneer of semiotics, along with the American philosopher and logician C.S. Peirce.

Iconic, indexical, symbolic

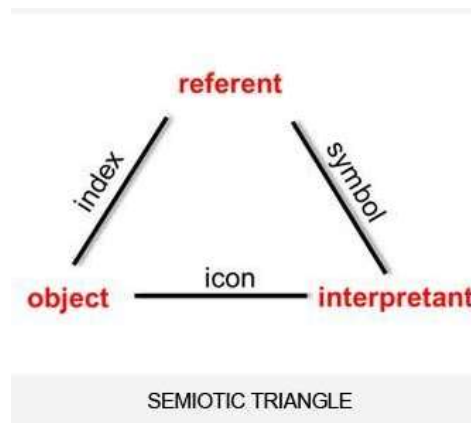


Fig. 2.1 C.S. Peirce elements of Semiotics (Fiske, 1990)

Signs were categorized into three groups by Charles Peirce. The iconic is similar to that which it explains. For example, Maps and photographs are iconic. Smoke, for instance, is an index of fire; a jacket draped over a chair may be an index of indicator of a person's presence or absence; in a movie, a close-up of a revolver typically serves the indexical function of suggesting that the weapon is going to be fired. It's possible that the symbol doesn't represent what it is supposed to. The alphabet's letters are symbols. Common consent gives them meaning as signs, and codes like grammar standards control how they are used (Schneider, 2013).

According to Saussure, a sign was a tangible item that had meaning; in other words, a sign was made up of a signifier and a signified. The signified is the mental idea that the sign alludes to, while the signifier is the image of the sign as we interpret it. Everyone who speaks the same language and belongs to the same culture has a general understanding of this idea. Saussure's signifier and Peirce's sign, as well as Saussure's signified and Peirce's interpretant, are immediately comparable. But compared to Peirce, Saussure is less interested in how those two components relate to Peirce's "object," or outward meaning (Fiske, 1990).

Signs: signifiers and signified

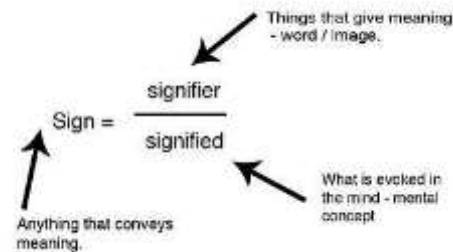


Fig.2.2 De Saussure's Signifier- Signified elements of meaning (Watson, 1998)

As a philosopher, Peirce was concerned with how we comprehend the world and our experiences. He was interested in meaning, which he discovered in the structural connections between objects, people, and signals. As a linguist, Saussure's primary focus was language. He was less interested in how signs (or, in his case, words) linked to Peirce's "object" and more interested in how they related to other signs. Thus, the focus of Saussure's basic model is different from Peirce's.

2.11.2. Semiotic mode of color and composition

Colors certainly affect us emotionally (for example, we may feel better in one color setting than another), and this visceral aspect of color helps explain why it is such a powerful incentive for a lot of consumer behavior. It's crucial to understand, though, that often an informational portion of color's impact exists alongside or even in place of its emotive component (Won & Westland, 2017). Perspective flipping is a photographer's primary ability. Whether we are sitting in a car on a country road, biking through a hamlet, or walking through a city, we all see the world from eye level, which is roughly the same for all adults. Nevertheless, because to the limitations of human vision, the photographer can provide a perspective that is uniquely accessible to the camera, akin to that of a child or a bird within a scene, making photographs from original perspectives and take advantage of this freedom for aesthetic purposes (Vorenkamp, 2016).

In its COVID-19 communication efforts, the government has used a mix of overt and covert fear-inducing semiotic encounters to "nudge" compliance even as the

regulations—like requirements for stay-at-home parents—have been made clear. In other words, fear was evoked by using unusual imagery (like a weapon) and by emphasizing genuine imagery (like the NHS being under strain). Different social groups were integrated into the public discourse concerning pandemic management and standardized to render individuals more compliant and controllable, framing infection control as a matter of risk by attributing liability for it to individual activities (Gill & Lennon, 2022).

2.11.3. Rhetoric: The Art of Persuasive Writing and Public Speaking

Rhetoric, a classical art of oratory, dates back to the fifth century BC. At first, it was a talent for enabling others to use public speaking to further their objectives. Instead, Aristotle advocated speech as a crucial element of democracy and a means of formally empowering citizens.

Price (2005) refers to as the "craft of communicating through one or more media with a particular set of audiences for specific purposes," entails "informing, entertaining, attacking, or reassuring – far more than just persuading" ("Chunking Content"). To put it even more broadly, rhetoric is the art of "human symbol use" in communication (Foss, "Rhetorical theory"). Perceiving rhetoric beyond the realm of human communication is also equally important today. Since rhetoric is "a natural faculty," according to Kennedy (2006), it also includes "analogies in features of communication among non-human animals that live in groups and seek to influence each other's actions by utterance or gesture (Engelhart & Moughamian, 1968).

Rhetorics and its appeals

1. Logos : It is related to "the speech itself, in so far as it proves or seems to prove," according to Aristotle (1990). The term "rational appeal" is another name for the persuasive mode logo. It entails introducing the audience to inductive or deductive reasoning and letting them draw the logical conclusions from the discourse. Mathematical, statistical, logical, and objective arguments are all part of the logos appeal (Matsen et al., 1990).
2. Pathos: Pathos is sometimes referred to as "emotional appeal," passion endured, or persuasion through emotional appeal. It is an appeal to the

emotions, self-interest, and feeling of identity of the listener. Despite the fact that humans are naturally logical, their emotions will constantly push or encourage them. Pathos aims to evoke a feeling in the audience, either favorable or bad, in order to inspire them (Lin, 2019).

3. Ethos: Ethical appeal (ethos) is geared to the audience's sense of what is right and proper. It is frequently used to persuade people to support social issues including aid for the underprivileged, improved racial relations, equal rights for women, and a cleaner environment (Aristotle, 1990).

2.11.4. Health-Based Models/Theories

Rosenstock and his colleagues (1966,1974) developed the HBM, which is wider, more complicated, and has a very different force than the other therapeutic model. This model more based to describe the nature of people's preventative health efforts. Therefore, since its introduction in the late 1950s, the model has been the focus of extensive research

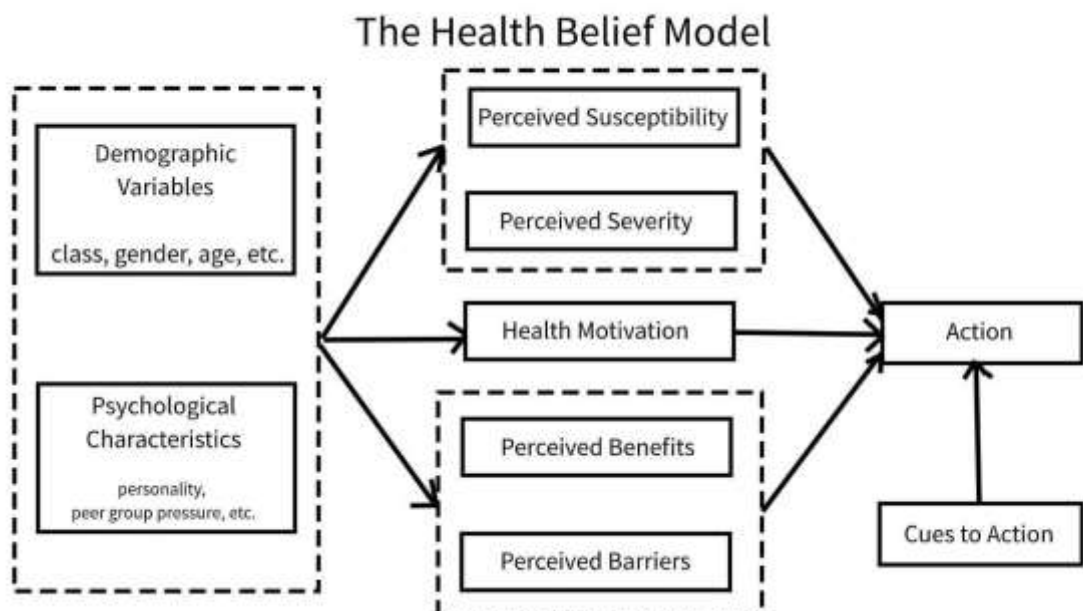


Fig. 2.3 Health Belief Model

According to the HBM, people will take action to prevent illness if they believe they are susceptible to a condition (perceived susceptibility), if they believe it will have potentially serious consequences (perceived severity), and if they believe a particular course of action available to them will reduce susceptibility or severity or lead to other positive outcomes (perceived benefits), and if they believe it will lead to other positive outcomes (perceived benefits), if people perceive only a few negative aspects of the health action (perceived barriers) (Jones et al., 2015).

The way the Health Belief Model frames people's actions is among its most alluring features. It recognizes that merely wanting to change a health-related behavior isn't always enough to spur someone on. Consequently, it adds two more elements that are necessary to convince someone to make the decision. The two elements are self-efficacy and cues to action. Cues to action are examples of outside events that inspire a desire to change one's health. Self-efficacy was not incorporated into the model until 1988. Self-efficacy measures a person's belief in their capacity to alter their health. It may appear insignificant, but having faith in your capacity to achieve something has a huge impact on your real ability to do it (Boskey, 2022).

2.11.5. Ecological Models of Health Behaviour

Ecological frameworks concerning health behaviors underscore the significance of environmental and policy contexts while also encompassing social and psychological dimensions. This model's basic assumption is that behavior is influenced at several levels, including the societal community, physical surroundings, policy, interpersonal (social, cultural), and intrapersonal (biological, psychological). Since the 1960s, the combination of environmental, policy, social, and individual intervention strategies have been credited with significant reductions in tobacco use in the United States (Institute of Medicine, 2001), and this practice has prompted the application of multi-level models and interventions to many health problems. Four core principles of ecological models of health behavior are proposed (Oldenburg & Glanz, 2005).:

- A variety of elements at the intrapersonal, interpersonal, organizational, community, and public policy levels can have an impact on particular health behaviors.
- At these several levels, influences on behavior interact.
- Behavior-specific ecological models need to identify the most pertinent possible influences at every scale.
- Behavior modification should be most successful with multi-level treatments.

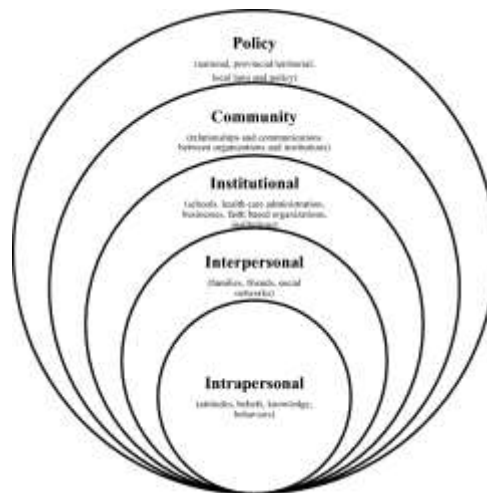


Fig.2.4 Ecological Models of Health Behaviour

2.11.6. Social Cognitive Theory

Earlier this theory was known as social learning theory, later when the concept of cognitive integrated it is termed as Social Cognitive Theory. This mainly emphasizes Reciprocal Determinism making an interaction between people and environment. This also posits dynamic interplay of personal, behavioral and environmental influences of human behavior. It also examines the people's potential abilities to alter and construct the environment they devise for themselves. Additionally, it exhorts people to cooperate within the social structure in order to bring about environmental changes that are advantageous to the society as a whole. Thus, emphasizing the human potential for collective data.

The promotion of public health and the planned protection can be seen as illustrative of reciprocal determinism, as societies seek to control environmental and social factors that influence health behaviour and health outcomes by Bandura (1997).

2.12. Research Gap

Scholars have increasingly examined the role of health communication during the COVID-19 pandemic, yet there remains a significant void when it comes to understanding the specific contribution of health journalism, particularly in urban centers such as Lucknow, the capital of Uttar Pradesh. Much of the existing research tends to concentrate on assessing awareness levels among communities. While this is important, it often overlooks the broader question of how health campaigns can act as agents of social and behavioral transformation, especially across contrasting socio-economic groups such as residents of informal settlements and more privileged urban populations.

Although health campaigns have long been acknowledged as essential tools in public health promotion, their deeper influence on shaping long-term health behaviors has not been sufficiently explored. Current studies largely emphasize knowledge dissemination but rarely consider how individuals interpret these messages, adapt them to their social realities, and ultimately incorporate them into their daily routines. As a result, the transformative capacity of health campaigns beyond simply raising awareness remains under-investigated.

This study attempts to fill that gap by focusing on how campaigns rooted in health journalism and communication can generate sustainable behavioral change. It aims to investigate the ways in which these campaigns encourage healthier choices, improve preventive health practices, and reduce misinformation, while also being sensitive to the psychological well-being of the public. Importantly, the study will move away from traditional media-centered perspectives and highlight the importance of inclusive, culturally relevant, and community-driven strategies.

By doing so, this research emphasizes that effective health campaigns should not merely inform, but also empower communities, foster resilience, and contribute to long-term improvements in public health. In turn, this underscores the role of health journalism as more than just a vehicle of information; it is a powerful medium capable of inspiring collective action and meaningful social change.

CHAPTER- THREE

RESEARCH METHODOLOGY

3.1 Research Problem

The role of Health Communication has always been crucial, that has been viewed during the Global crisis ‘Coronavirus’ to reduce panic, promote preventive measures, and guide healthcare workers. Beyond emergencies, it supports disease prevention, health promotion, and quality-of-life improvements through sustained education and advocacy efforts. The health-based news coverage is somewhat lacking, the Centers for Disease Control and Prevention (CDC), (2022) of the United States has issued a warning about the social upheaval caused by COVID-19. It recommends people should take a break from the mainstream media as it is raising more mental problems, as the news stories are arousing anxiety and panic among readers rather than providing contextual information related to health. The communication tactics used by the Indian government were frequently unclear and inconsistent. For example, rather than offering reassurance, the authorities’ health related announcements occasionally caused panic, which contributed to misunderstandings regarding lockdown procedures and their effects on day-to-day activities.

The lack of specific information about government readiness added to the public's fear (Rajkumar, 2020). This has hampered major sections of society, including the marginalized such as migrant laborers, slum dwellers, and people with poor literacy levels, who were often ignored by health communication efforts. Many of the informational items were ineffective because they failed to address the unique needs or realities of these groups (Sengupta, 2021).

In India, the poor face limited access to essential health determinants like clean water, nutrition, and sanitation, which negatively impact their health. Geographic barriers, overcrowded healthcare facilities, and a shortage of resources hinder their access to government-funded curative services. Despite schemes like

Ayushman Bharat, high out-of-pocket costs and lack of awareness remain obstacles (Banerjee et al., 2012). This lack of access and knowledge calls for targeted health communication strategies that can effectively convey vital health information, raise awareness about available services, and encourage preventive care. All these factors underscore the urgent need for effective health communication strategies that not only reach the intended audience but also drive meaningful and lasting changes in their social and behavioural practices, ultimately improving their overall health outcomes and well-being.

The widespread use of health communication strategies during the COVID-19 pandemic has played a pivotal role in reaching diverse audiences across different societal segments. This study aims to examine the effectiveness of the COVID-19 health campaign in two distinct segments of society: individuals residing in slums termed as urban informal settlements and those in affluent localities were called as formal settlement. By focusing on the grassroots level in the Lucknow district of Uttar Pradesh, the research seeks to understand the impact of these health communication efforts on both vulnerable and privileged communities. Specifically, the study will explore how the messaging, dissemination methods, and accessibility of health information influenced public awareness, behavior-social change, and adherence to health guidelines. The researcher will employ both qualitative and quantitative research methods to gain a comprehensive understanding of the campaign's reach, effectiveness, and challenges, ultimately providing valuable insights into the success and areas for improvement in future public health campaigns.

3.2 Research Design

The research uses a mixed-approaches method, integrating qualitative and quantitative research design to effectively address the objective. In order to address complicated public health challenges and provide a more comprehensive understanding of health behaviors and outcomes, mixed-method research is a crucial approach because of its capacity to integrate quantitative data with firsthand accounts, which eventually results in more successful interventions and policies in

order to create complete strategies that enhance health outcomes for a variety of populations (Kaur, 2016).

The study aims to explore the social and behavioral changes resulting from the COVID-19 health campaign in the Lucknow district. To achieve a comprehensive understanding, the research is conducted in two stages. First, the study segments society into distinct strata—Informal and Formal settlements—and examines factors such as media availability, access, and awareness. It also investigates the extent to which these campaigns are bringing about significant social and behavioral changes, analyzing the stages of communication in reaching different audiences, and exploring the role of mediators in the flow of information. This approach provides a detailed and nuanced analysis of how the campaign has impacted various segments of the population and highlights areas where health communication may be lacking or ineffective.

Second, the study critically evaluates the overall impact of the health campaign on these groups, employing semiotic analysis to uncover gaps in communication. It assesses the campaign's effectiveness in fostering meaningful change and determines which group benefited the most from these efforts. This multi-faceted methodology ensures a comprehensive evaluation of the campaign's reach, effectiveness, and impact on diverse communities, providing valuable insights for future public health initiatives.

3.3 Research Methods

A survey method was employed for the first stage of the study, utilizing both observation and scheduled interviews for informal settlement, who were predominantly illiterate. For the formal settlements, a Google-form survey and focus group discussions were used.

"Schedule" in the survey technique is a scheduled form or questionnaire that an interviewer uses to gather data from respondents through direct interaction. It allows respondents to comfortably share their views and belief and identify relative riches through this (Ngongo et al., 2007). In this method, enumerators have a major role. They were appointed with proformas containing a series of questions. As the

enumerators visited respondents, they followed the proforma's structured order, recording the answers in the appropriate sections (Kothari, 2004). This method allowed for direct observation of the sample in their natural environment, providing valuable insights into people's attitudes and behaviors.

For the formal settlements, both the Google survey and the schedule method were employed. Focus group discussions were conducted with six to twelve individuals simultaneously, with a moderator guiding the participants through a largely unstructured conversation on the study's topic (Wimmer & Dominick, 2010). This approach helped gather in-depth responses and foster a dynamic exchange of ideas.

Additionally, semiotic analysis will be utilized to evaluate the effectiveness of the COVID-19 health campaigns, particularly those based in the Lucknow district. Semiotics, the study of signs and sign systems in sociocultural contexts, is used to analyze the messages conveyed in these campaigns. The focus of this analysis is on the "text"—the signs, symbols, and meanings embedded within the campaign—and how they resonate with the target audiences (Watson, 1998). By applying semiotic analysis, the study will assess how the health messages are constructed, interpreted, and whether they effectively influence public behavior and awareness.

3.4 Sampling

The process of choosing a subset of people, organizations, or units to take part in a study from a wider population is known as sampling. It is essential for research since it saves time and money while preserving validity by enabling researchers to make generalizations about the population without examining each person (Kothari, 2004).

The study employs Fig. 1 'Sampling stages: Urban informal, formal settlement and Campaign' Simple Randomized Multipurpose Cluster Sampling and Purposive sampling to select two distinct groups: informal and formal settlements society in the Lucknow district. For informal residents, the sample includes individuals with limited literacy, chosen through a structured schedule method. The formal group is sampled through Google-form surveys and focus group discussions. This targeted sampling approach ensures representation from both ends of the socio-economic spectrum, facilitating a comprehensive analysis of the health campaign's impact.

For analyzing the campaign, the top five COVID-19 health communication campaigns were selected based on the people recall method, which was tested during the pilot study conducted in five areas: three slum areas as informal settlement and two focus group discussions in formal settlement sections of Lucknow.

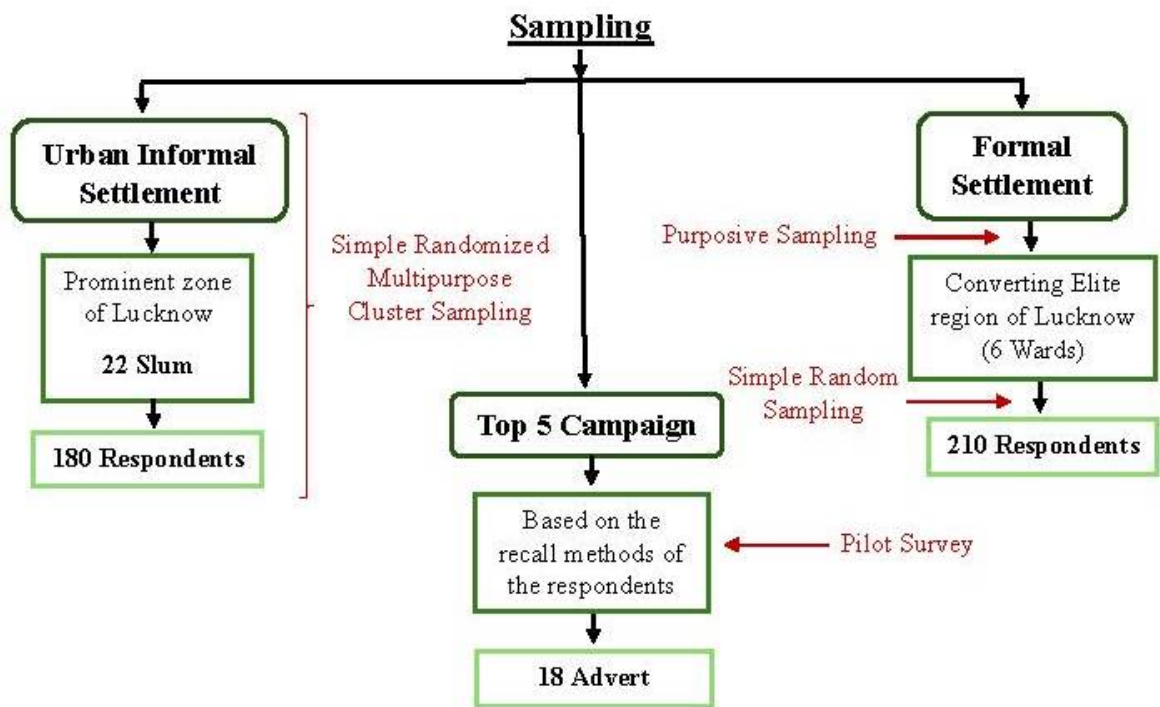


Fig. 3.1 ‘Sampling stages: Formal Settlements, Informal Settlements and Campaign’

3.5. Sample Size

The above sample size is been calculated by this formula:

As per 2011 Census population of Lucknow is estimated as 4,589,838,7595 and the sample was selected according to the formula given below:

The sample size (n) is calculated according to the formula: $n = \frac{z^2 * p * (1 - p)}{e^2} \div \left[1 + \frac{z^2 * p * (1 - p)}{e^2 * N} \right]$

Where: $z = 1.96$ for a confidence level (α) of 95%, p = proportion (expressed as a

decimal), N

= population size, e = margin of error.

$z = 1.96$, $p = 0.5$, $N = 4589838$, $e = 0.05$

$n = [1.962 * 0.5 * (1 - 0.5) / 0.052] / [1 + (1.962 * 0.5 * (1 - 0.5) / (0.052 * 4589838))]$

$n = 384.16 / 1.0001 = 384.128$

$n \approx 385$

The sample size (with finite population correction) is equal to 385

Source: (*Sample Size Calculator*)

3.5.1. Urban Informal Settlements: Slum Study

The first step will be dealing with the Survey- Schedule- observation method to study the Informal Settlements of Lucknow with a population of 7,72,807 distributed in six Zones. A densely populated, urban residential neighborhood with poor housing that is frequently connected to poverty and has inadequate infrastructure is called a slum (Olotuah, 2011). The sample of 22 informal settlement areas is collected using the sampling technique of Randomized Multistage Cluster Sampling and incorporating 180 respondents. The Randomized multistage cluster sampling (Fig.2. Randomized Multistage Cluster Sampling (Scribbr, 2021)) is appropriate for large, geographically distributed populations because it divides the population into clusters, chooses a subset of those clusters at random, and then chooses smaller units at random from those clusters for the final sample. The other probability sampling involves having a list of the whole population, in some cases, there is no way to obtain such a list. This problem could be rectified by dividing a sample into groups or categories i.e., performing Cluster Sampling Technique (Wimmer & Dominick, 2010).

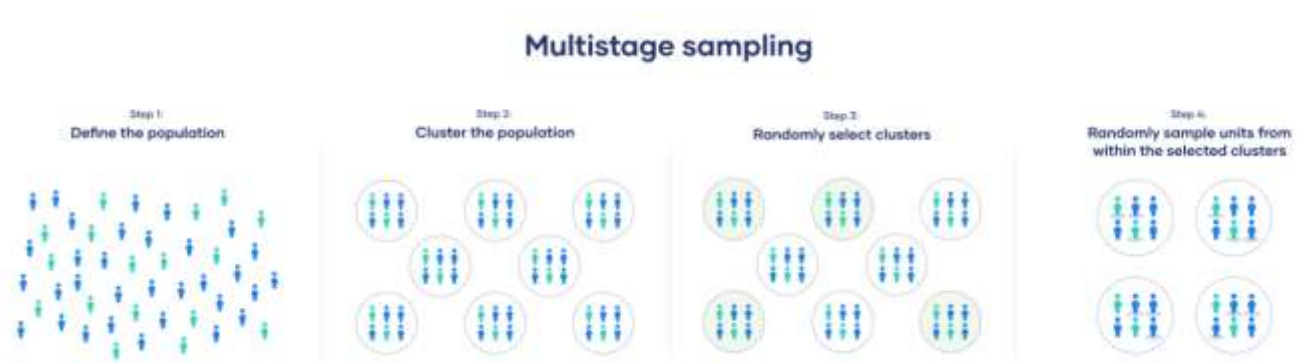


Fig.3.2.Randomized Multistage Cluster Sampling (Scribbr, 2021)

The list of selected informal settlements and total population from all the Zones in Lucknow are:

S.No	Zone	Slum Code	Ward Name/No.	Location	Total Population in Slums
1.	1	Nayi Basti	1	Mahatma Gandhi	3500
2.	1	Gousnagar Nala	28	Maulvi Ganj	3200
3.	1	Nayi Basti Bano Mandi	52	Vajeer Ganj	4100
4.	2	ArtiNagar	126	Ambedkarnagar	6100
5.	2	Durgapuri	153	Chandrabhanu gupt Nagar	6500
6.	2	Mawaiyya	154	Chandrabhanu gupt Nagar	4200
7.	3	Akilapur	239	Lala LajpatRai	3600
8.	3	Madiyaon	265	Janaki Puram 1	6000

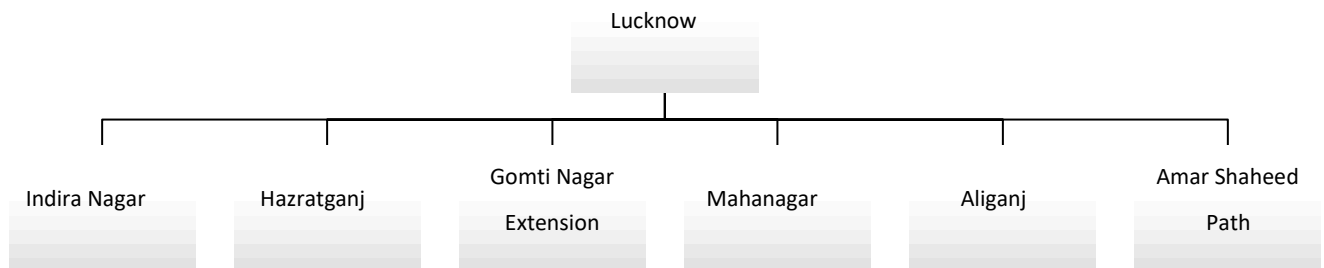
9.	3	Tagore Marg	273	Mankameshwar	6000
10.	4	Chinhath Bazar	307	Chinhath Bazar	7800
11.	4	Choti Jugauli	333	Gomyinagar	5000
12.	4	Mayawati Colony	338	Saheed Bhagat Singh	6000
13.	5	Kumhar Mandi	380	Kartika	5300
14.	5	Saleh Nagar	403	Sharada Nagar	4200
15.	5	Amausi	452	Sarojni Nagar	7500
16.	6	Rustam Nagar	500	Maulana Kalbe Abid Pratham	3640
17.	6	Adarsh Nagar	537	Kanhiya Madhavpuri	4620
18.	6	Wazeerbag (Charhi)	594	Ambarganj	3580

Table 3.1 : Selected urban informal settlements and total population

3.5.2. Urban Formal Settlements: Elite Study

Under this method majorly online survey and focus-group studies on few were performed by targeting all rich localities of Lucknow: Indira Nagar, Hazratganj, Gomti Nagar Extension, Mahanagar and Aliganj by Purposive Non- Probability sampling method. Purposive sampling, sometimes referred to as judgmental or selective sampling, is a non-probability sampling technique in which researchers deliberately choose participants not at random but rather according to particular traits, expertise, or experiences pertinent to their study issue (Wimmer & Dominick, 2010). For this study 210 respondents were purposively chosen and were fulfilling the urban formal settlement criteria. The "elite" are a small group of individuals who, within a society or particular field, possess an excessive amount of wealth, privilege, power, or talent; they are frequently distinguished by their high status and influence

(Mahr, 2018). Here are the six rich localities of Lucknow (Khurana, Jasmine 2022) and the list of selected areas with their total population (Close & Zinkhan, 2009).



The list of selected areas and their total population:

S.No.	Area	Population
1.	Indira Nagar	3314
2.	Hazratganj	44810
3.	Gomti Nagar Extension	317463
4.	Mahanagar	42507
5.	Aliganj	74502

Table 3.2 Selected Elite area Source: (Close & Zinkhan, 2009)

3.5.3. Campaign Analysis

To study the effectiveness of COVID-19 health-based campaigns, the top five campaigns: such as Do Gaj Duri, mask hai Zaurui, Stay Home, stay Safe; I support janta curfew; Aarogya Setu ‘Download the app now’ and Har Ghar Dastak were selected based on those most remembered by people during the pilot study. For each campaign, three ads were chosen for analysis, totalling 18 ads. These were selected based on their high ratings according to SEO metrics on Google search engine. Using

the semiotic analytical tool the analysis were performed. The study of signs and sign processes, such as warning signs, branding, emojis, and cultural representations, is called semiotic analysis. More so than seeing signals and their meanings, knowing semiotics is a useful skill to supplement other consumer insights techniques. It can be useful for improving exclusivity and inclusion as well as for spotting new trends and opportunities (Dunstone, 2019).

Definition of variable used for analysis (Fiske, 1990): -

a) Analysis on the basis of frame

- **Body Language:** It refers to the physical gestures, posture, and movement of individuals in the campaign visuals. It can communicate emotions, intentions, and engagement levels, playing a key role in how the audience perceives the message.
- **Colourfulness:** It influences mood, attention, and message interpretation. Bright, vivid colours might evoke urgency or positivity, while muted tones could convey seriousness or caution.
- **Optical Centre:** It is the focal point of a visual design where the viewer's attention is naturally drawn first. Effective use of the optical centre ensures that key information or the most important message stands out to the audience.

b) Analysis on the basis of Semiotics elements

- **Symbol:** It is an object, image, word, or gesture that represents something else. It holds cultural or social meaning and is often arbitrary, meaning the connection between the symbol and what it represents is learned rather than innate.
- **Signifier:** It is the physical form or representation of the symbol. It's the "sound," "image," or "word" that is used to communicate a particular concept.
- **Signified:** It is the concept or meaning that is evoked by the signifier. It's the idea or mental image that the symbol or signifier represents. In the case of the mask (signifier), the signified would be the concept of health

protection, safety, and prevention from infection.

3.6. Area of Study

The largest city in terms of geographic area is Lucknow, the capital of the Indian state of Uttar Pradesh. The district lies on 26.8467⁰N – 80.9462⁰E and geographical area of 2528sq km. It experiences a stark socio-economic divide, with informal and formal groups representing two vastly different living conditions. Many cities dwellers labour in low-paying, informal employment in slums, which are defined by overcrowding, poor infrastructure, poor sanitation, and restricted access to healthcare and education. The privileged groups, on the other hand, lead luxurious lives with access to first-rate healthcare, education, and facilities, and they frequently live in well-planned communities with dependable infrastructure. Because the wealthy maintain their standing through resources, social networks, and wealth, while slum dwellers confront substantial obstacles to upward mobility, this socioeconomic gap feeds poverty cycles. In order to guarantee more inclusive growth and opportunity for the underprivileged, addressing these disparities calls for concentrated efforts in the areas of affordable housing, education, healthcare access, and urban planning.

Urban informal settlements areas covered for study were: Ghantaghar, Pakka Pul (Near Imambada), Phool Mandi (Near Bada Imambada); Shram Vihar, Aishbagh; Balu Mandi {Thedi Pulia}; Daliganj Crossing; Engineering Chauraha; Hasanganj {Daliganj}; Malin Basti Sec. 12 {Near Engineering College}; Balmikinagar Metro city {Near Nishatganj Bridge}; Gomtinagar Railway station {Vijay Khand}; Govind Vihar Chintah; Husariya; Janeshwar Park Opp. Gate No. 4; Malin Basti Sec. 23 {Near Indraprastha Aprt.}; Sarvoday Nagar {Nishatganj}; Vineet Khand Gomtinagar; Alambagh Bus Stand; Durgapuri Metro Station; Taalkatora Rajajipuram; Polytechnic; Near Indraprasth hotel; Near Matiyari.

Urban formal settlements areas covered for study were: Indira Nagar, Hazratganj, Gomti Nagar

Extension, Mahanagar and Aliganj

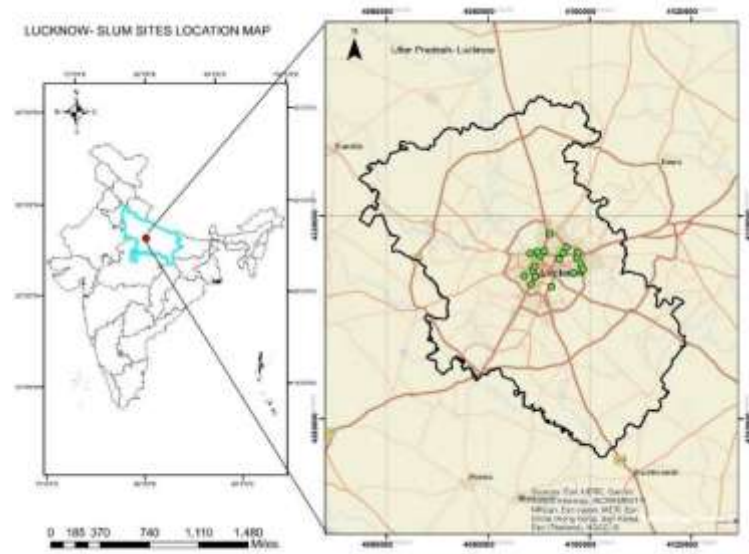


Fig.3.3 Sampled size of Urban Informal Settlements of Lucknow

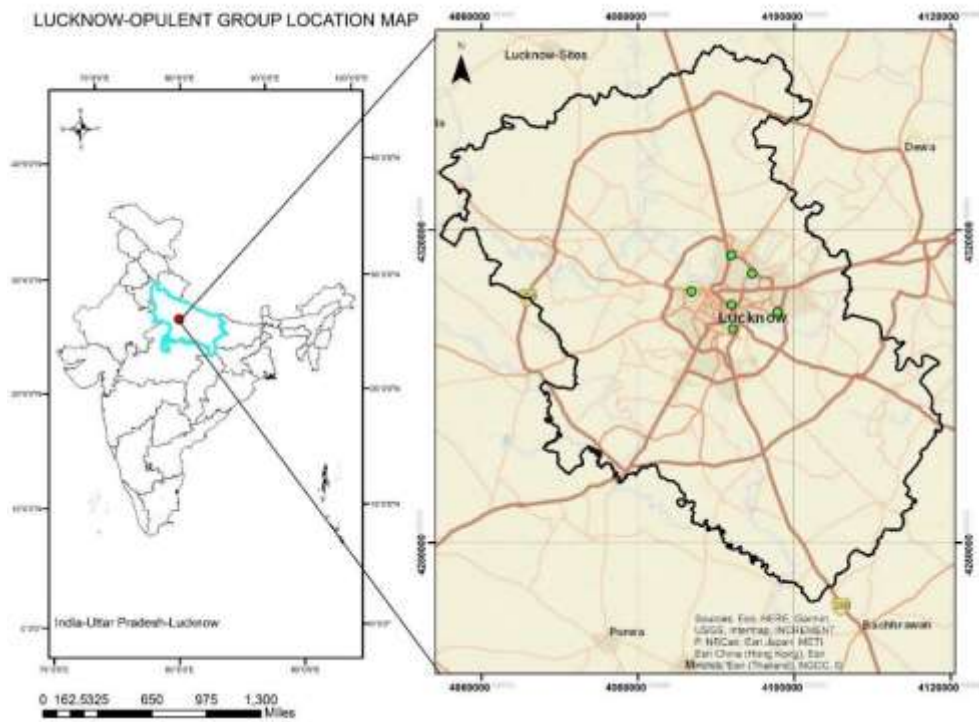


Fig.3.4 Sampled size of Urban Informal of Lucknow

3.7. Operational Definition:

Urban Informal Settlement: Unplanned, unpermitted residential communities that grow on either public or private property without legal authorization are known as urban informal settlements. These neighborhoods usually lack official planning, basic infrastructure, and secure land tenure. These neighborhoods, which might include slums, squatter colonies, and shanty towns, are commonly defined by overcrowding, poor access to water, sanitation, and other necessities (Nix et al., 2022).

Urban Formal Settlement: It "complies with legal and regulatory frameworks," according to research literature. Urban planning criteria are usually followed in the planning, development, and formal approval of these settlements. In addition to housing that satisfies government safety standards, residents enjoy secure tenure and access to fundamental social and infrastructure services. Authorities acknowledge formal settlements, which provide controlled, ongoing access to city facilities and infrastructure (Beall et al., 2010).

Slum: A slum household is a group of individuals living under the same roof in an urban area who lack one or more of the following: durable housing of a permanent nature that protects against extreme climate conditions; sufficient living space (Kirkton, 2018), which means not overcrowding; easy access to safe water in sufficient amounts at an affordable price; access to adequate sanitation in the form of a private or public toilet shared Chang (2011) by a reasonable number of people; and security of tenure that prevents forced evictions (UN-Habitat, 2003).

Opulent: It describes something that exhibits or is characterized by great wealth or abundance, often to the point of being lavish or extravagant. It suggests a display of richness. When "opulent" is used in reference to people, it signifies individuals who live in or display a lifestyle characterized by great wealth, abundance, and often lavish displays of material possessions. It implies a

condition of being very rich and living in luxury. While dictionaries primarily define "opulent" in relation to things or environments, the application to people is a common extension of that meaning. To support this, we can cite general dictionary definitions and then show how they apply to people.

Communication: It involve mainly two or more person to share, to dialogue and to commune. It is not limited to act or process but more as a social and cultural togetherness. Also, communicating oneself, God, nature, spiritual world is a form of communication called Intrapersonal. It is the countless ways to commute, this is not just limited to just words and music, picture and print, nods and becks, posture and plumages. Communication is not mere sending or receiving of information in whatever form. It is a whole situation and an experience, a human relationship in sum.

Campaign: A series of activities designed to produce a particular result. An organized course of action to achieve a particular goal. A campaign is an organized course of action designed to achieve a specific goal. This typically involves a series of planned activities over a period of time.

Advertising: It is the activity or profession of producing advertisements for commercial products or services. It is a form of communication intended to persuade an audience (viewers, readers, or listeners) to purchase or take some action upon products, services, ideas, etc (Nekmahmud & Rahman, 2016).

Advertising Campaign: It is specifically designed strategy with a series of advertisement messages, carried out across different medium and aiming to share single idea and theme with unified approach. Additionally, a targeted marketing effort is better for achieving desired outcomes like higher sales and better communication. The duration of ad campaign may last from few weeks and months to years.

Health: It is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, WHO (2020).

Health Communication: Health communication has been defined as the study and use of communication strategies to inform, influence, and motivate individuals, institutions, and communities in making effective decisions to improve health and enhance the quality of life (U.S. Department of Health and Human Services, 2005).

Health Campaign: This specific genre of campaign aims and attempts to promote public health. Health campaign organizers use information and a chance to get more involved. For example, a vaccination campaign aims to inform the public about a vaccine and give it to those who want it. The organizer also seeks to change the participant's behaviour in some way along with disseminating awareness as their primary aim.

Behavioural Change: The people in a society adopt a different pattern of working or reacting to external stimuli. It can be by the influence of family, friends, or colleagues, or either it could be a message delivered through an external medium (like Advertising, Campaign, Cinema, or Events). This change could be permanent or temporary as compared to an individual previous change. It could result in transformation in thinking, interpretations, emotions, or relationships.

Social Change: No society has ever remained the same; change is constant. Change, to us, is inevitable. It mainly involves many people engaging in activities that may differ from their previous generation. It is the clear transformation in the people's culture and principled institution as a result of interaction and relationships among human beings. It is art of compromise that has the power to create a more lasting change.

CHAPTER- FOUR

DATA ANALYSIS

4.1 Introduction

The chapter "Data Analysis and Findings" offers a comprehensive analysis of the information acquired through various research techniques in order to evaluate the contribution of the health communication campaign to social and behavioral change in the Uttar Pradesh district of Lucknow. A multi-method research technique was used to meet the study's goal, which allowed for a thorough understanding of the data from multiple perspectives. This chapter is structured to provide a thorough analysis of the information gathered through surveys – Urban informal and formal settlement regions using schedule and google survey method, semiotic analysis of campaigns that were widespread during pandemic. Moreover, while performing schedule surveys, discussion methods were also done while studying the Urban informal regions, to study the adequate behavioural and social change among them. This group is highly impacted by the advent of COVID-19, which led to lockdown and had shut down all the sources of income amongst the dwellers. The performance of discussion provides comprehensive insight into difficulties encountered by the slum people during the global crisis and had been neglected by the authorities.

Semiotic analysis of health-based campaigns was rigorously performed using prominent theories of semiotic analysis. Also, to study the persuading factor in COVID-based health campaigns for insisting people to frequently wash hands, stay at home, get vaccinated, and etc. rhetorical analysis: the art of persuasion was used in this study.

The chapter incorporates sections such as demographic study, COVID-19 and Media usage, Social and behavioural changes for both Urban informal and formal settlement sections of society. Further, the study incorporates comprehensive semiotic analysis. A complete and full interpretation of the data is provided by the integration of quantitative and qualitative investigations, highlighting the benefits and drawbacks of current communication strategies. The chapter's conclusions will

undoubtedly improve future regulations and procedures, resulting in a more effective use of health communication in relation to behavioral and health change.

4.2 Demographic characteristics of the Urban informal settlement area

Groups		Respondent (%)	Total Respondent
Gender	Male	42.2	180
	Female	57.7	
Age	18-21	25	180
	22-30	37.2	
	31-40	17.8	
	40 above	20	
Education of Adult	Literate	11.1	180
	Illiterate	88.9	
		Percentage (%)	Total Sampled (N)
Native	Uttar Pradesh	50	22
	Assam	40.9	
	Bihar	9.09	
Duration	less than 15 years	31.8	22

	16 to 30 years	36.4	
	31to 45 years	18.2	
	45 above	13.6	
	Total Population		
	No. of Household	2367	
Estimated	No. of Population	10380	22
Population	No. of Children	5373	

Table 4.1: Demographic characteristics of respondents

The demographic composition of the respondents of informal settlements indicates that 42.2% are male and 57.7% are female among the total sample group of 180 individuals selected from 22 different urban informal settlement areas, slum with age group from 18-21 were 25 %, 22-30 were 37.2 %, 31-40 were 17.8 % and lastly above 40 was 20%. A majority of these individuals have migrated from states such as Assam (40.9%), Bihar (9.09%), and other belongs to various districts of Uttar Pradesh (50%), including Barabanki, Sitapur, Bahraich, Kairabaad, Hardoi, Unnao, Gonda, Shravasti Lakhimpur, Faizabad, and Gorakhpur. The majority have relocated to Lucknow in search of daily wage opportunities over the past 16-30 years accounts 36.4% , respondents less than 15 years were 31.8%, 31 to 45 years were 18.2% and lastly staying above 45 years were 13.6 %. The male members predominantly engage in activities like Ragpicking and daily wage labour, while the female members are primarily employed as domestic workers, with some also working for the Nagar Nigam. The estimated total number of households is 2367, with a population of 10380 Table (1).

4.3 Perceived Severity among Urban informal settlement residents regarding the COVID-19 outbreak

Item	Item description	Yes (%)	No (%)	Some of them (%)
K1	Heard about COVID-19	100	0	0
K2	Know about COVID-19 Severity	100	0	0
K3	Taken both COVID-19 vaccination	92	0	8
A4	Addiction towards Alcohol	28	36	36
A5	Smoking Habit and Tobacco intake	76	16	8
A6	Being discriminated by others	68	32	4
A7	Afraid of spreading virus to others	72	24	0
R8	Experience fear in leaving home	44	52	4
R9	Fear of getting COVID-19	53.3	36.2	10.5
R10	Fear of No work/ No food	80	16	4
R11	Given special treatment to elderly people	20	80	0
R12	Given special treatment to children	24	64	12

Table 4.2: Percentage of 'Knowledge' 'Attitude' and Perception of COVID-19 'Risk' among informal settlement

In the provided data table, K1, K2, and K3 are used to represent the Knowledge related to COVID-19, while A4:A7 signifies the attitudes, and R8:R12 highlights the risk factors linked with the pandemic. The number indicates that 100% of the sampled population of informal settlement were aware of COVID-19 and understands its severity, with approximately 92% of them having received the vaccine. When examining the attitude factor, it was observed that 28% of the individuals were still consuming alcohol even after the COVID-19 period, and 76% continued to smoke or use tobacco. In terms of societal attitudes, 68% of the sampled population felt discriminated against, and 72% expressed fear of transmitting the virus to others. Analysis of the fear factor revealed that only 44% of the sampled

individuals were afraid to leave their homes, while 100% and 80% feared a lack of work or food during the pandemic. Additionally, only 20% and 24% of the sampled population reported receiving special assistance for elderly individuals and children

4.3.1. Information sources in informal settlements areas and the accessibility of media resources

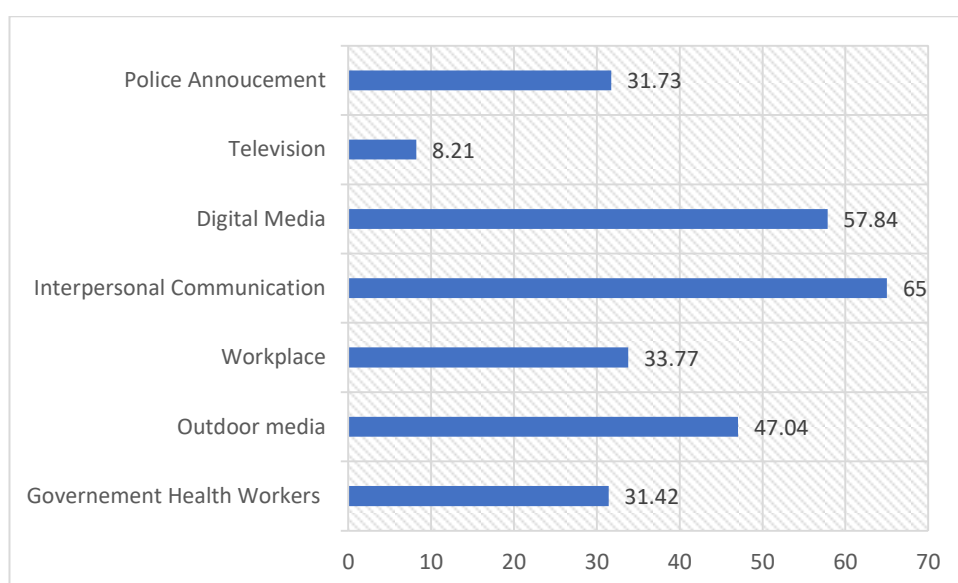


Fig 4.1: Major Sources of Information in informal settlements (%)

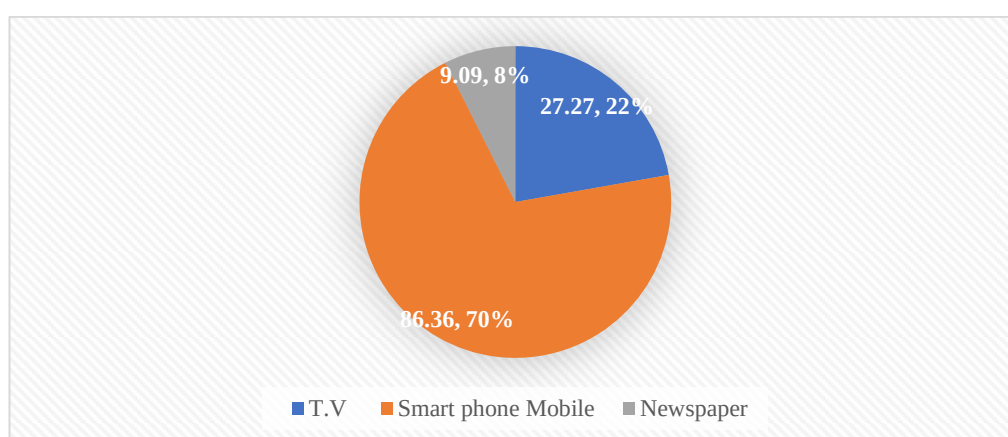


Fig 4.2: Media Availability (%)

Urban informal settlement areas are often marginalized and isolated from the broader society, existing within urban centers. These communities lack basic resources, making it challenging to meet their daily requirements. In the early stages of the

coronavirus, prevention emerged as the primary strategy, with interpersonal communication (65%) being a key source of information exchange among them, supplemented by word of mouth. Mobile phones (57.84%) served as the second most common source of information, while media platforms such as WhatsApp and YouTube played a significant role in disseminating updates about COVID-19.

Outdoor mediums like billboards, hoardings, and transit ads also played a crucial role in information dissemination. Workplace environments (33.77%), police announcements (31.73%), and government health workers (31.42%) were additional sources of information, whereas television (8.21%) played a relatively minor role. Strategies related to public health communication need to be intentional, inclusive, and cognizant of the fact that mass media channels have the potential to approach a broad spectators (Lewis et al., 2021).

The absence of significant media resources such as television and newspapers, which represent only 27.2% and 9.09% respectively, is evident among the residents in Lucknow. This scarcity can be attributed to the steep costs, substantial energy usage, and low levels of literacy. In contrast, smartphones emerge as a unifying medium that encompasses all primary media platforms, offering greater accessibility and convenience.

4.3.2. Digital media and its usage in COVID-19 related information in Urban Informal Settlement regions

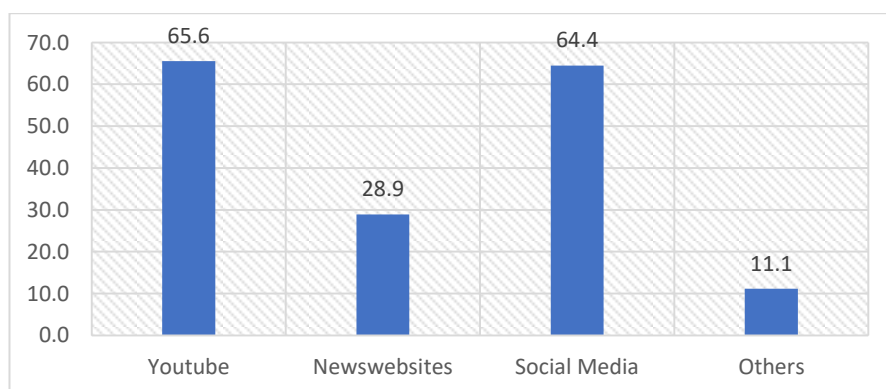


Fig. 4.3. Digital Media usage among Urban Informal Settlement regions

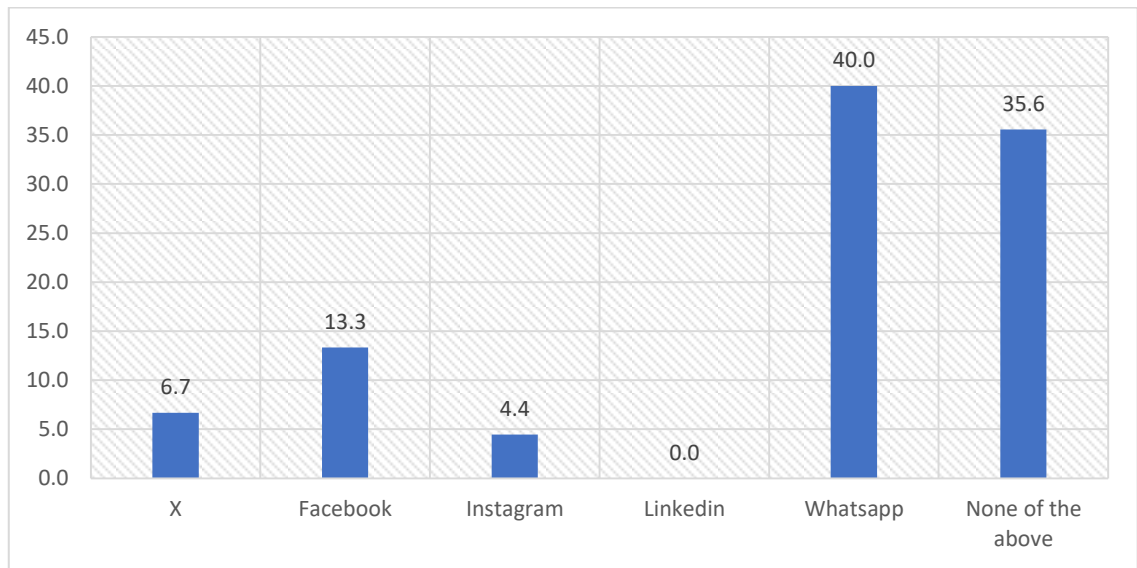


Fig. 4.4. Social Media usage among Urban Informal settlement regions

The higher availability of mobile phones had increased the usage of digital media. In fact, COVID-19 has brought a greater shift towards the online world. The Urban Informal settlement regions had shown significant usage patterns of digital media. The bar graph in fig3.a shows that youtube and social media were highly used digital media platforms in Urban informal regions accounts 65.5 % and 64.4%, while news websites accounts 28.9%. Whereas social media is also a highly used mass media and source of information nowadays. Social media and its usage during pandemic were surveyed among Urban informal regions dwellers. It was found that the majority, that is, 40 % of respondents were using WhatsApp while 35.6 % of respondents were using nothing, which was none of the above social media. There were group who uses Facebook which accounts for 13.3 %, twitter and Instagram were the minimum, which were 6.7 % and 4.4 %. Urban informal regions dwellers did not use LinkedIn at all and even they haven't heard about it much.

4.3.3 Campaign and Slogans watched/heard by Urban informal regions based on COVID-19 health information

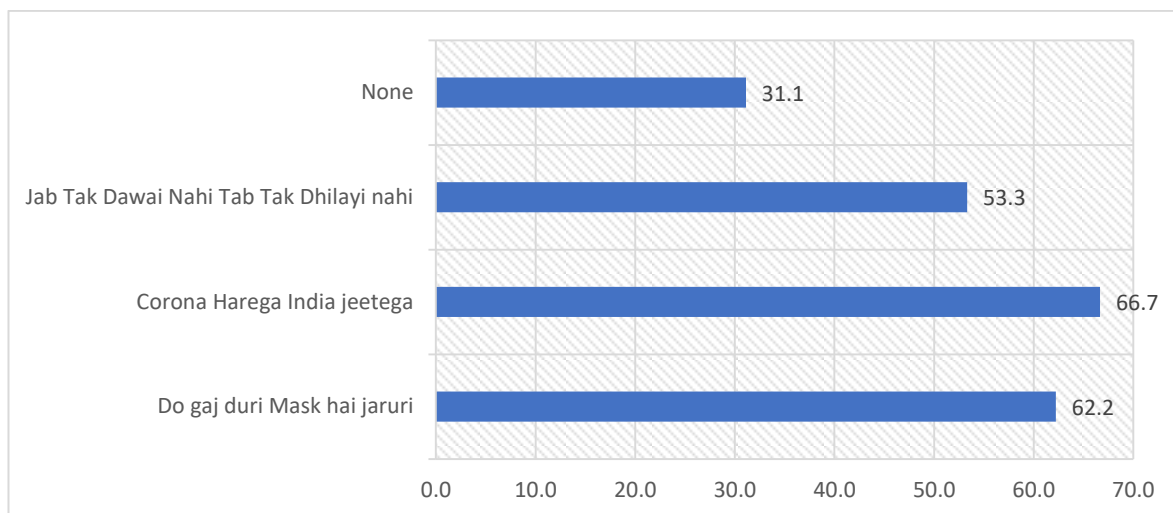


Fig. 4.5. Slogans heard by Urban informal settlement groups (%)

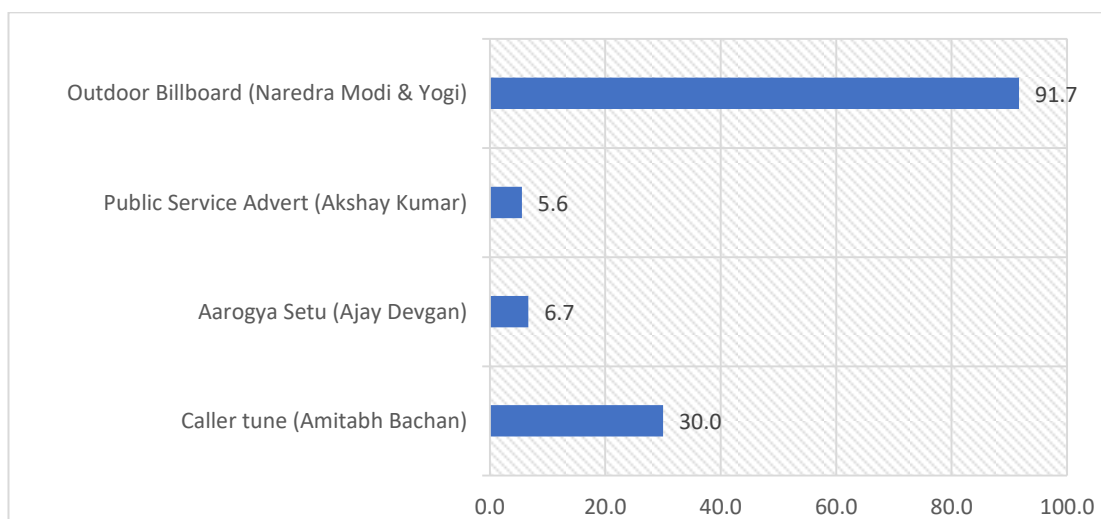


Fig. 4.6. Slogan heard/ watched by Urban informal settlement groups (%)

The mentioned figure 4a and 4b shows the percentage of slogans and campaigns heard and watched by urban informal regional people. The sample campaigns chosen majorly were those which the respondent remembers and recalls, while performing the pilot schedule study.

Figure 4a. represents that the slogan *Corona Harega India Jeetega* highly heard among the respondents making it 66.7%, they believed it unites them as India, and we are defeating our enemy. Urban informal regions had faced lots of hardship hence, they found it should be by all of us as soon as possible. Secondly, *Do Gaj duri Mask hai jaruri* tends to make them a behavioural shift of following social distancing and wearing masks, accounting for 62.2 % of respondents. Lastly *Jab Tak Dawai Nahi Tab Tak Dhilayi Nahi* nearly (53.3 %) of respondent has heard and recalls and was quite famous for its appealing approach to people for vaccination

Figure 4b. represents that the campaign heard and watched by Urban informal regions, where the *Outdoor Billboard (Narendra Modi and Yogi ji)*, was majorly seen by the respondents accompanying (91.7 %), the big hoardings and poster persuading citizens for free corona vaccination, they found it everywhere around squares of cities. Its appealing orange color and tagline were also eye-catching, having great recall value.

Followed by caller tune of Amitabh Bachan (30.0 %), they found appealing in terms of giving information about safety measures like hand washing, wearing mask and following social distancing. The *Aarogya Setu application casting Ajay Devgan* was seen by around (6.7 %) but did not get motivated to download. Lastly, *Akshay Kumar Public Service advert* was witnessed by around, (5.6 %).

4.4 Social Change among Urban informal settlements

4.4.1. Social Change attributes witnessed in COVID-19 campaign

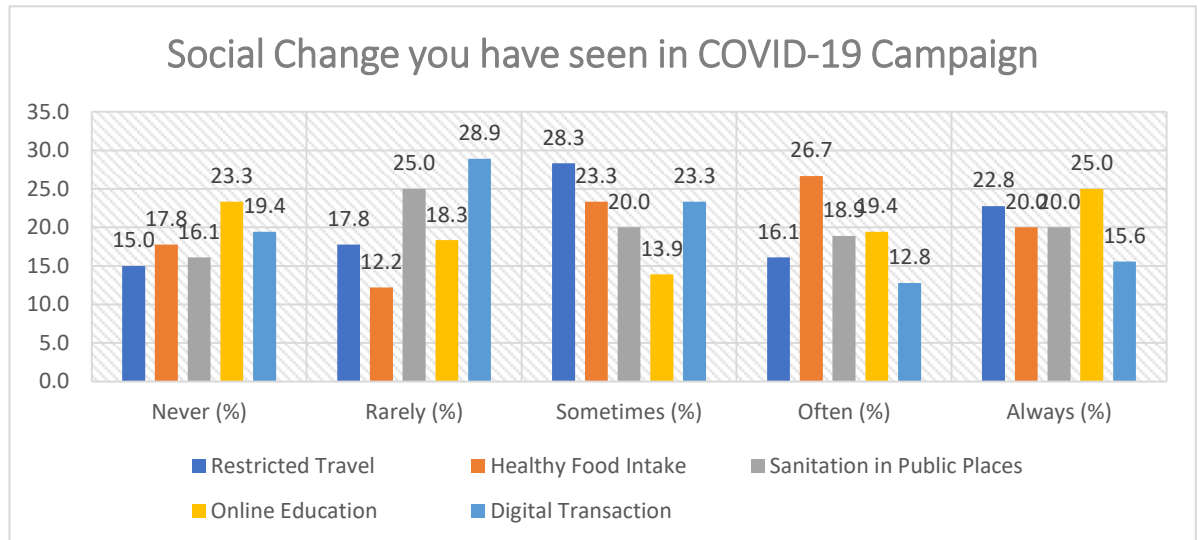


Fig. 4.7. COVID-19 campaign relating to Social Change

Urban informal regions, the marginalized section of society, had also seen various social changes through social media.

The data shows that Urban informal regions have seen campaigns disseminating the message of restricted travel, where 22.8% of them are always seen, 16.1% of them had seen them often, 28.3% of Urban informal regions had come across sometimes, 17.8% had seen it rarely while 15% of them had seen never.

Healthy food intake was disseminated during pandemic, 20 % of Urban informal regions dwellers had seen it always, 26.7 % of them had seen it often, 23.3% of Urban informal regions had come across sometimes, 12.2 % had seen it rarely and lastly 17.8 % of them had seen it never.

Sanitation in public places was also disseminated through media and health workers, 20% of them had seen it always, 18.9% of Urban informal regions had seen it often, 20% had come across through the message sometimes, 25% had witnessed it rarely, and lastly 16.1 % had never seen it.

Pandemic has seen a major shift in the Online world. There had been hikes in Online Education and digital transactions among Urban informal regions had been

observed. 25 % of Urban informal regions had always seen such a message in campaign, 19.4 % had come across it often, 13.9 % had come across it sometimes, 18.3 % had seen it always and 23.3 % had never seen it. On the other hand, for digital transaction messages 15.6 % of Urban informal regions have seen it always, 12.8 % had seen it often, 23.3% had witnessed it sometimes, 28.9 % had come across it rarely while 19.4% had never seen any campaign.

4.4.2. Influence and positive social change observed among Urban informal regions dwellers

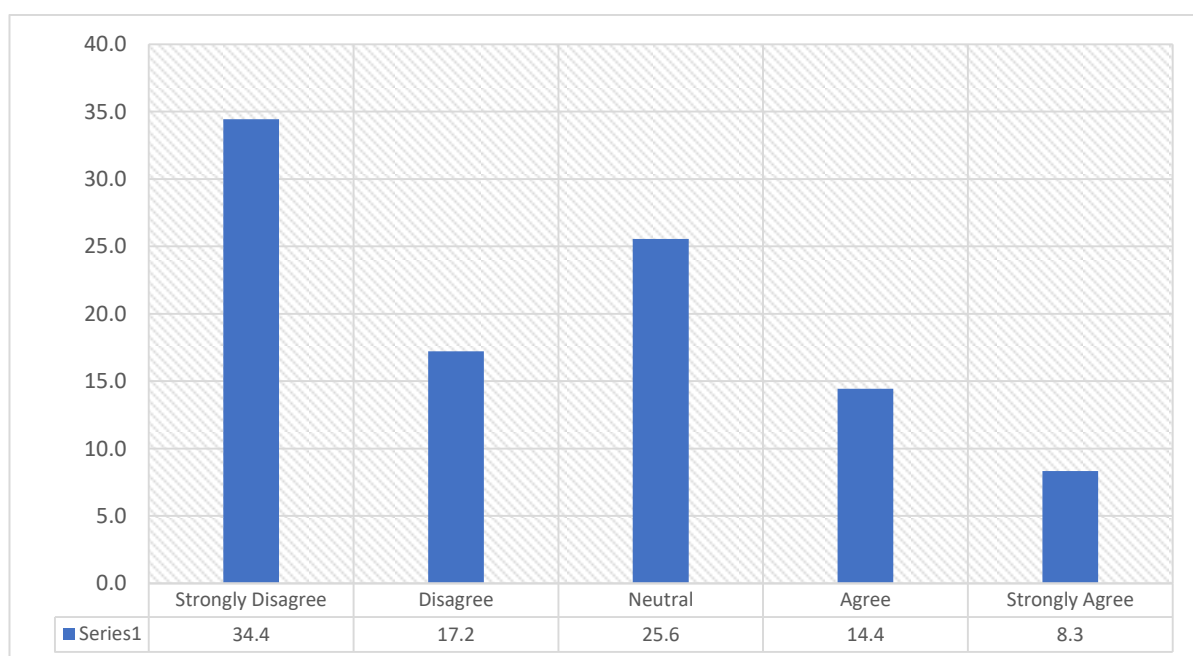


Fig. 4.8 Positive Social Change after two years of COVID-19 (Urban informal regions)

During the pandemic many changes were social changes, that persuades some Urban informal regions, to follow post covid while some only do during the corona period. While data collected during study when asked about social change habits, shows 34.4 % of Urban informal regions strongly disagree about having positive change in themselves after two years of pandemic, 17.2 % disagree with the statement, 25.6 % were neutral, 14.4 % were only agree while just 8.3 % Urban informal regions strongly agreed.

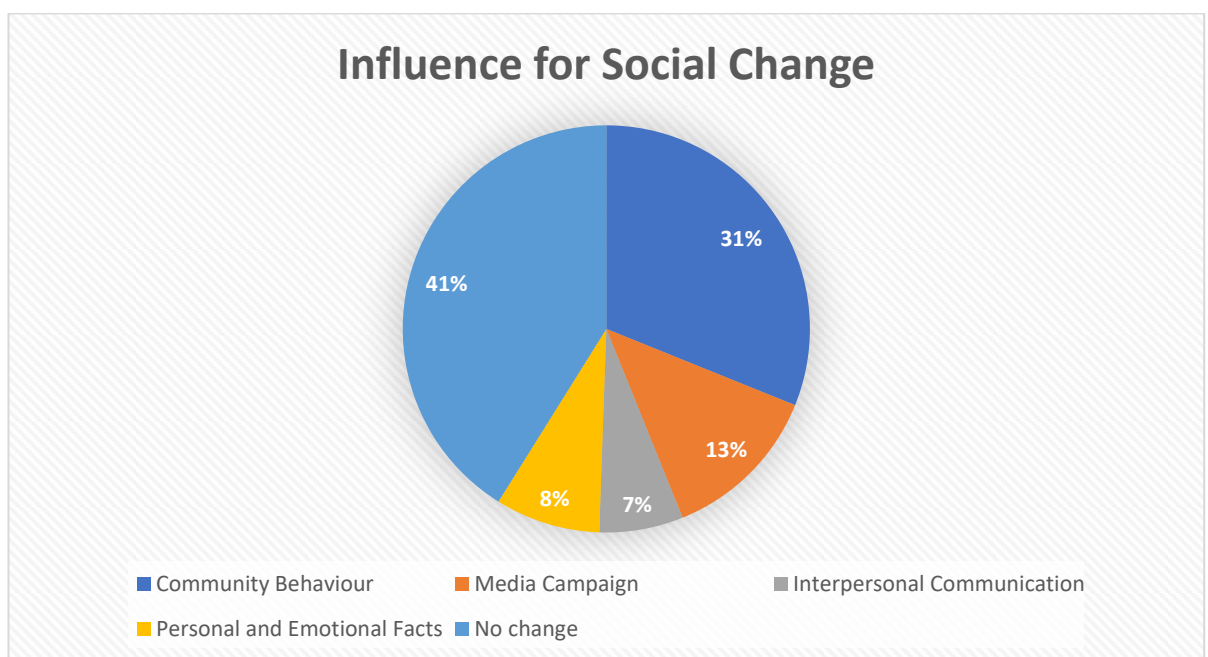


Fig. 4.9. Factors influencing Social Change (Urban informal regions)

During COVID-19, some major social habits were widely encouraged and disseminated through various means such as- Media Campaign, Interpersonal Communication, through Health workers, and individuals' inner thought and practices.

The above mention data shows that 41 % of Urban informal regions did not face any social change, while 31 % of Urban informal regions were influenced for social change because of community behaviour, 13% were found media campaign as a

major reason where as 8% found personal and emotional facts, on the other hand 7 % found interpersonal communication as a crucial factor.

4.4.3. Mapping Social change habit among Urban informal regions: During and After

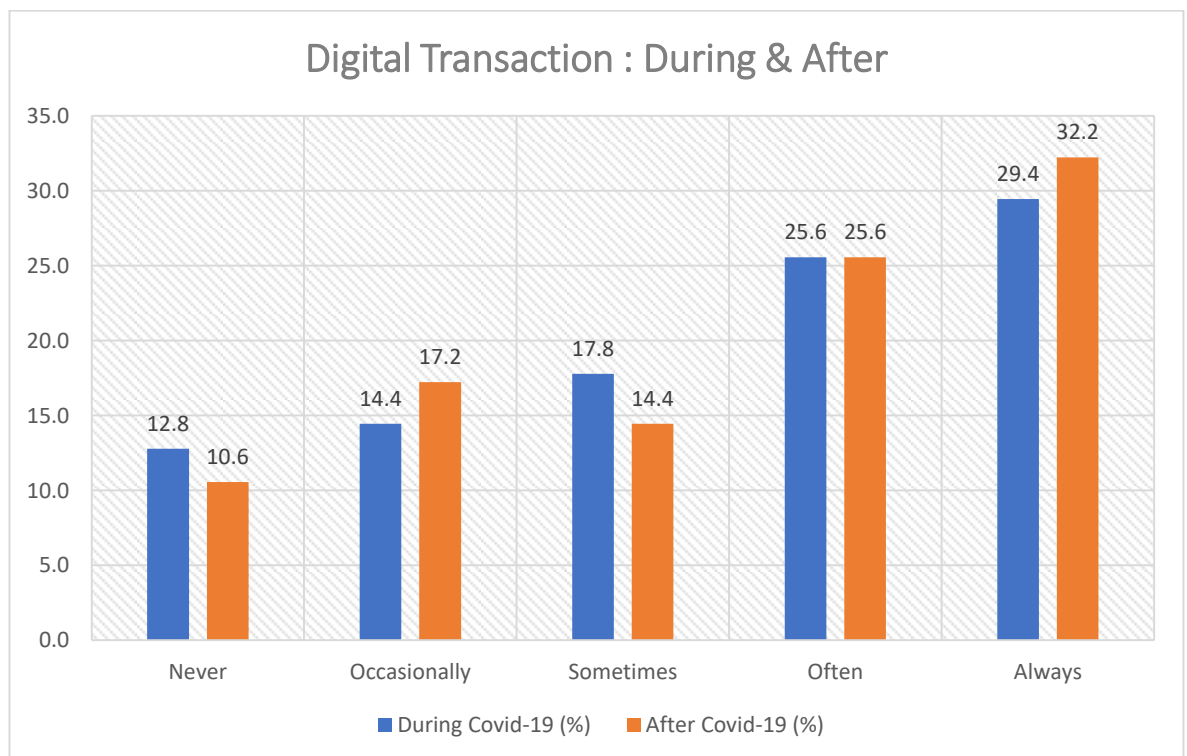


Fig 4.10. Urban informal settlement regions preferring digital transaction: During and After

To break the chain of corona virus, unnecessary touching of substances was avoided and was highly recommended by the government to prefer digital transactions over traditional methods of payment.

The data shows that during Corona 29.4 % of Urban informal regions used digital transactions always, 25.6 % had used them often, 17.8 % of them had used it sometimes, 14.4 % of Urban informal regions had used it occasionally, while 12.8 % of Urban informal regions had never used.

On the other hand, there is a hike in digital transactions in after COVID-19 period, 32.2 % of Urban informal regions respondents were using it always, 25.6 % of them still use it often, 14.4 % of respondents use it sometimes, 17.2 % of respondents uses it occasionally where as 10.6 % of respondents uses never still in post pandemic period.

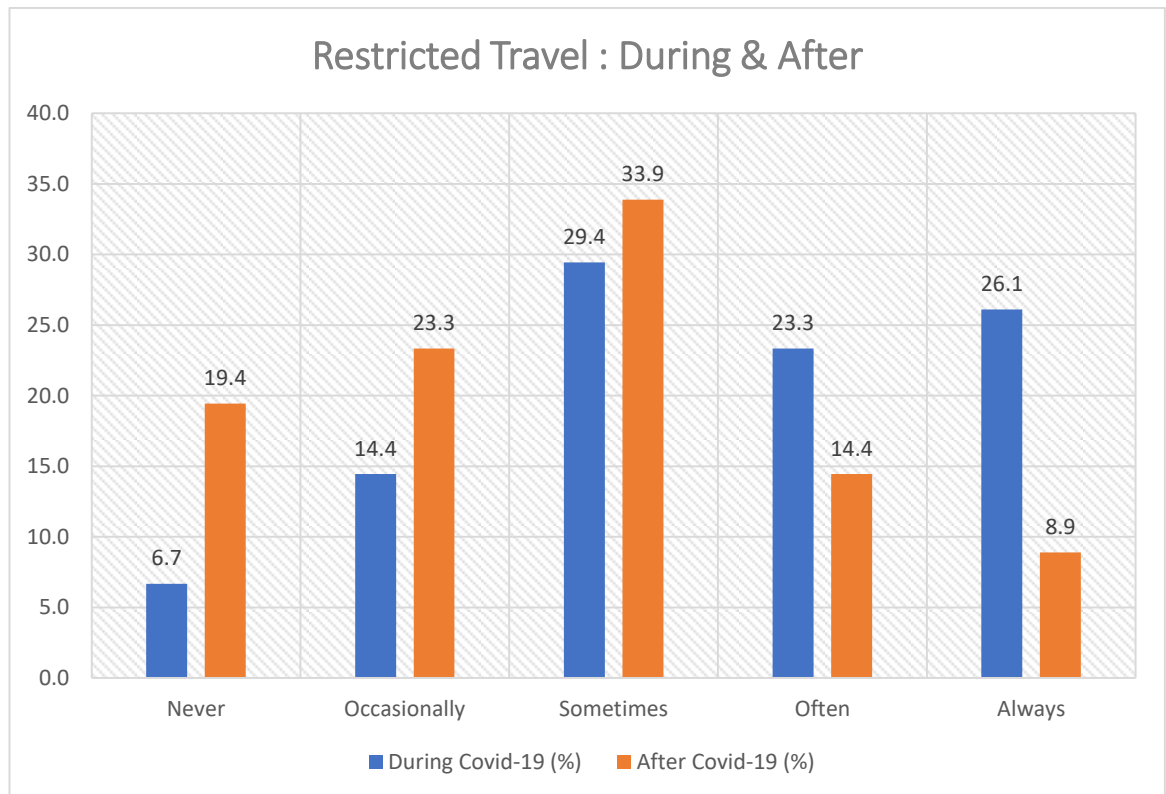


Fig.4.11. Urban informal settlement regions preferring Restricted travel: During and After

During pandemic lockdown was highly recommended and suggested for restricted travel just to break the chain of corona. The same for Urban informal regions to stay at home

During COVID-19

The data shows during corona 26.1 % of Urban informal regions had restricted their travel always, 23.3 % had restricted it often, 29.4 % of them had restricted there travel sometimes, 14.4 % of Urban informal regions had travel restricted it occasionally.

After COVID-19

On the other hand there is a decline in restricted travel after COVID-19 period, 8.9 % of Urban informal regions respondents had restricted it always, 14.4 % of them restricted it often, 33.9 % of respondents did sometimes, 23.3 % of respondents did occasionally where as 19.4 % of respondents did never even in post pandemic period.

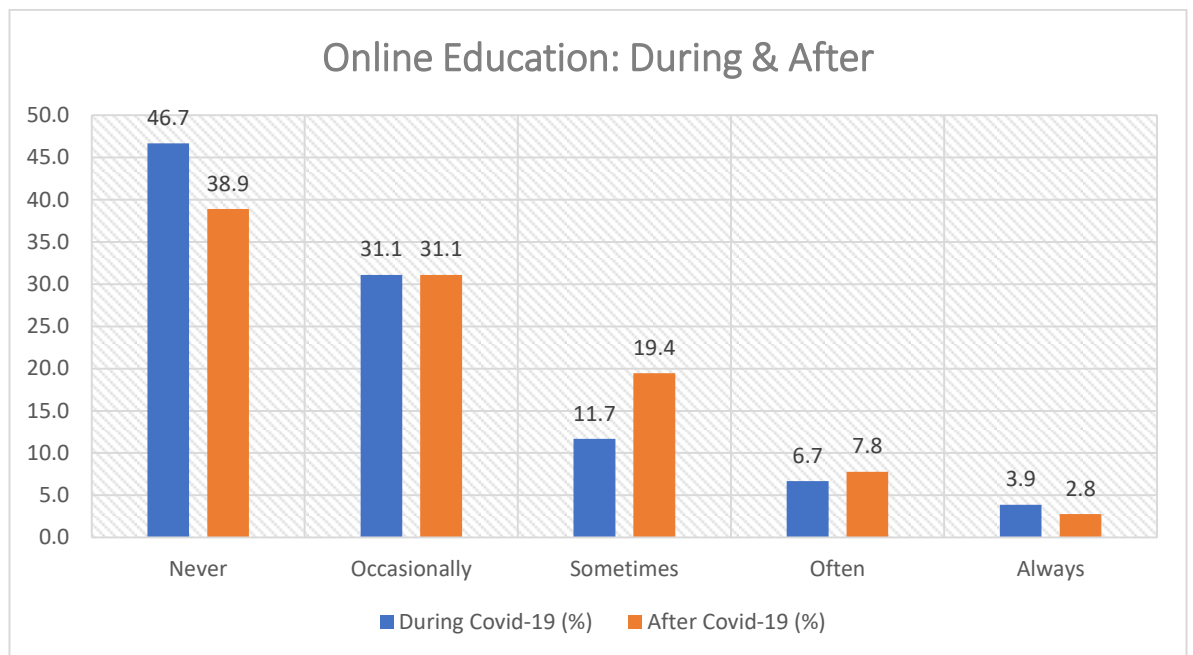


Fig. 4.12. Urban informal regions personnel preferring Online Education: During and After

Pandemic had seen slurs towards online education, even every stratum of society had shifted towards online education.

During COVID-19

The data shows that 46.7 % of Urban informal regions respondents never prefer online education, 31.1 % prefer it occasionally, 11.7 % of respondents prefer it sometimes, 6.7 % prefer it often while 3.9 % prefer it always.

After COVID-19

While the data collected after COVID-19 period shows slight hike in online education. 38.9 % of Urban informal regions respondents prefer online education for their children 31.1 % of them prefer it often, 19.4 % of them prefer it sometimes, 7.8 % of them prefer occasionally while 2.8 % of Urban informal regions respondents prefer never.

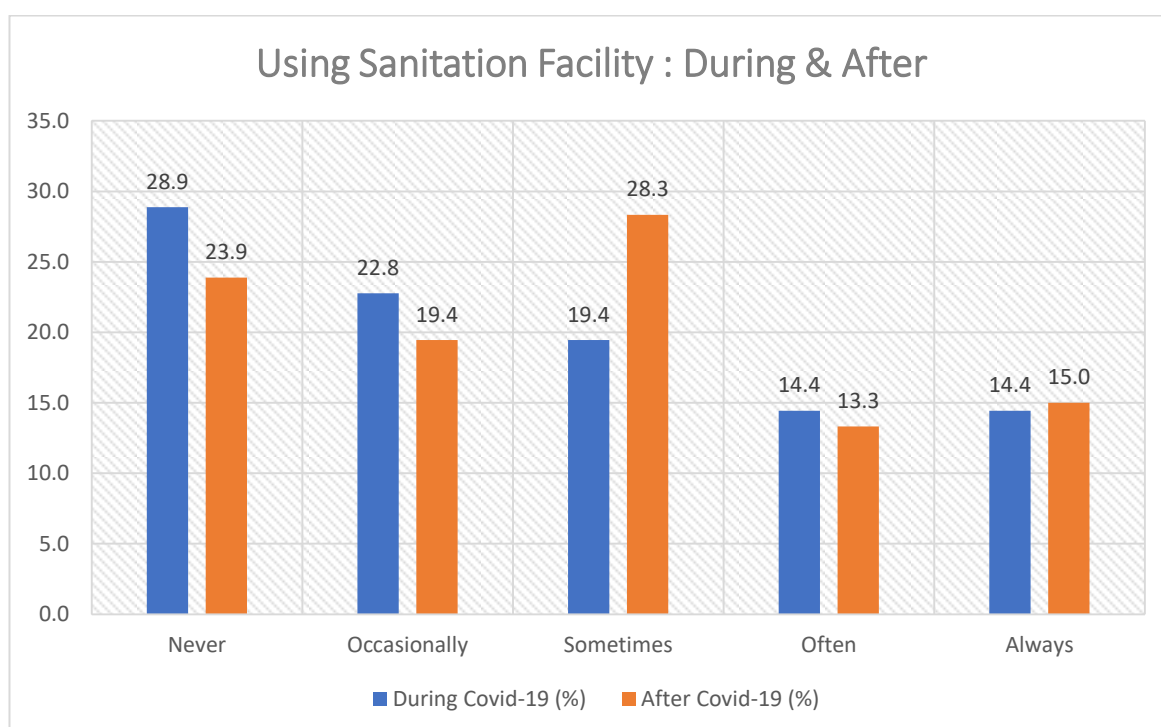


Fig. 4.13. Urban informal regions dwellers preferring Sanitation Facility: During and After

Pandemic has also promoted hygiene and sanitation facilities across the globe. It was highly advised to do hand washing frequently with soap and using sanitizer.

During COVID-19

The data shows that 14.4 % of Urban informal regions respondents prefer using sanitation facilities always and often, 19.4 % of them prefer sometimes, 22.8% of them prefer it occasionally, 28.9 % of Urban informal regions dwellers never prefer using sanitation facilities.

After COVID-19

While the data collected after COVID-19 period shows a slight hike in sanitation facilities. 15.0 % of Urban informal regions respondents prefer using sanitation facilities always, 13.3 % of them prefer it often, 28.3 % of them prefer it sometimes, 19.4 % of them prefer occasionally while 23.9 % of Urban informal regions respondents never prefer.

4.5. Behavioural Change

4.5.1. Behavioural Change witnessed in COVID-19 campaign by Urban informal regions

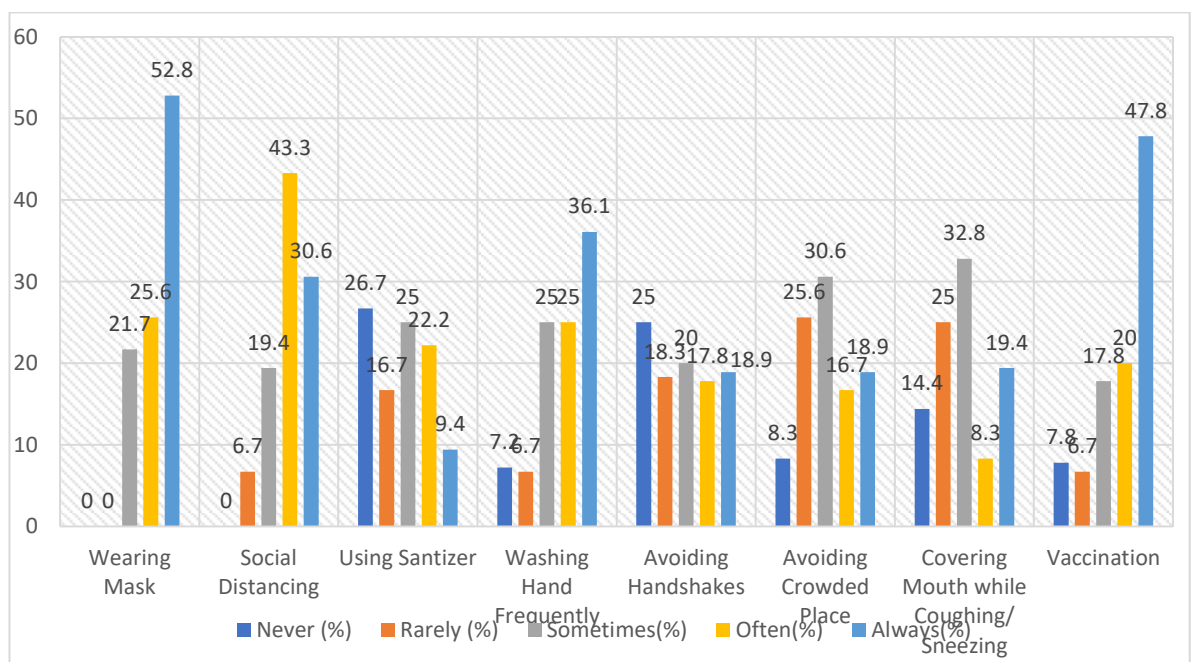


Fig. 4.14. COVID-19 campaign relating Social Change

During the corona period the majority of behavior changes were opted by the individuals. Among them, Urban informal regions were one of them. There were major behaviour and safety measures were highlighted by the campaigns such as- Wearing Mask, Social Distancing, Using Sanitizer, Washing Hand Frequently, Avoiding Handshakes, Avoiding Crowded places, Covering mouth while coughing/sneezing and Vaccination.

The data shows that Wearing Mask safety measures were seen by Urban informal regions always (52.8 %), while (25.6 %) have seen it often, 21.7 % have seen it sometimes.

Social Distancing health behaviour, 30.6 % of Urban informal regions were seen in campaigns always, 43.3 % of Urban informal regions saw often, 19.4 % sometimes, while 6.7% had never seen.

Using Sanitizer safety health measures were not much seen by Urban informal regions. Only 9.4 % were seen always, 22.2% had seen often, 25% of Urban informal regions had seen sometimes, 16.7% of respondents Urban informal regions had seen 16.7%, while 26.7 % of respondents had never seen.

The important aspect of health safety measures during the pandemic was washing hands frequently. 36.1% of Urban informal regions had seen washing hand habit always, 25 % of Urban informal regions had seen it sometimes and often, whereas 6.7% of them had seen it rarely while 7.2% had never seen it.

Avoiding handshakes symbols were not majorly covered in the Indian campaign during COVID-19. Only 18.9 % of Urban informal regions respondents has seen always, 17.8% of them had seen it often, 20% of respondents had come across only sometimes, 18.3% of them had seen it rarely while 25 % of individual had never seen it.

Covering mouth while coughing/sneezing was essential and widely been circulated through the means of campaign during pandemic, 19.4% of Urban informal regions respondents had come across always, 8.3% were seen often, 32.8% of individuals had seen sometimes, 25% of respondents had seen rarely, while 14.4 % of them had seen never.

Lastly, Vaccination was widely covered during pandemic campaign, 47.8% of respondents had seen it always, 20% of respondents had seen it often, 17.8% of had come across sometimes, 6.7 % had of Urban informal regions respondents had noticed it rarely, while 7.8% of Urban them had seen it never.

4.5.2. Factors for positive behavioral change observed among Urban informal regions

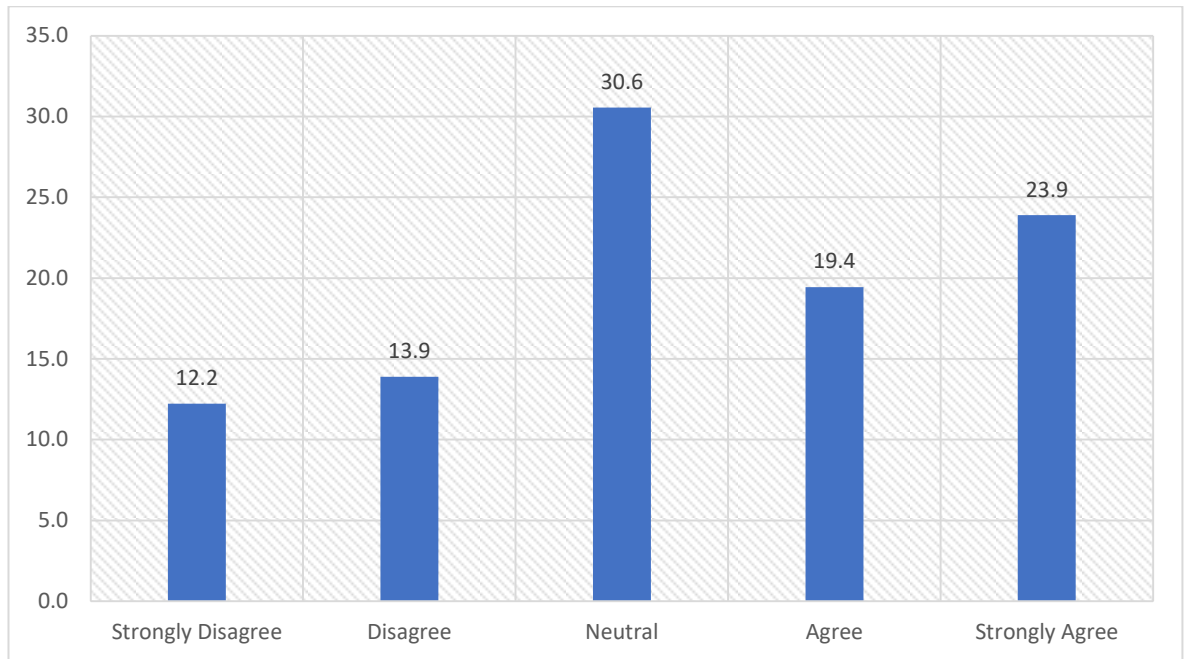


Fig. 4.15. Positive Behavioral Change after two years of COVID-19 (Urban informal regions)

During pandemic it was widely advised to follow safety measures to be safe from the corona virus, and bring positive behavior change.

The above mentioned graph shows that 23.9 % of respondents strongly agree that still after two years of pandemic they follow required behavioural change, 19.4 % of respondents agree, 30. 6 % were neutral that they follow, 13.9 % of respondents disagree, whereas 12.2% of respondents strongly disagree that they found any positive behavioral change among themselves.

Major factor that influenced for a Behavioral Change

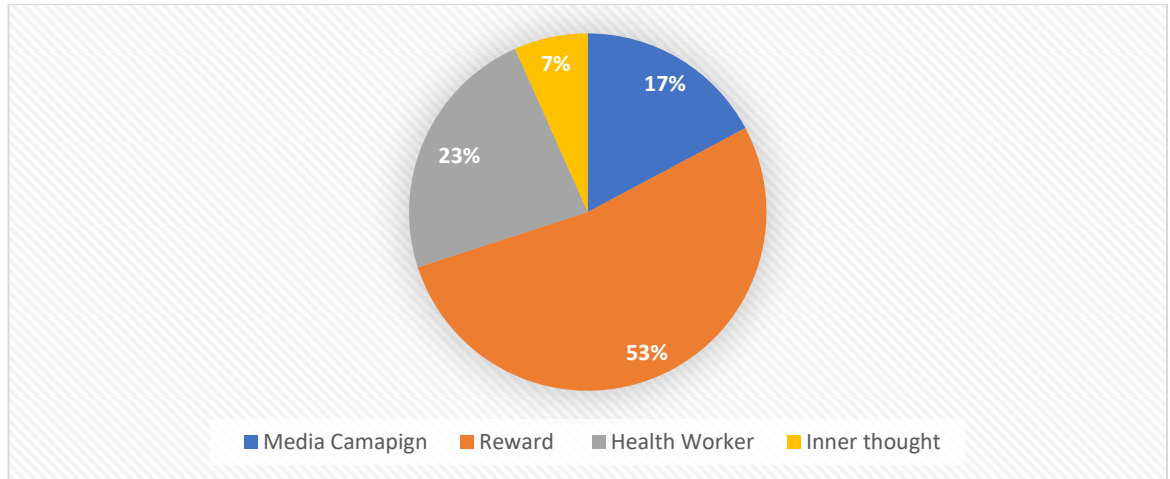


Fig. 4.16. Factors influencing for Behavioral Change (Urban informal regions)

During COVID-19 adequate behaviour change were vital safety measures that were disseminated during pandemic through various means such as- Media Campaign, Reward basis, through Health workers, and individuals' inner thought and practices.

The data shows that majority of Urban informal regions respondents 53% were driven by the factor of reward basis. During that period of lockdown, daily wages laboures were forced to stay at home with zero income, thus government had come up with the initiative of providing necessities such as oil, flour, rice, salt, soap, surf and mask.

Secondly, around 23% of Urban informal regions respondents were motivated by health worker advice, who use to visit their place, guide them along and update them regarding corona around the nation and world.

While, 17% of respondents found media campaigns to be a crucial factor that has brought required behavioral change. On the other hand, 7% of respondents did find their inner self and thought that motivated them for behavioral change.

4.5.3. Mapping Behavioural Change, among Urban informal settlement regions: During and After COVID-19

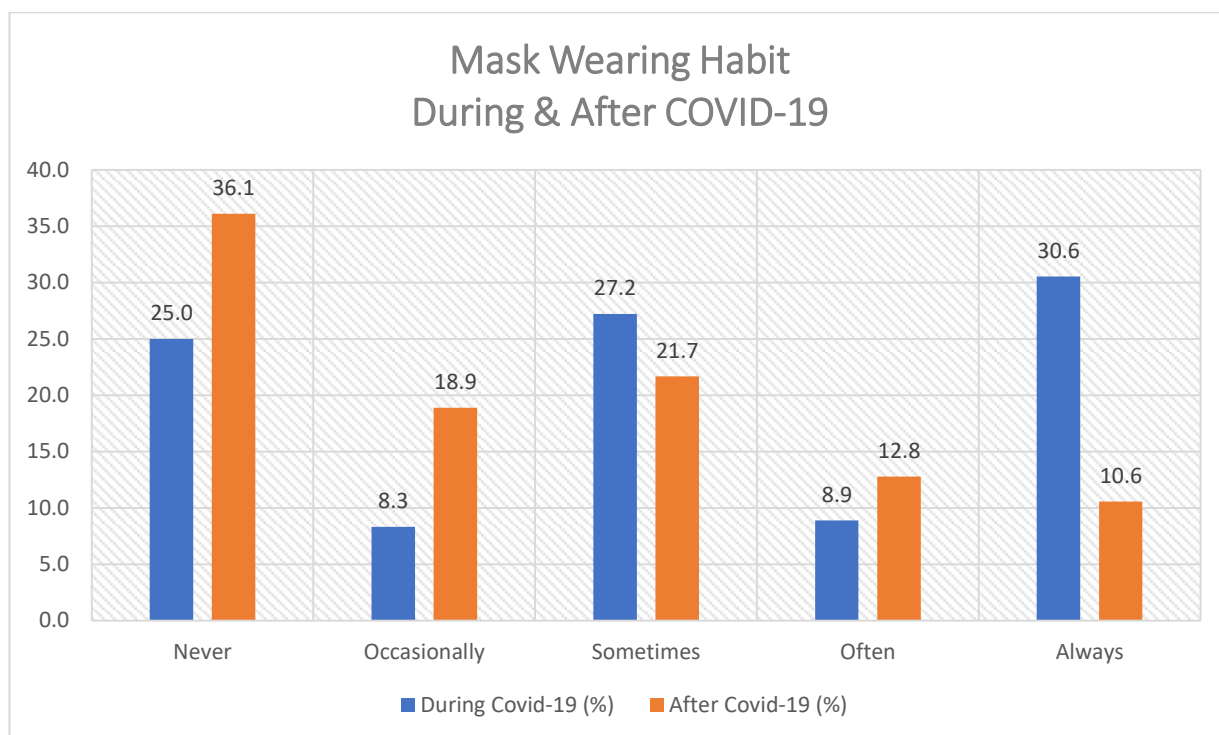


Fig. 4.17. Mask Wearing Habit Among Urban informal settlement area: During and After COVID-19

Mask Wearing was widely advised during pandemic, as an essential safety measure to be followed. Among urban informal regions this habit was widely witnessed in both the period, that is during and after the pandemic.

During COVID-19

The data shows that 30.6% of Urban informal regions were used to wearing masks, where 8.9 % of respondents wears them often, 27.2% of Urban informal regions wear them sometimes, 8.3% of respondents wears them occasionally and 25.0 % wear them never.

After COVID-19

There was a stark decline observed in mask wearing habits in after COVID-19 period. Only 10.6 % of Urban informal people used to wear always, 12.8 % wears it

often, 21.7% of them wear it sometimes, 18.9 % of them wears it occasionally, while majority of the them 36.1% wears never in post covid period.

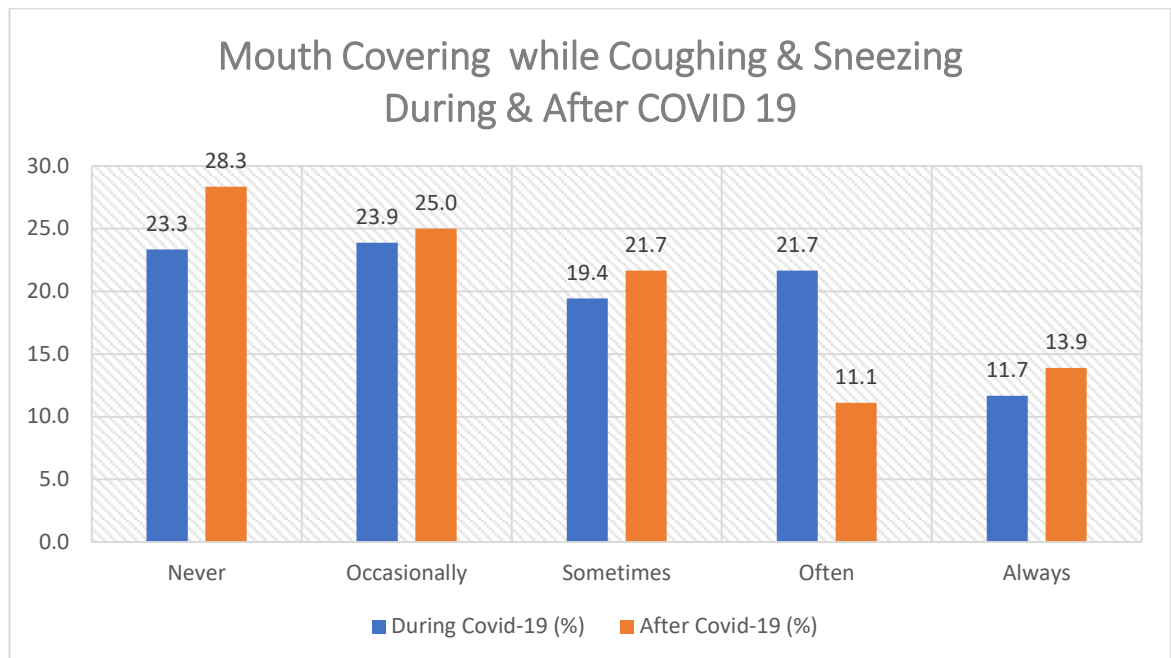


Fig. 4.18. Mouth Covering habit while Coughing and Sneezing Among Urban informal regions: During and After COVID-19

Mouth covering while coughing and sneezing were always advised, as a sign of a healthy habit. During corona this was widely disseminated across all the mediums, as covering the mouth while coughing and sneezing will reduce the spread of virus in your surroundings.

During COVID-19

The data shows that 11.7 % of respondents always cover their mouth, 21.7 % of them do it often, 19.4 % of them cover their mouth sometimes, while 23.9 % of respondents do it occasionally while 23.3% of them never do.

After COVID-19

There was no major difference in during and after covid-19 period. 13.9 % of Urban informal personnel used to cover their mouth always, 11.1% of respondents used to do it often, 21.7% of them do sometimes, 25 % used to do it occasionally, whereas 28.3% of respondents do it never.

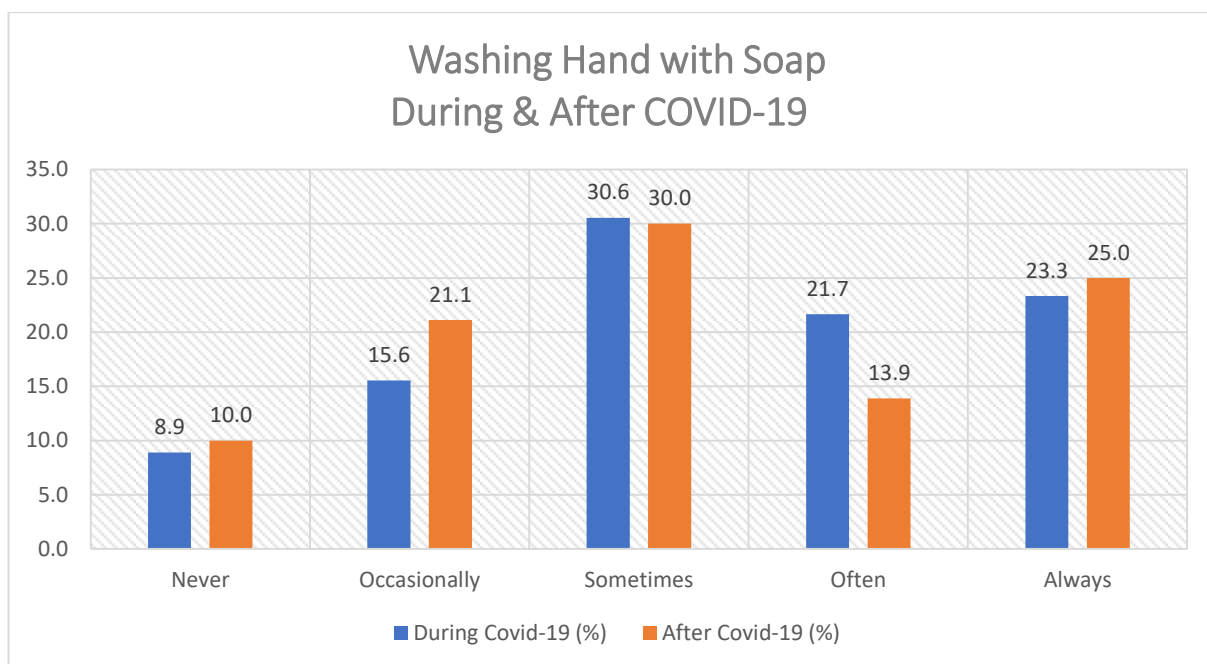


Fig. 4.19. Washing hand with Soap Among Urban informal settlement: During and After COVID-19

Washing hands with soap were majorly advised during pandemic, Urban informal settlement personnel were seen hardly using soap for washing hands. But during the pandemic there is significant data that shows Urban informal people using soap and during frequent hand washing.

During COVID-19

The data shows that 23.3 % of Urban informal settlement people always use soap for handwashing, 21.7 % of respondents use it often, 30.6 % of respondents do it sometimes, 15.6 % of them do it occasionally whereas 8.9% of individuals tend to do it never.

After COVID-19

There were minor differences seen after COVID-19 period. 25.0 % of respondents were seen doing it always, 13.9 % of Urban informal settlement people were seen doing it often, 30 % of respondents using it sometimes, 21.1% of them used to do it occasionally while 10.0% of them never did.

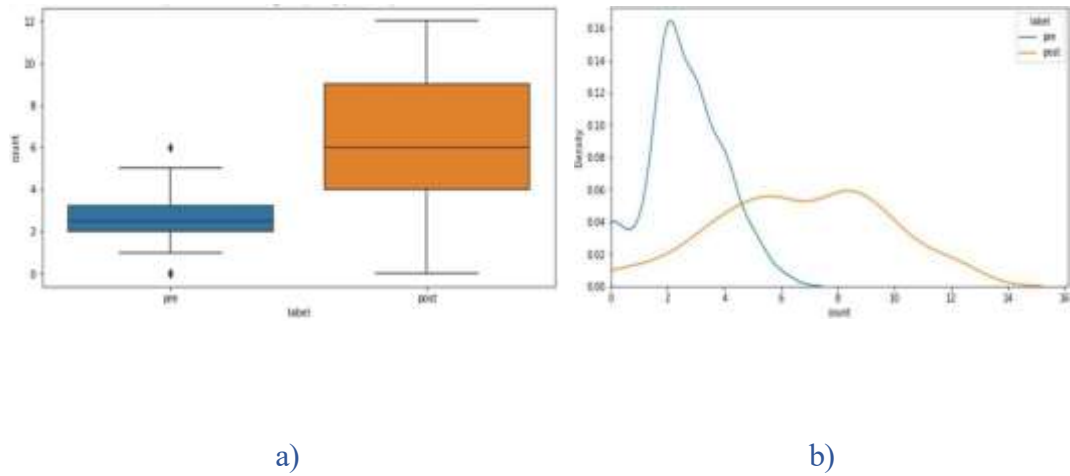


Table 3: Boxplot and frequency distribution of hand washing frequency in pre and post- COVID-19

The above frequency distribution graph clearly represents the hand-washing behaviour of Urban informal settlement respondents in the pre- and post-COVID-19 period. The frequency of hand washing of 50% respondents lies between q1 and q3, i.e. (2 to 3.5) pre COVID-19 whereas (4 to 9.5) in post- COVID-19 that shows the majority of hand washing frequency was 2 to 4 times a day in pre-pandemic period and counts increased to 4 to 8 in post. The major outliers are Zero (0) and Six

(06) in pre pre-pandemic period as there are certain groups which did not use soap Fig (a), with inter quartile range is 1.5 to 2.5. Even after the pandemic they prefer Rakh, Mitti and detergent (ashes, mud, and surf) over soap with interquartile range 0 to 12 Fig (b).

There was high a tendency to use mud and ash for washing hands among Urban informal settlement people in pre COVID times, but now there is a slight decline in the post-pandemic period. The usage of modern cleansing items like soap has increased after COVID-19.

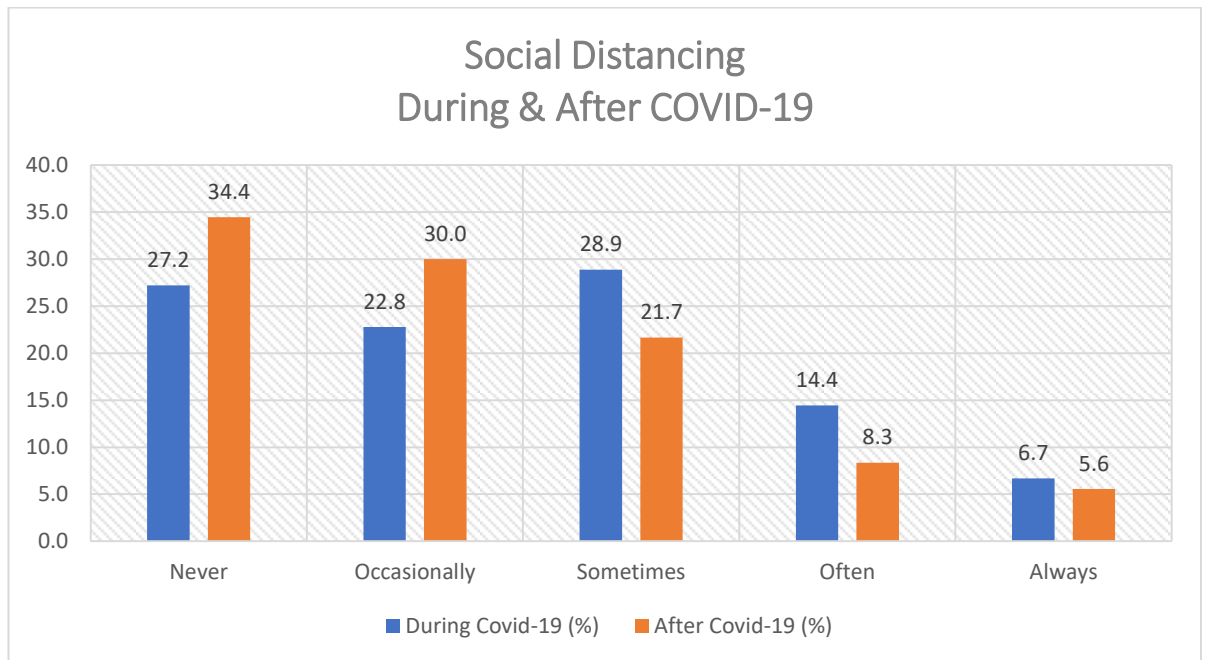


Fig. 4.20 Social Distancing Habit Among Urban informal settlement people: During and After COVID-19

During pandemic social distancing were widely advised habit, to break the chain of spreading virus. This was widely disseminated among Urban informal settlement regions to follow, though due to lack of space and large number of family members it was difficult to follow among, but somehow some of respondents tried to maintain and be safe from corona outbreak.

During COVID-19

The data shows that 6.7 % of Urban informal settlement respondents followed social distancing habits always, 14.4 % of them used to do often, 28.9 % of them do sometimes, 22.8 % of them followed it occasionally, while 27.2 % of them used to never.

After COVID-19

There were data that shows there is a slight difference in during and after COVID-19 period, 5.6 % of respondents were used to follow social distancing habit always after pandemic, 8.3 % of individuals tends to it often, 21.7 % of respondents

to it sometimes, 30 % of respondents follows it occasionally, while majority 34.4 % of respondents follows never.

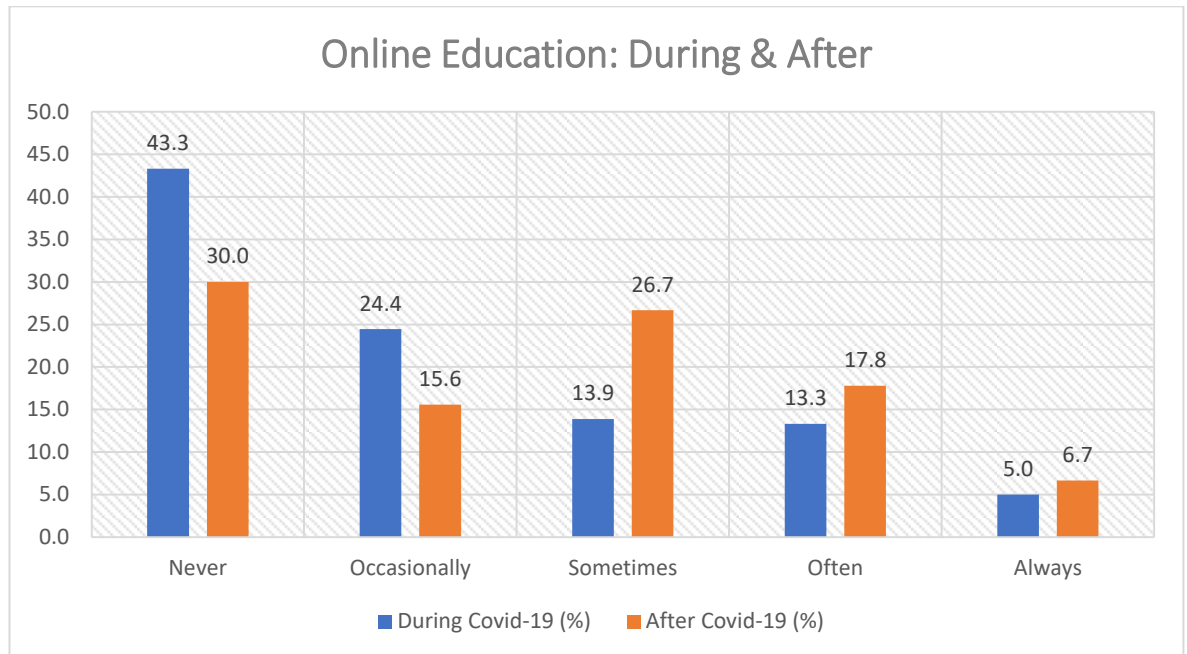


Fig. 4.21. Urban informal regions Dwellers preferring Online Education: During and After COVID-19

Pandemic had seen slurs towards the online world, and had witnessed massive increase in online education among various strata. Even in urban informal settlement regions, the majority of individuals had shifted towards the online world.

During COVID-19

The data shows that 7.8 % of Urban informal settlement regions's children prefer online education habits always, 14.4 % of them prefer online education often, 28.9 % of them prefer sometimes, 22.8 % of respondents follow it occasionally, while 27.2 % of them never do.

After COVID-19

There were data that shows there is a slight difference in during and after COVID-19 period, 5.6 % of Urban informal settlement respondents were used to follow social distancing habit always after pandemic, 8.3 % of individuals tends to it

often, 21.7 % of respondents to it sometimes, 30 % of respondents follows it occasionally, while majority 34.4 % of them follows never.

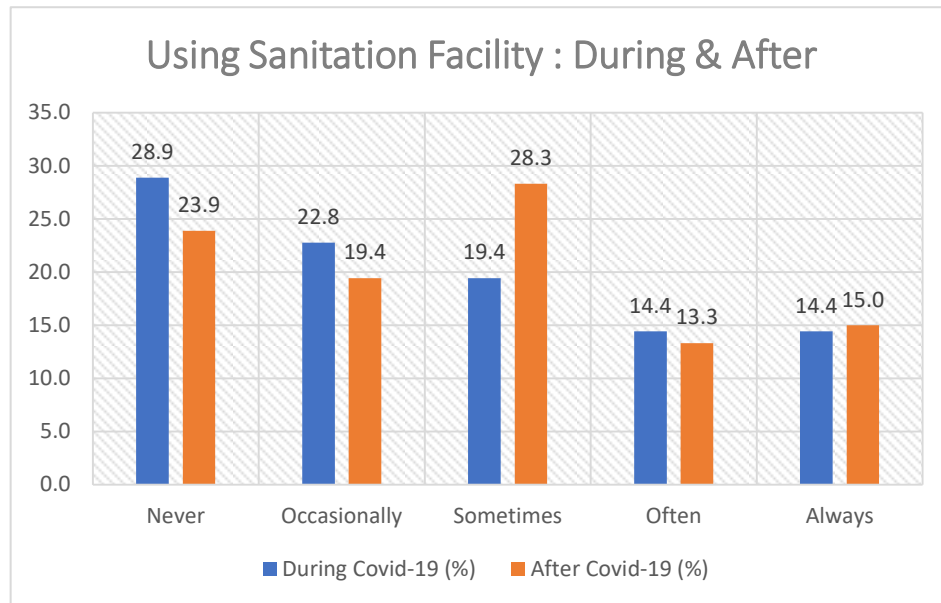


Fig. 4.22. Urban informal settlement respondents Using Sanitation Facility: During and After COVID-19

Sanitation facility was widely advised during corona among all groups of society, as per discussion it was observed health workers had made Urban informal settlements more conscious about the sanitation and hygiene maintained in Urban informal regions regions and locality.

During COVID-19 :The data shows that majority of respondents has never felt of using sanitation facility available in their locality, 22.8% of them use occasionally, 19.4 % of respondents uses it sometimes, 14.4 % had used it often while 14.4 % of respondents had use it always.

After COVID-19: The after data shows slight difference in sanitation usage. The majority had increased the sanitation usage facility sometimes which accounts 28.3%, where as still there were some group never prefer using sanitation facility which accounts 23.9 % and while 15% of respondents prefer it always.

4.6. Step-by-step communication flow during COVID-19 in Urban informal settlement regions

During the pandemic the flow of communication was crucial, as it was the only source through which individuals were getting updates, but the flow of communication varies from Urban formal settlement to the informal settlement groups. Formal settlement regions has direct flow of communication from media and other governmental agencies while in majority cases of Urban informal settlement there is between community leader/ health worker who disseminates news to Urban informal regions dwellers. Here is a chart showing the flow of information among urban informal and formal settlement people.

4.6.1 Communication Flow in a Pandemic among Urban informal settlements

Following a discussion and survey deliberation, the researcher has demonstrated the pathway through which information is disseminated to the susceptible demographic of Urban informal settlement in Lucknow. The discourse underscores that the primary information is reaching the core of the Urban informal settlement populace, encompassing women, children, and elderly individuals in a step-by-step process. Talking about the various mediums, Outdoor mediums (such as billboards and posters) and Digital platforms (including the Internet and mobile phones) have effectively communicated with the prominent members of the Urban informal settlement regions who venture outside their residences, as well as family members in possession of digital devices. This communication subsequently trickles down to the less influential family members. Conversely, Electronic and Print media exhibit minimal efficacy as direct sources of information for the Urban informal regions cohorts. Predominantly, the messages they receive originate from Government authorities, Police personnel, and Health Workers. Additionally, they obtain firsthand information from the Municipal Corporation and the elite households, where female Urban informal regions workers go for daily household work which is frequented due to employment opportunities.

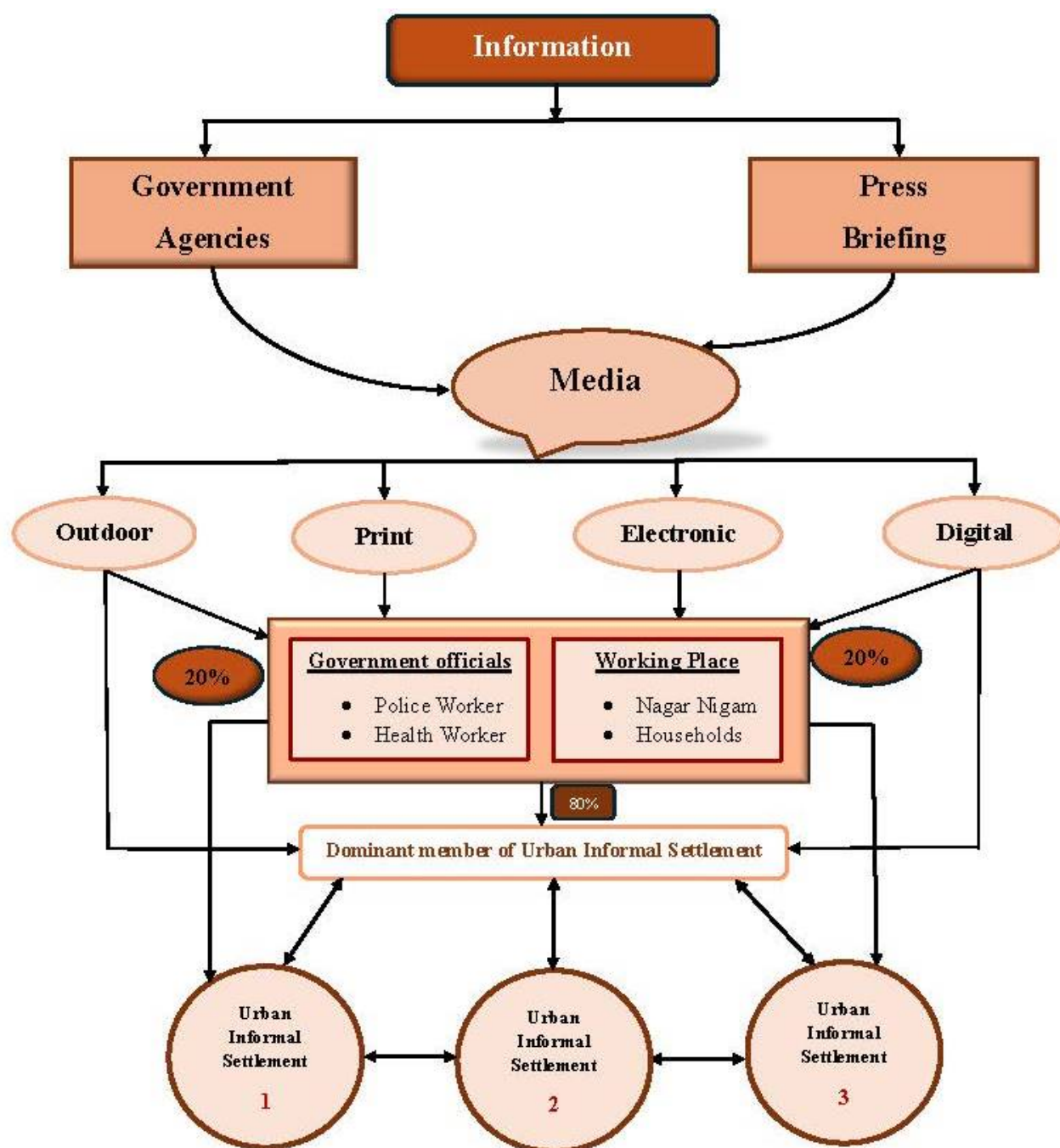


Fig 23. Flow of Information among Urban informal regions

a. Top-Down Communication (Government to Public)

- Government Agencies and Health Authorities: The information flows from higher governmental authority (e.g., WHO, CDC, national health

departments) about the official guidelines, warnings, and updates hardly reaches to Urban informal regions directly. There is a mediator in the channel such as Health Workers and Police Workers/ Working Place (Nagar Nigam and Household) and Community leader. Through where information is disseminated to urban informal regions.

- **Press Briefings and Public Announcements:** These agencies update with the latest developments, infection rates, new guidelines, and safety measures, which helps to directly get the information without any biasness. While urban informal settlement groups had hardly access and knowledge to these kinds of sources, they hardly got across these platforms by themselves.
- **Digital and Mass Media:** Information was broadcasted through television, radio, social media, and government websites. Urban informal settlement groups majorly use these platforms themselves for getting information. During the pandemic social media was highly used platform for getting information and updates about corona.
- **Public Health Campaigns:** These included advertisements, social media posts, posters on road side, and health videos etc. Encouraging preventive behaviors and providing information directly to Urban informal groups through their mobile phones or roadside posters.

b. Bottom-Up Communication (Public to Health Authorities)

- **Health Workers:** The ASHA workers and health workers from vaccination drive used to visit places of Urban informal regions, there they also tended to answer all queries and doubts of Urban informal regions.
- **Community Engagement:** Local leaders, influencers, and health workers acted as intermediaries to communicate public concerns to health authorities. They were acted as a voice of Urban informal settlement people and represents them in forefront of others.

c. Lateral or Peer-to-Peer Communication

- Family and Social Networks: Communication flowed informally through families, friends, and colleagues. This form of communication played a critical role in spreading personal experiences and coping mechanisms.
- Community Leaders and Social Organizations: In some areas, community leaders or social organizations became trusted sources of information. These local figures often relayed public health messages in culturally appropriate ways, helping to overcome barriers of language or mistrust

Urban Formal Settlement

Table 3. presents the data about the demographic composition of the respondents taken from the formal settlement regions by using Schedule research method. The data indicates that the majority are female respondents (54.8 %) and while male participants are lesser (45.2 %) among the studied sample, which were 210. The selected localities with their estimated population were Indira Nagar (3314), Hazratganj (44810), Gomti Nagar Extension (317463), Mahanagar (42507), Aliganj (74502) (Census, 2022). These six regions were purposely selected based on the highest number of population and post residential localities in Lucknow (Jasmine Khurana, 2022).

The majority of the respondents (38.6 %) lies in the age group from 16-20, secondly age group from 21-30 hold (33.8 %), the respondents lying in the age group from 31-35 were minimum with 11.9 %, whereas respondents belonging to above 35 were 15.7 %. Hence, the sample studied were mostly youngsters.

There are about (24.3 %) who were in intermediate, while (60 %) of respondents were pursuing Graduation, (11.4 %) of the respondents were doing Post- Graduate, and Doctorate were least with the (4.3 %). The majority of the study samples are graduates. The respondents working profile were majorly students with (59.5%) accompanying 125 individuals followed by employed which were (31%), the Housewife were (9.5 %) and there were no respondents as Househusband (0) %.

The majority of these respondents' hails from Uttar Pradesh (82.9 %), followed by Bihar (8.1%). While (2.4 %) respondents came from Madhya Pradesh and Rajasthan and (4.3 %) were from Delhi. They have relocated to Lucknow as their parents are working professionals over the period of years, while in some cases they themselves are working in some private sectors and some are still studying.

4.7. Demographic characteristics of Urban Formal Settlement

Groups		Respondent (%)	Total Respondent
Gender	Male	45.2	210
	Female	54.8	
Age	16-20	38.6	210
	21-30	33.8	
	31-35	11.9	
	35 above	15.7	
Education	Intermediate	24.3	210
	Graduate	60	
	Post-Graduate	11.4	
	Doctorate	4.3	
Working	Studying	59.5	210
	Employed	31	

	Housewife	9.5	
	Househusband	0	
Native	States	Percentage (%)	Total Sampled regions (N)
	Uttar Pradesh	82.9	
	Madhya Pradesh	2.4	
	Bihar	8.1	
	Rajasthan	2.4	6
	Delhi	4.3	
Duration	less than 10 years	6.2	
	For 20 years	11	
	Above 20 years	82.9	6

Table 3: Demographic characteristics of Urban Formal Settlement

Lastly, talking about the duration of stay of these individual residing in Lucknow were categorized in three sectors, which were group of people have stayed less than 10 years were (6.2 %), respondents stayed for the last 20 years were (11 %) and individuals staying above 20 years were (82.9 %)

4.8 Study on COVID-19 and Media Campaign on Urban Formal Settlement Group

4.8.1. Perceived Severity among Urban formal settlement residents regarding the COVID-19 outbreak

Item	Item description	Yes (%)	No (%)	Never used (%)
K1	Heard about COVID-19	100	0	0
K2	Know about COVID-19 Severity	100	0	0
K3	Taken both COVID-19 vaccination	75.7	21.9	2.4
A4	Decrease in Alcohol Addiction	31.0	9.5	59.5
A5	Decrease in Smoking Habit and Tobacco intake	34.8	9.0	56.2
A6	Being discriminated by others	12.4	87.6	0.0
A7	Afraid of spreading virus to others	65.7	34.3	0.0
R8	Experience fear in leaving home	69.5	30.5	0.0
R9	Fear of getting COVID-19	76.2	23.8	0.0
R10	Fear of locked at home	69.0	31.0	0.0
R11	Given special treatment to elderly people	71.4	28.6	0.0
R12	Given special treatment to children	11.4	31.0	5.7

Table 4: Percentage of 'Knowledge' 'Attitude' and Perception of COVID-19 Risk among formal settlement group

In the provided data table, K1, K2, and K3 are used to represent the Knowledge related to COVID-19, while A4, A5, A6, A7 signifies the attitudes, and R8, R9, R10, R11, R12 highlights the risk factors linked with the pandemic.

While talking about the Knowledge factor 100% of the sampled population were *heard about COVID-19* and *Know about its severity*, despite this only (75.7 %) of sampled population has *taken both COVID-19 Vaccination* while (21.9 %) were still have not taken their both the vaccine, while some have not taken any (2.4%) mainly due to pregnancy and breastfeeding ladies.

When examining the attitude factor, it was observed that there is (31%) *decrease in alcohol intake*, while (9.5%) of respondents has found no change. Similarly, (34.8%) of respondents have found a *decrease in their smoking and tobacco intake habit*, while (09%) of respondents were not affected. There were respondents who were *afraid of spreading virus to others* (65.7%) and *experienced fear in leaving home* (69.5 %) and (30.5 %), so they likely to follow the safety measures whereas (34.3%) were not afraid and (30.5 %) did not fear of leaving home.

Lastly, there were respondents those having *fear of getting COVID-19* (76.2 %) and (23.8%) having no fear. At the same, (69%) of respondents were having *fear of being locked at home* and (31%) were not having. Among amidst all there were respondents *given special treatment to elderly people and children* (71.4%) and (11.4%), while (28.6 %) and (31%) had not been given.

Health professionals and other educated groups tend to be less anxious and have more positive views and awareness of the epidemic (Caress et al., 2010). A group of well-educated people also asserted that they had a pessimistic outlook and a misunderstanding of a pandemic (Kang et al., 2020). About 60% of participants in a study by Roy et al. (2020) evaluating the knowledge, attitude, anxiety experience, and perceived mental health of educated adults in India during the COVID-19 pandemic thought that people who had recovered from the virus shouldn't be permitted to remain in their communities. According to reports, 41.3% of educated persons experience high levels of worry when others in their social circle report being ill (Intan Siti Nugraha; & Haq, 2021).

4.8.2. Information sources for COVID-19 in Urban formal settlement localities and the media availability

During COVID-19 pandemic media was the major and only source of information, while the government was actively disseminating Covid related information covering all the major mediums of media.

Fig.1 clearly represents that respondents have received the majority of COVID-19 related information through their mobile phone (85.7%), followed by Television which accounts (76.2 %) of the respondents. In the Urban formal settlement group Interpersonal communication (42.9 %) has also played information, in this case individuals with their neighbor's, family relatives taking information of eating and living healthy, along sharing their understanding of how to be safe from corona among each other.

Fourthly, respondents were getting adequate information at their Workplace accounts (19 %), as individuals' organizations tended to update their employees about lockdowns, vaccination to be taken, the compulsion and safety of wearing masks and sanitizing hands.

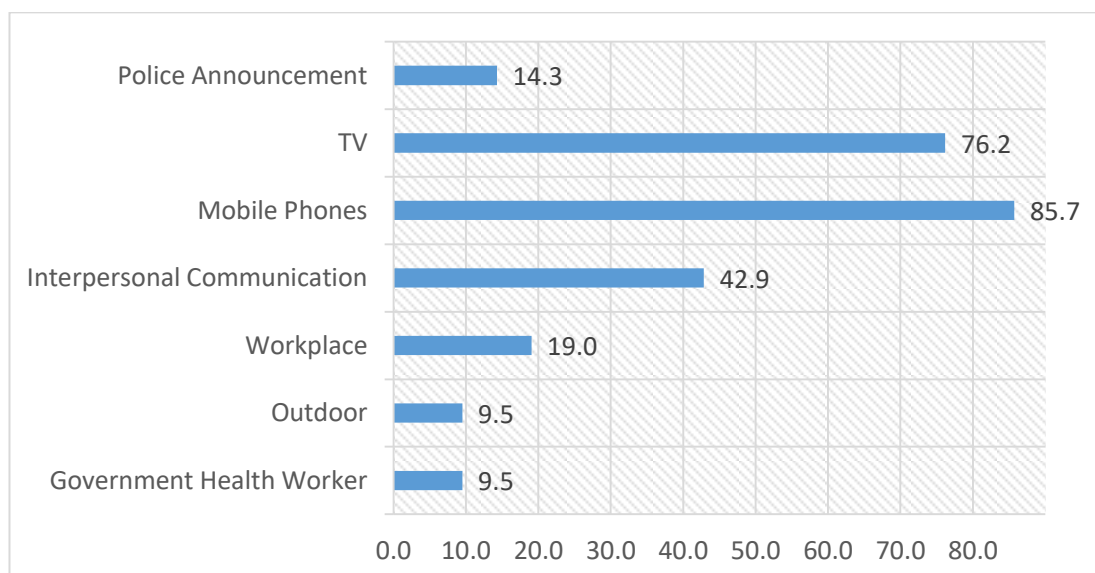


Fig 4.24: Major Sources of COVID-19 Information (%) among Urban formal settlement group

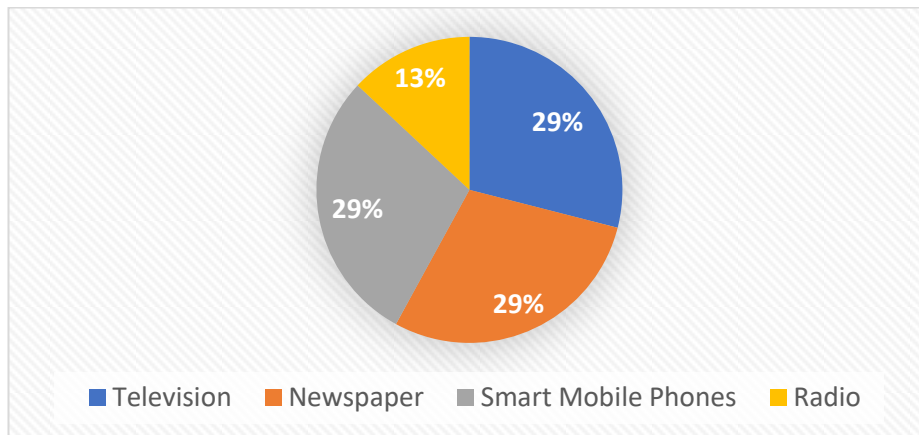


Fig 4.25: Media Availability (%)

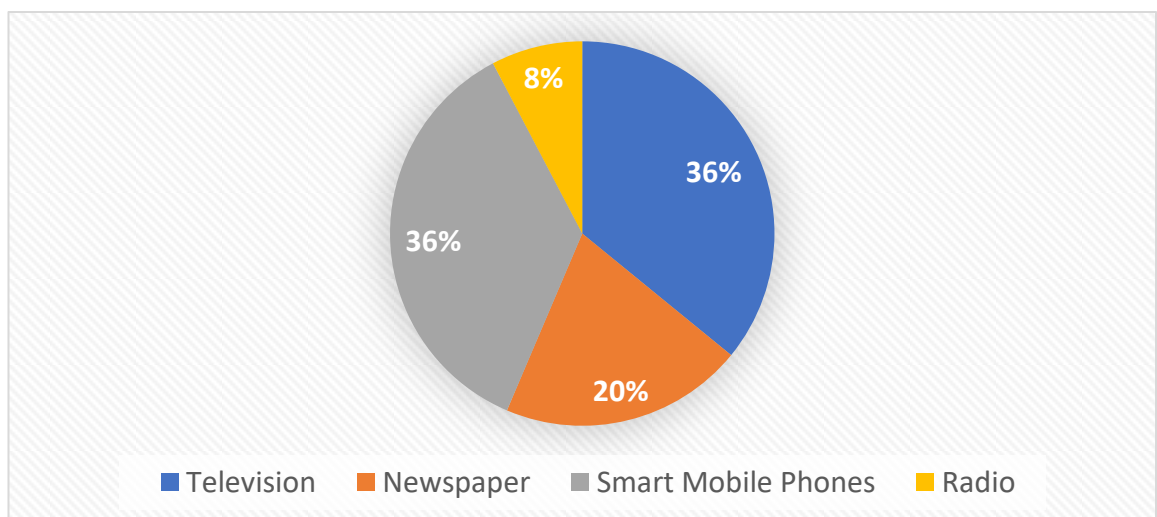


Fig 4.26: Media Usage (%)

The (14.3 %) respondents have also gathered information from Police announcements, they were actively working at public areas like railway stations, bus stands and squares of the city, updating and announcing the major protocols to be followed.

The formal settlement sector accounts least as a source of information to the outdoor media and government health workers which was (9.5 %), as they have least interaction with them.

Fig. 2 and Fig. 3 clearly state that the formal settlement class had availability of all the major media resources (29%), such as Television, Newspapers and Smart

mobile phones. Radio (as different devices) were only among (13%) of respondents, but media usage is different shows that, they highly rely on Television and smart mobile phones for covid related information which accounts for 36%, while newspaper usage (20%) and radio was least with (8%). These help them with the updating of crucial information, more likely events and news happening in their surroundings.

Respondents also believes mobile phones were easiest way of being updated that through social media playing major role, but amidst all social media has played major role in disseminating myths among the people, and moreover it was the media including Television and only which were causing major stress and anxiety through repeatedly presenting with the negative news.

4.8.3. Digital Media and its usage in COVID-19 related information in Urban Formal Settlement areas

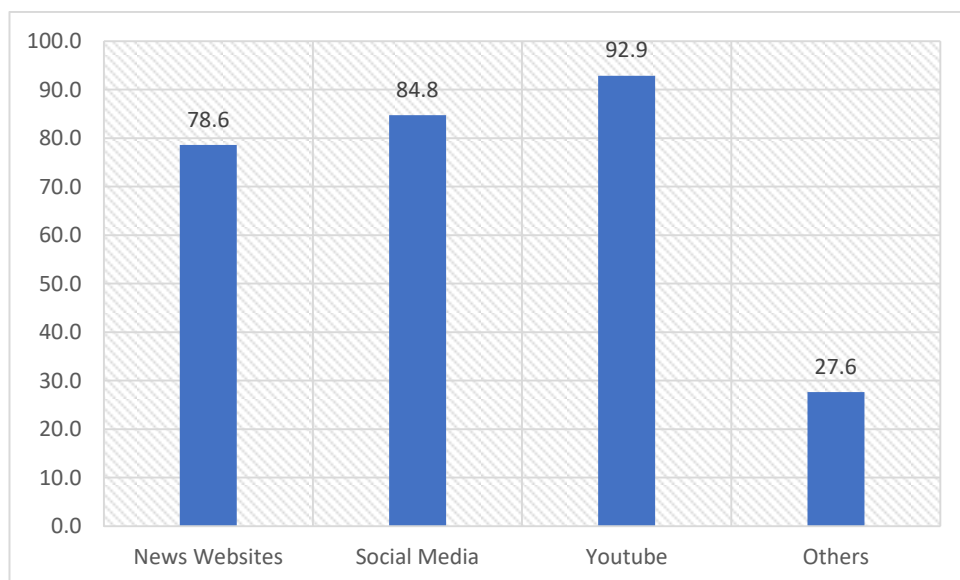


Fig. 4.27. Usage of Digital media in for COVID-19 related information by Urban formal settlement group

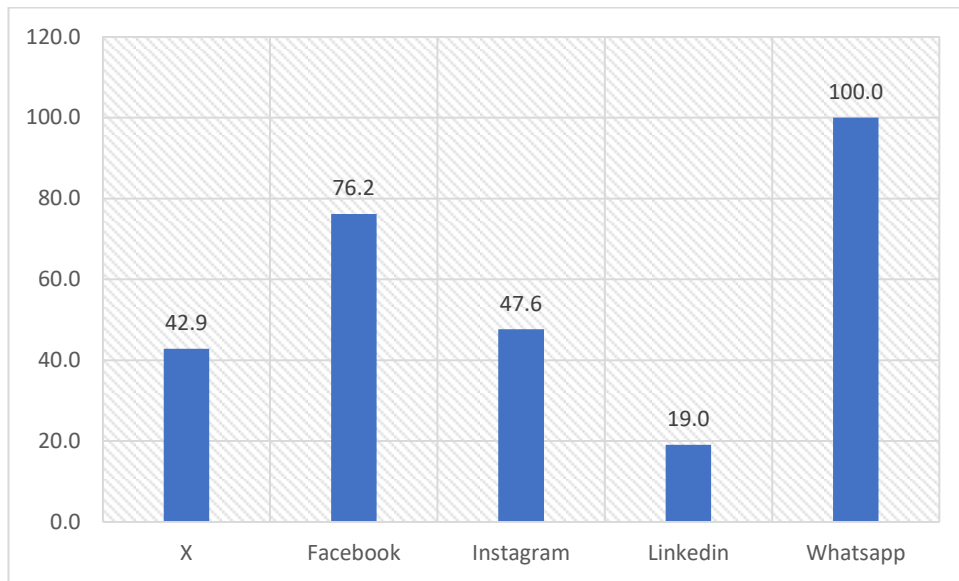


Fig. 4.28. Usage of social media in for COVID-19 related information by Urban formal settlement

The above figure shows that the usage of digital media for gaining COVID-19 related information by Urban formal settlement group.

The bar graph fig 24.a, shows that Youtube was highly used digital media among Urban formal settlement group accounts 92.9 %, followed by social media 84.8 %, News websites 78.6 % and others were 27.6 %

While the bar graph fig 24.b shows usage of social media among Urban formal settlement groups. The data shows WhatsApp was the highly used application by them, accounts 100%, sharing of videos, photos and other information such as requirement of oxygen cylinders, vaccination consequences in our known, was quicker during pandemic through this. Moreover, the groups of WhatsApp update happenings of our locality and society that helps us in better preparedness.

Secondly Facebook, which accounts 76.2 % among respondents as a crucial source for updating health related information. It helps in getting viral videos and news that update with the precautionary measures should be taken.

Next is Instagram, as the preference of youth, majorly viral reels and memes it helps in reaching the vast audiences and followed by X, formerly Twitter that reaches or used by people for getting helps like Sonusood team was quite popular during lockdown period and coming out for helping people in such difficult time. Lastly there was Linked In, more famous for job related profiles, thus aware people from the perspective of economy, country and policies. It helped but very few segments of people were (19 %).

4.8.4. Campaign and Slogans watched/heard by Urban formal settlement Class based on COVID-19 health information

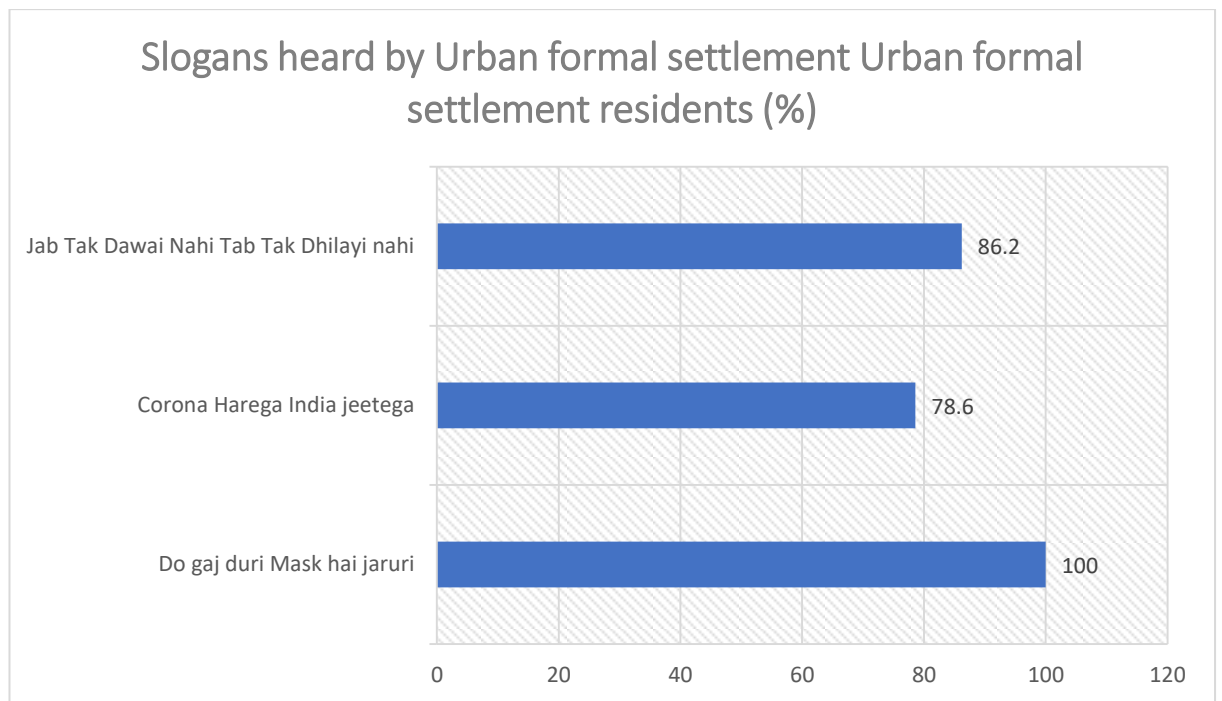


Fig. 4.29. Slogans heard by Urban formal settlement group (%)

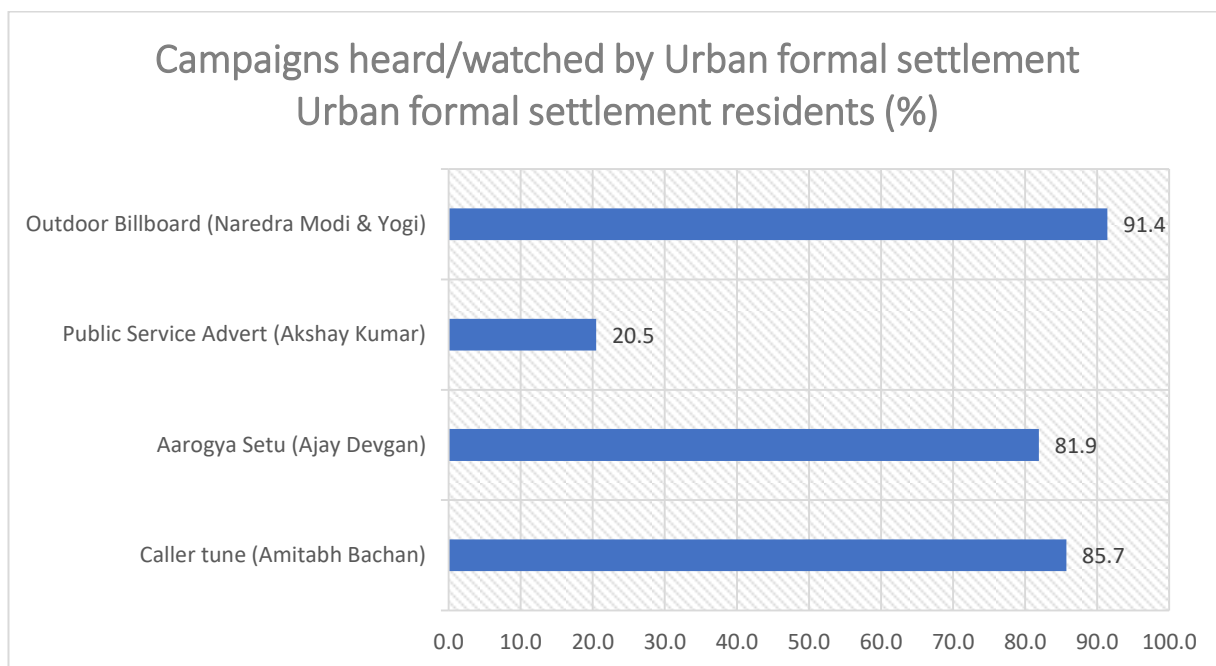


Fig. 4.30. Campaigns heard/ watched by Urban formal settlement group (%)

The mentioned figure 1 and 2 shows the percentage of slogans and campaigns heard and watched by the Urban formal settlement group. The sample of campaign chosen majorly were those which respondent remembers and recalls, while performing the for-schedule study.

Figure 1. represents that the slogan *Do gaj duri, Mask hai jaruri* were highly heard among the respondents making it 100%, the respondent get instantly connects with that as its suggesting for adequate behavioral change required for corona safety among users, while the prevalent slogan during corona and lockdown duration was *Jab Tak Dawai Nahi Tab Tak Dhilayi Nahi* nearly (86.2 %) of respondent has heard and recalls and was quite famous for its appealing approach to people for vaccination. Lastly *Corona Harega India Jeetega* slogan was heard and recalled by (78.6 %) of respondents, this aims to boost the inner morals of people that one should keep following safety measures and eventually India will win and Corona will be defeated.

Figure 2. represents that the campaign heard and watched by Urban formal settlement residents where the *Outdoor Billboard (Narendra Modi and Yogi ji)*, was majorly seen by the respondents accompanying (91.4 %), the big hoardings and

poster persuading citizens for free corona vaccination, they found it everywhere around squares of cities. Its appealing orange color and tagline were also eye-catching, having great recall value.

Followed by caller tune of Amitabh Bachchan (85.7 %), they found Although they can't recall the whole line and helpline number the caller tune suggests, and most of the respondents found it does not help in information rather they find it disruption while urgent call.

The *Aarogya Setu* application casting *Ajay Devgan* went viral among (81.9 %) where individuals recall it as corona Bodyguard, people also believed this has fostered them from downloading the application. Lastly, *Akshay Kumar Public Service* advert was quite infamous, only (20.5 %) people recall this advert.

4.9. Social Change among Urban formal settlement residents

4.9.1. Social Change witnessed among Urban formal settlement residents



Fig. 4.31. COVID-19 campaign relating Social Change

During the pandemic, the internet was full of COVID-19 campaigns disseminating awareness about the healthy lifestyle to boost our immunity. The above graph highlights the major social changes observed in the campaign by the individuals.

The prevalent social changes observed in campaigns were restricted travel, Healthy good Intake, Sanitation in Public Places, Online Education and digital transaction.

During the pandemic it was wisely advised to restrict their travelling and stay home, campaign has played important role in disseminating this message, where 34.3 % of individual has always seen this in campaign, 16.2 % of Urban formal settlement individual has seen this often, 21.4 % of individual has seen it sometimes, 13.3% has seen them rarely, while 14.8% has seen them never.

Healthy food intake was also advised to stay immune. 10.5% of respondents have seen this message in campaign, 11% have seen them often, 21.9 % of respondents have seen it sometimes, while the majority of 41.0 % have seen it rarely, 15.7 % of respondents have never seen them.

Using sanitation practices at public places was also very prevalent during high peak of COVID-19, where 26.7% of respondents has seen always, 21.4 % of individual has witnessed it often, 26.7% has come across sometimes, where as 11% has seen them rarely, and 14.3 % have seen never.

Amidst corona everything was shifted online, education system was tended to shift in online mode and this was disseminated through campaigns where 15.2 % sampled population has seen always, 12.4 % have seen it often, 20% of seen them sometimes, 29.5 % have seen them rarely, while 22.9% have seen never. 27.6 % of individuals has always seen Digital Transaction messages in campaign run during pandemic, 21.4 % have seen it very often while 11% have come it across sometimes, 13.3 % have seen it rarely and 26.7 % have never seen such measures in COVID-19 campaign.

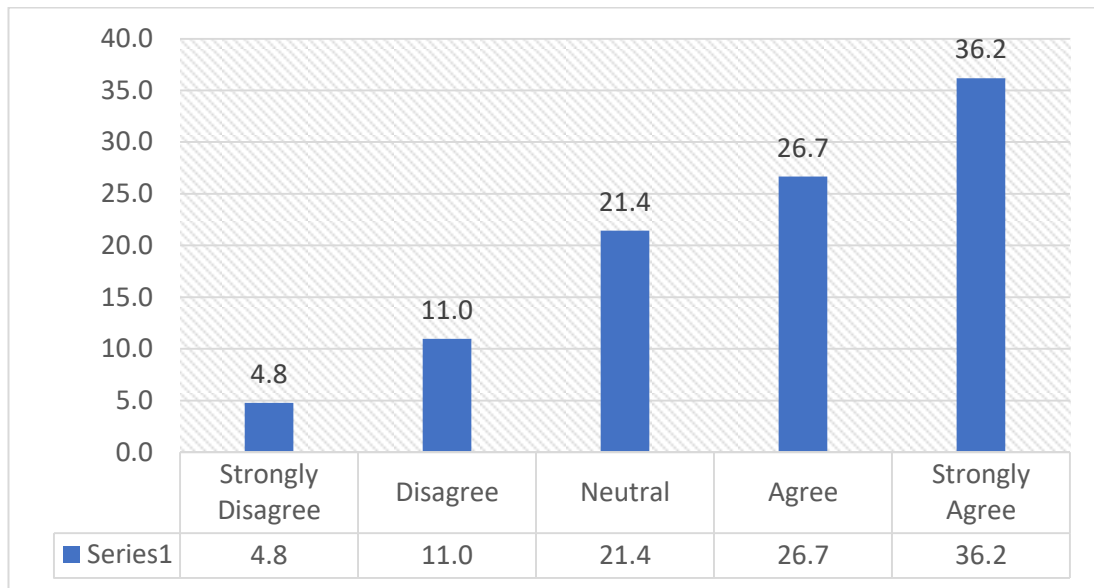


Fig. 4.32. Positive Social Change after two years of COVID-19 (Urban formal settlement)

The above bar graph shows the social changes opted by individuals after the two years of pandemic. The data shows that 36.2% of respondents strongly agree, that they have found the positive social changes in themselves even after the pandemic, 26.7% of individual were agree, 21.4% were found to neutral with statement, while 11% were found to be disagree and 4.8% were found to be strongly disagree.

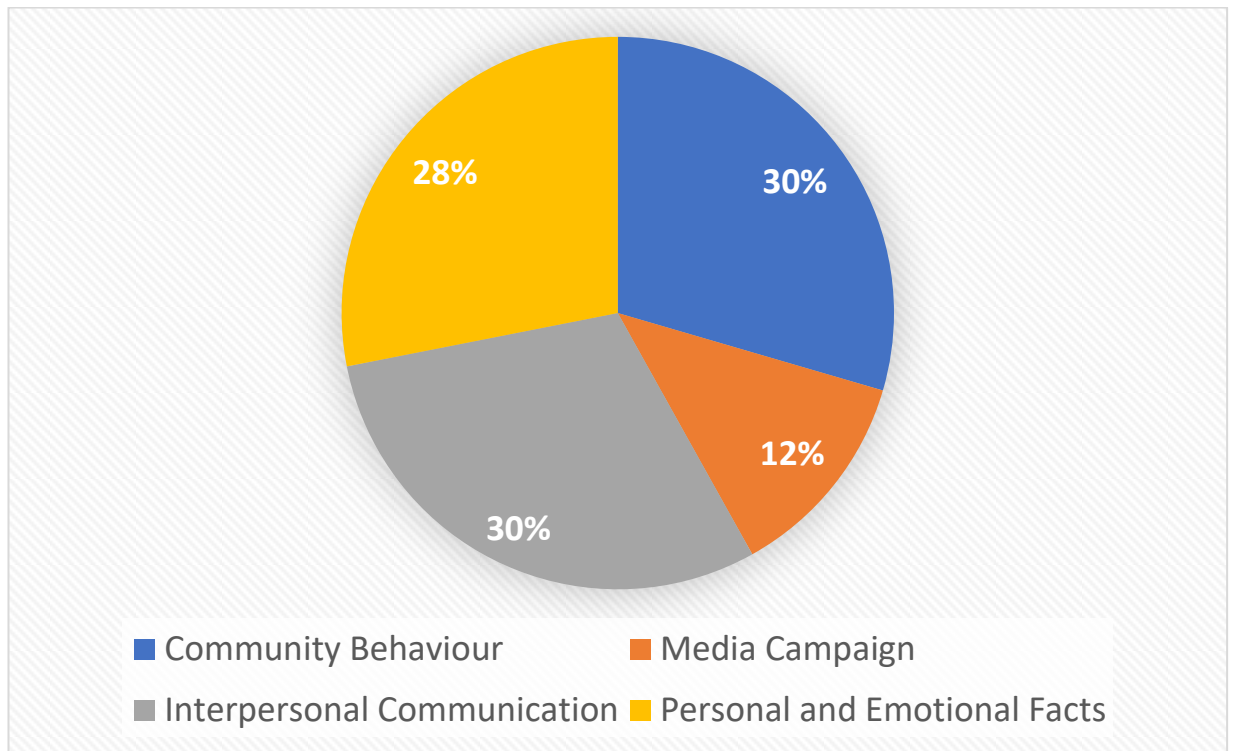


Fig. 4.33. Factors influenced for Social changes (Urban formal settlement)

The above pie chart shows the percentage of individual who were influenced by the social changes from the medium such as–Community Behavior, Media Campaign, Interpersonal Communication and Personal & Emotional facts that people account for behavioral changes.

The data shows that 30% of individual behavior were influenced through observing the community behavior and also through interpersonal Communication.

While 28 % of respondents were influenced by their personal and emotional facts presented during pandemic either through campaigns or advert, or through their inner thought. Lastly 12% of individuals were influenced by the media campaign encompassing all the campaigns governmental adverts along private organizations.

4.9.3. Mapping Social Change habit among Urban formal settlement resident: During and After COVID-19

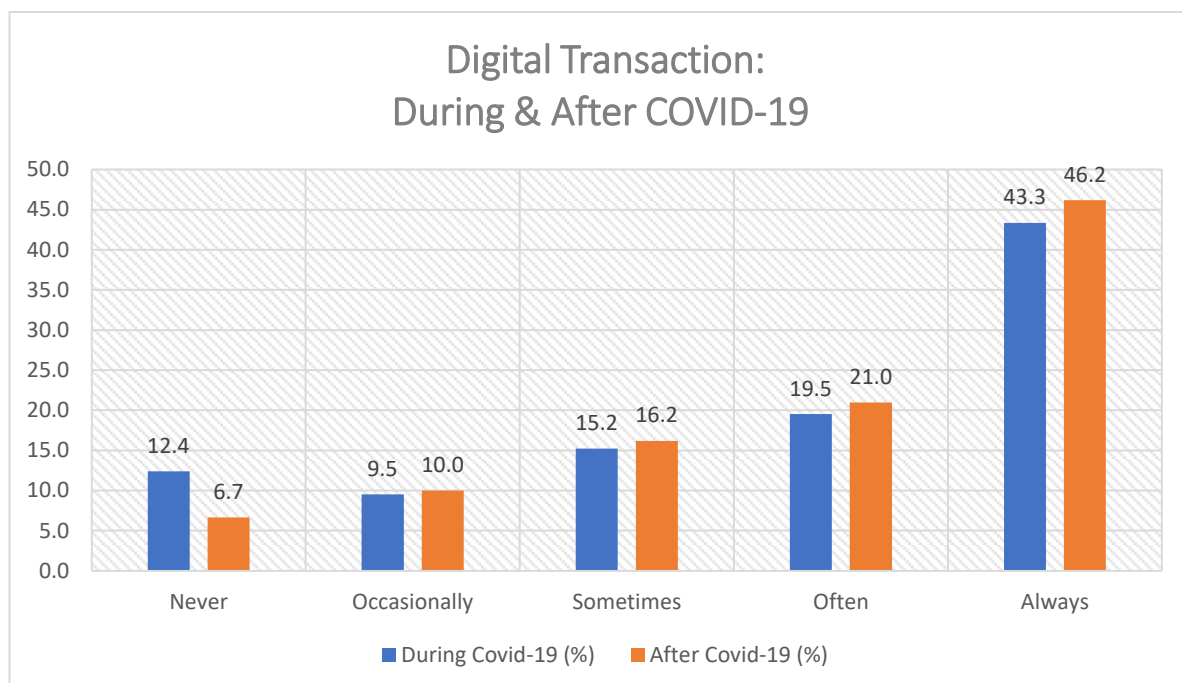


Fig. 4.34. Digital Transaction: During and After COVID-19

Among the social change aspects Digital Transaction have evolved majorly. The above bar graph shows the difference between during and post-COVID-19, in the case of digital transactions.

During COVID-19

The data shows that, 43.3 % of the sampled population is likely to perform digital transaction always, 19.5 % of sampled population used to do it often, 15.2 % used to perform sometimes, 9.5 % were used to do digital transaction occasionally, while 12.4 % of respondent never did digital transaction.

After COVID-19

There was a hike in digital transaction habit, 46.2 % of sampled population perform always, 21.0 % do digital transaction often, 16.2 % of sample population used to it sometimes, 10 % of respondents do transaction occasionally whereas 6.7 % tends to do never.

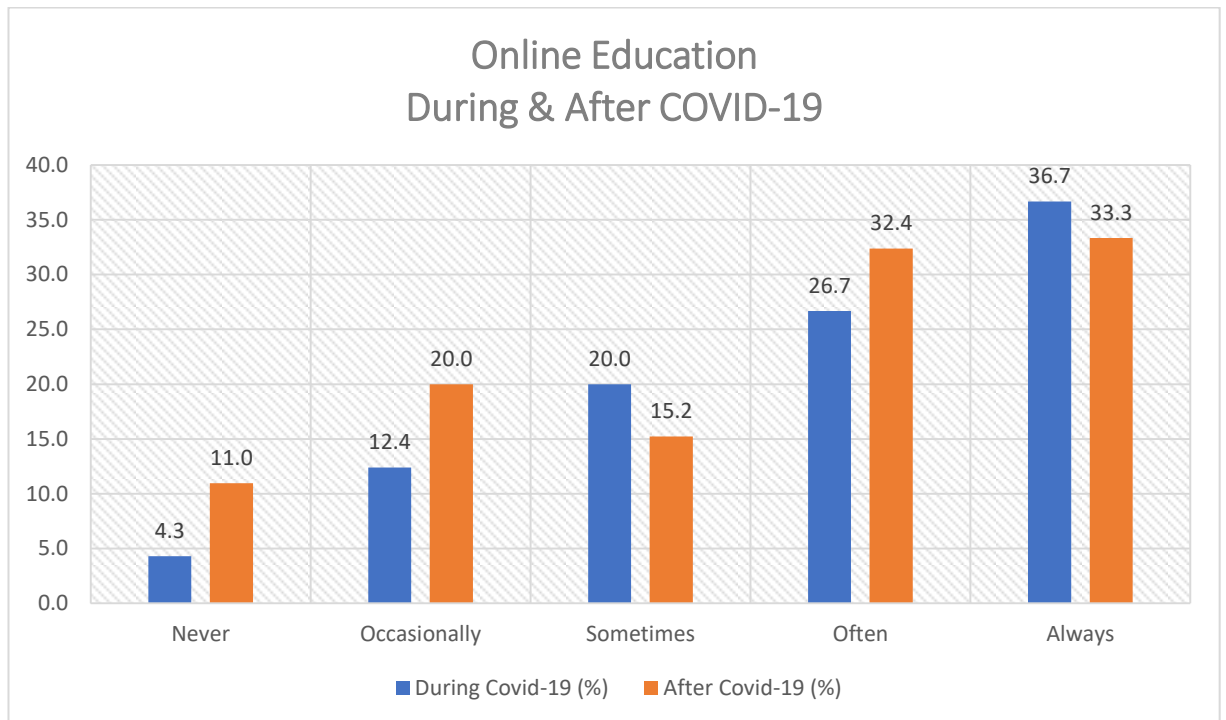


Fig. 4.35 Online Education: During and After COVID-19

The phase of pandemic has evolved more digital consumption among the respondents, while this has continued after the COVID-19 period. The above data shows the difference between the Online education, during and after COVID-19 period.

During COVID-19

The data shows that the majority of individuals have shifted in online education pertaining 36.7 % of respondents perform always, 26.7% of respondents perform often, 20 % used to do sometimes, whereas 12.4 % did occasionally and while 4.3 % did never.

After COVID-19

The graph shows decline in online education in the post COVID-19 period. In this phase only 33.3 % of respondents used to perform always, 32.4 % perform online education often, 15.2 % tend to perform online education sometimes, 20 % perform online education occasionally, while 11% of respondents never tend to perform online education.

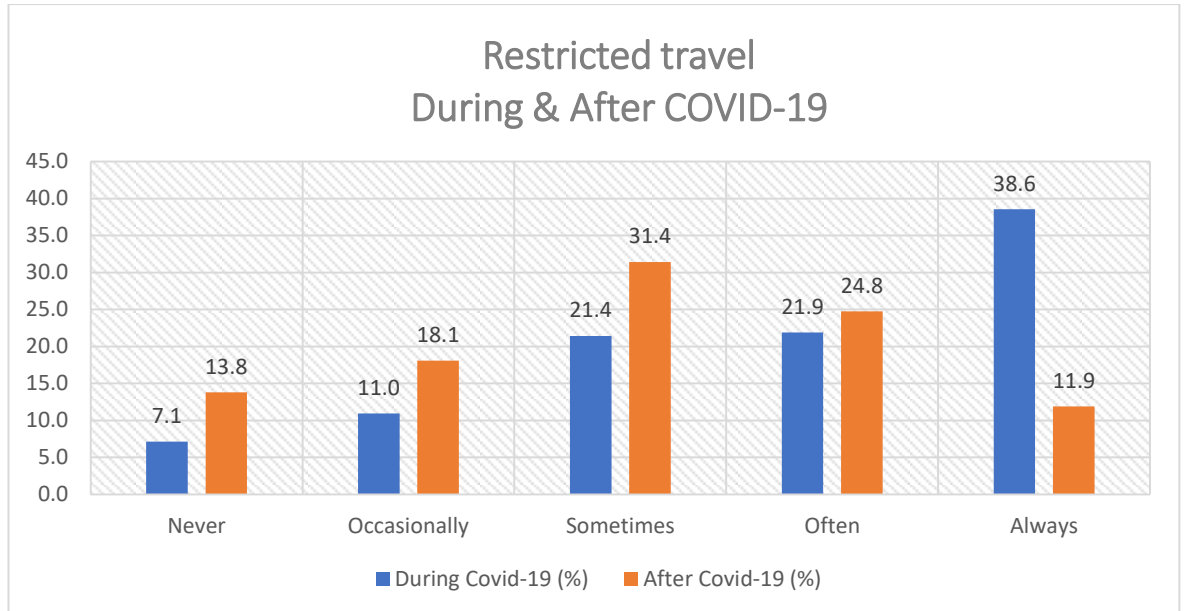


Fig. 4.36. Restricted travel: During & After COVID-19

During pandemic it was widely advised to stay home and stay safe, this leads to restricted travel among the population. The above graph show the difference in restricted travel amongst the respondents during and after COVID-19 period.

During COVID-19

The data shows that during the peak COVID period respondents have majorly restricted their travel 38.6 % of sampled population has always limited their travel. 21.9 % of the sampled population used to do it often, 21.4 % have restricted it sometimes, while 11% did it occasionally and 7.1% have never restricted.

After COVID-19

There was decline in restricted travel amongst the sampled population, only 11.9 % of population have been restricted their travel, while 24.8 % have restricted their travel often, 31.4 did it sometimes, 18.1 % used to do occasionally, where as 13.8 % have never restricted in after COVID-19 period.

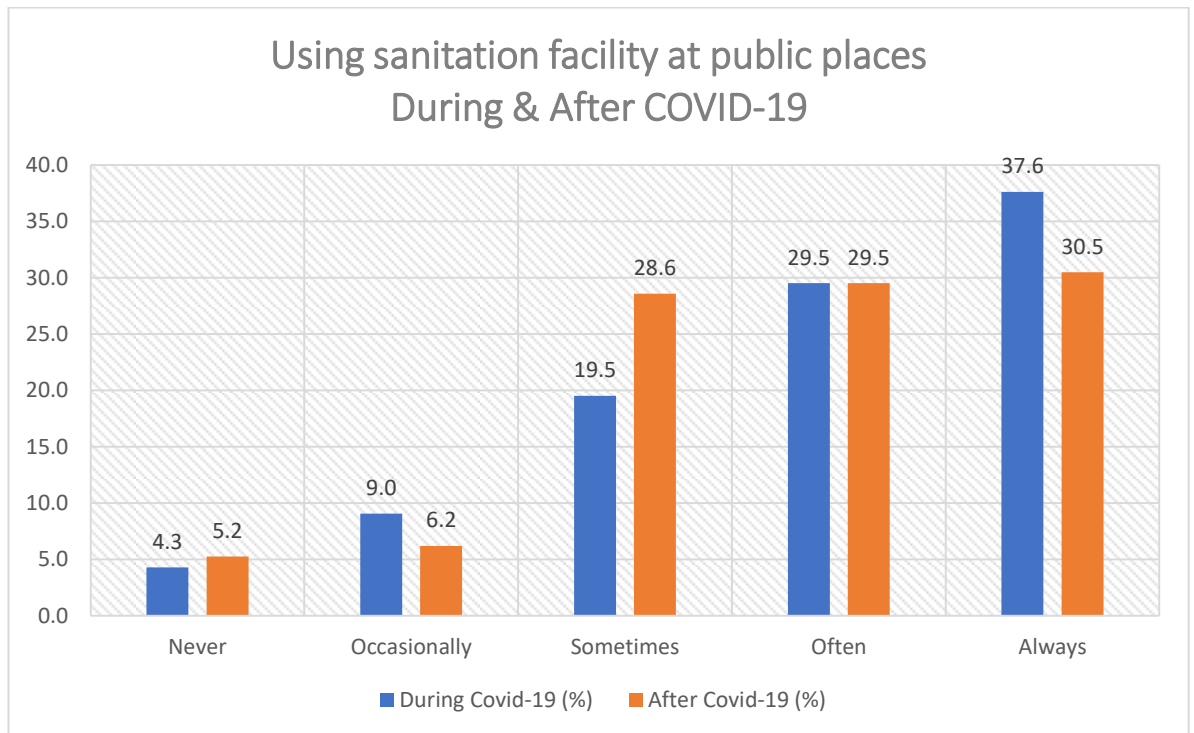


Fig. 4.37. Using sanitation facility at Public Places: During & After COVID-19

During pandemic period it was highly recommended to follow cleanliness and, use sanitation facility especially at public places. The above data shows the pattern of usage sanitation facility available at public places, during and after COVID-19.

During COVID-19

The data shows that 37.6% of respondents were likely to use a sanitation facility always available at a public place, 29.5 % of respondents used it often, 19.5 % of respondents were likely to use it sometimes, 9.0 % people use it occasionally, while 4.3 % tend to use it never.

After COVID-19

There was a slight decline in sanitation usage pattern 30.5 % of respondents always use, 29.5 % of respondents use it often, 28.6 % of respondents tend to use it sometimes, while 6.2% of people use it occasionally and lastly 5.2% of respondents never use it.

4.10. Behavioural Change among Urban formal settlement residents

4.10.1. Behavioural Change factors witnessed in COVID-19 Campaign by Urban formal settlement residents

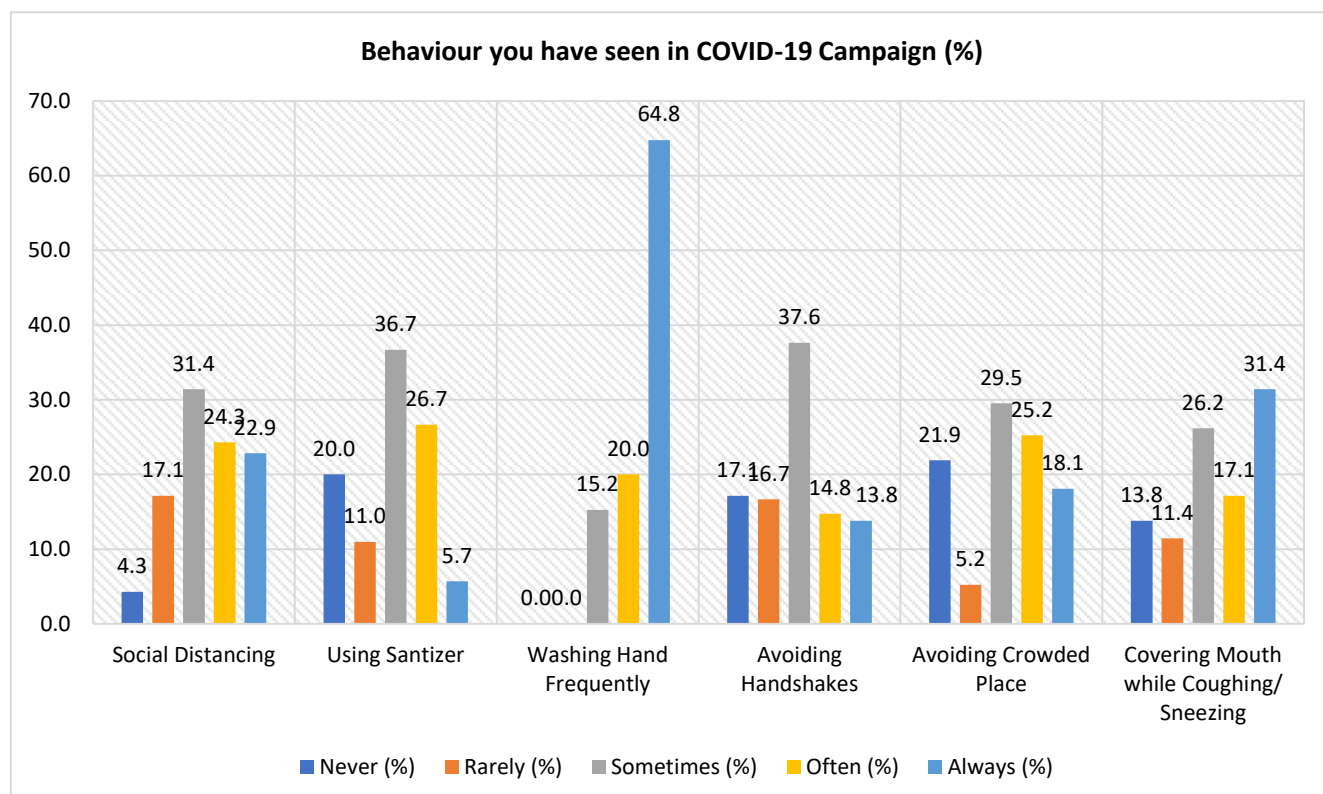


Fig. 4.38. COVID-19 campaign relating Social Change

During the pandemic, the internet was full of COVID-19 campaigns disseminating awareness about the safety and health measures. The above graph highlights the major behavioural changes observed in the campaign by the individuals.

The prevalent behavioural changes observed in campaigns were Social Distancing, Using Sanitizer, Washing Hand frequently, Avoiding Handshakes, Avoiding Crowded place and Covering mouth while coughing/ sneezing.

22.9% have always seen Social Distancing safety measures in COVID-19 health campaign, 24.3 % have seen it very often while 31.4 % have come across it

sometimes, 17.1 % have seen it rarely and 4.3% has never seen such measures in COVID-19 campaign.

In the case of Sanitizer using habit in COVID-19 campaign 20 % of individuals have never seen, 11 % have come across rarely, while 36.7 % have seen it sometimes, 26.7% of individual have seen it very often and lastly 5.7 % have always seen it.

The most important habit during COVID-19 which were wisely advice during pandemic is washing hand frequently, 64.8 % of individual has always seen in campaign, 20 % has seen often, and 15.2% has come across sometimes, accounting everyone has seen hand washing in pandemic.

The most common and neglected habit which campaign has highlighted is hand-shaking, 13.8 % have seen it always in pandemic campaigns, 14.8 % have seen them often, 37.6 % have seen them sometimes, while 16.7 % have seen them rarely, while 17.1 % have never seen them.

The other most important setting for COVID-19 safety measures was staying at home, and avoiding crowded places. The campaign coming with such messages and people witnessed it was that 21.9% have never seen, 5.2 % have seen rarely, 29.5% have seen come across sometimes while 25.2 % have seen often and lastly 18.1 % have witnessed always.

Along the basic and healthy habit of covering mouth while coughing and sneezing was hyped during pandemic, (31.4 %) of individual have witnessed such information in always, (17.1 %) have come across often, (26.2 %) of people have seen it sometimes, (11.4 %) have seen it rarely while lastly (13.8 %) of have never seen such information on campaign during pandemic.

4.10.2. Influence and Positive Behavioural Change observed among Urban formal settlement residents

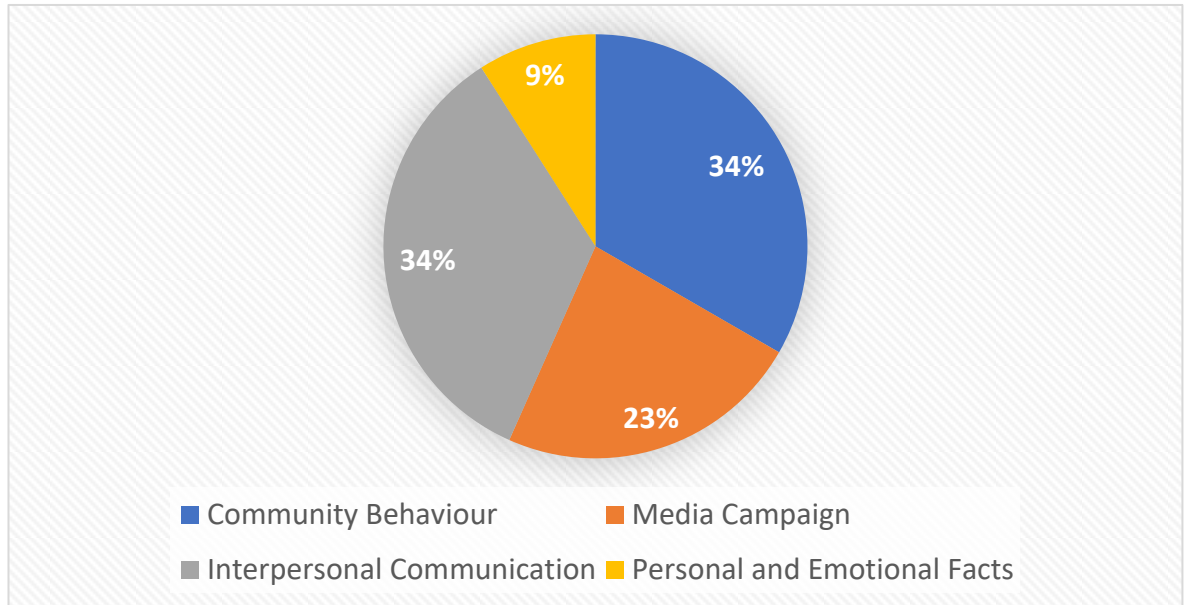


Fig. 4.39. Factors influenced for Behavioural changes (Urban formal settlement Group)

The above pie chart shows the percentage of individual who were influenced by the behavioral changes from the medium such as–Community Behavior, Media Campaign, Interpersonal Communication and Personal & Emotional facts that people account for behavioral changes.

The data shows that 34% of individual behaviour were influenced through observing the community behaviour and also through interpersonal Communication.

While 23 % of respondents have been influenced by the media campaign encompassing all the campaigns governmental adverts along private organizations.

Lastly, 9% of individuals were influenced by their personal and emotional facts presented during pandemic either through campaigns or advert, or through their inner thought.

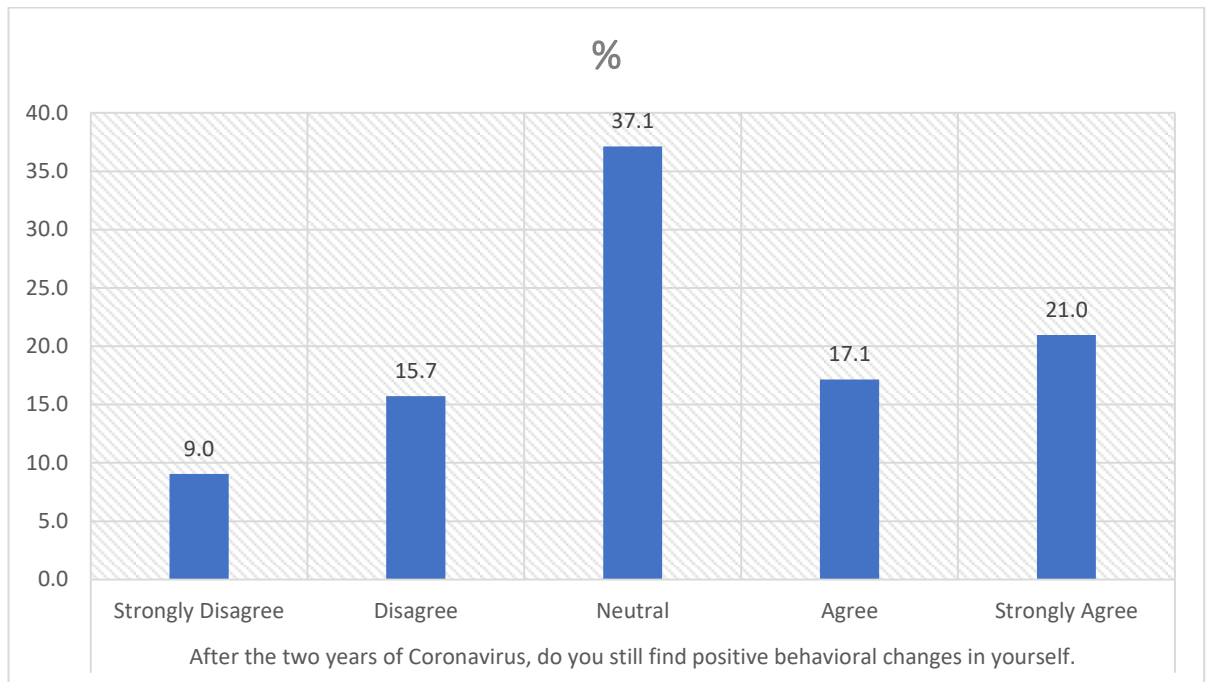


Fig. 4.40. Positive Behavioural Change after two years of COVID-19 (Urban formal settlement residents)

The above bar graphs show behavioural changes among the Urban formal settlement residents of individuals after the two years of corona. This highlights how the campaign run during pandemic was so impactful to bring the desired behavioural changes among the individual even after the cases of corona are minimal. Whereas this does not account for total difference in behavioural change while only for required changes which users should adopt for healthy a lifestyle.

As per data, it shows 21 % of respondents strongly agree that they still follow the positive behavioral change aspect which were during the pandemic. 17.1 % only agree with it, while 37.1 % were found to be neutral, 15.7 % found to disagree meaning that they hardly found any changes and lastly, 9% of individuals strongly disagree that they did not follow any changes among them.

4.10.3. Mapping Social Change habit among Urban formal settlement group: During and After COVID-19

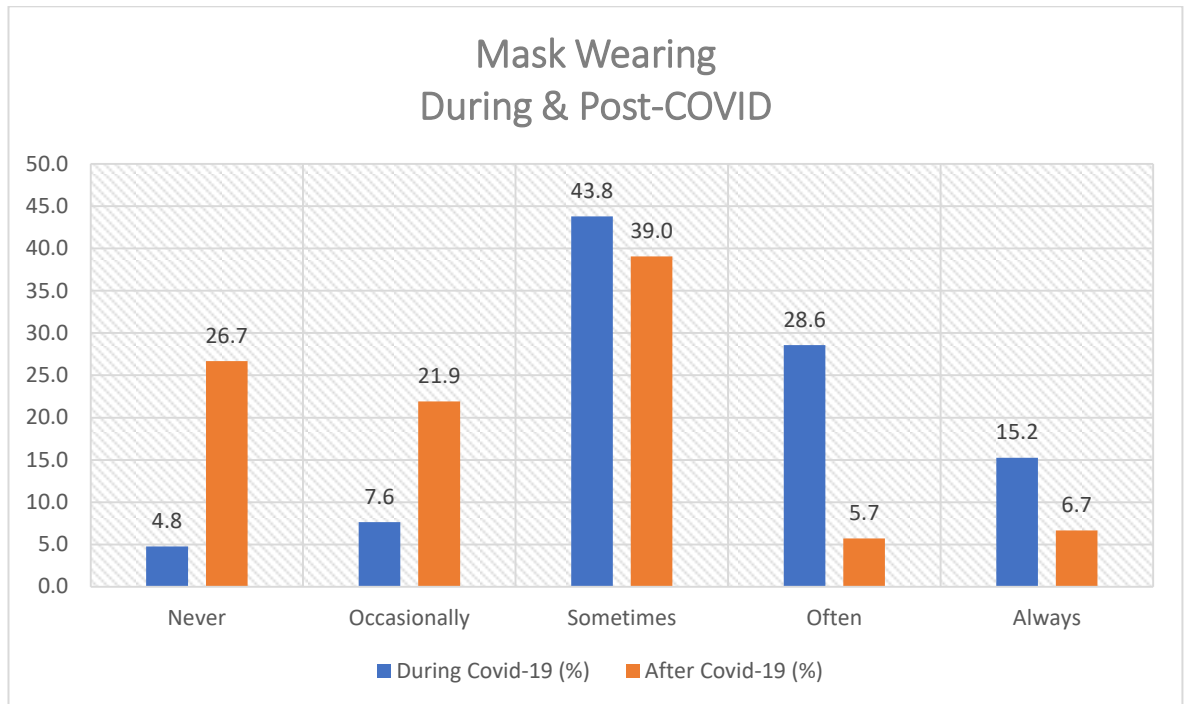


Fig. 4.41. Mask Wearing Habit : During and post- COVID-19

Among the behavioral change aspects Mask Wearing was majorly highlighted during the pandemic. Hence the above bar graph shows the difference of during and post-COVID-19, mask wearing habit.

During COVID-19

The data shows that, 15.2 % sampled population is likely to wear a mask always, 28.6 % of sampled population wears it often, 43.8 % used to wear it sometimes, while 7.6 % wears it occasionally and lastly, 4.8 % wear never.

After COVID-19

There was a major hike in never mask wearing habits which is 26.7 % of sampled population, 21.9 % wears it occasionally, 39 % wears mask sometimes after covid-19. While there is the least number of sampled populations who wear often 5.7 % and always 6.7%. Hence showing the average rate of result.

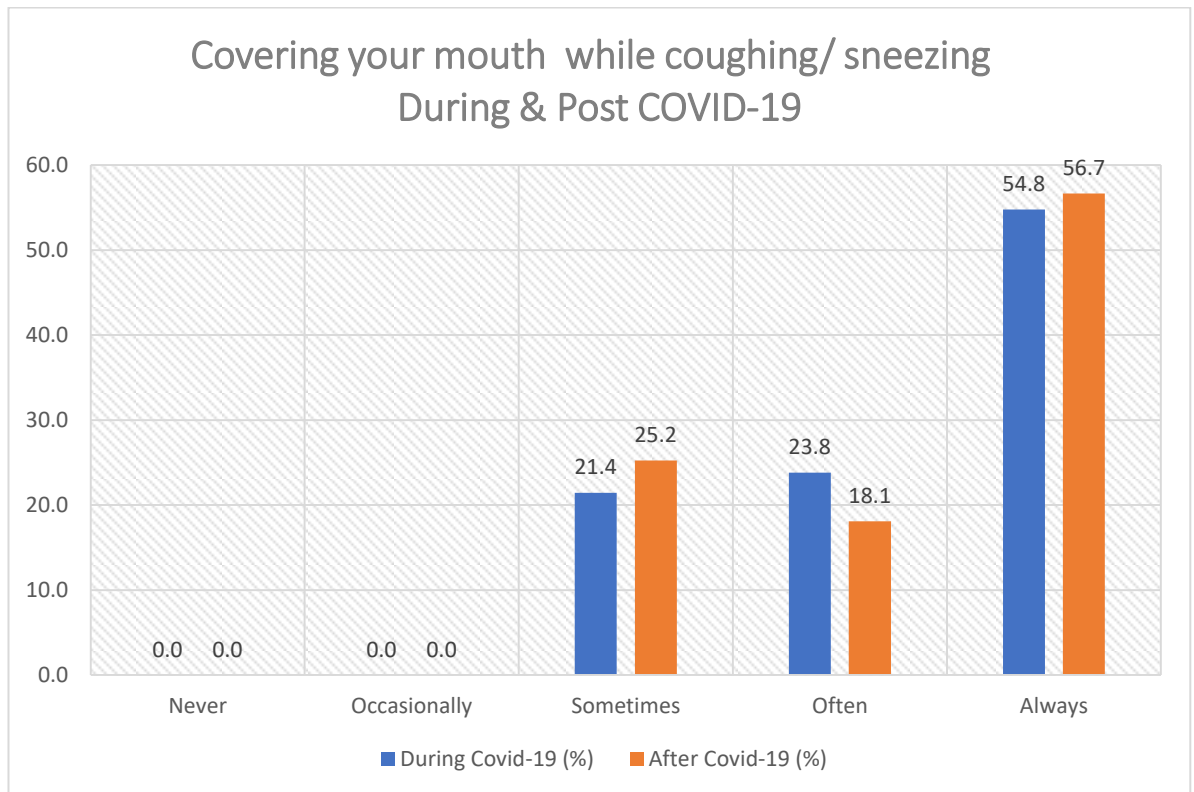


Fig. 4.42. Covering mouth while coughing/ sneezing: During and post- COVID-19

Among the behavioral change aspects, the most basic and common habit which tends people to always follow is covering your mouth while coughing/sneezing and during pandemic it is widely disseminated. Hence the above bar graph shows the difference of during and post-COVID-19 study of covering your mouth while coughing/sneezing

During COVID-19

The data shows that, 54.8 % sampled population is likely to cover mouth while coughing/sneezing, 23.8 % of sampled population covers often, 21.4 % used to cover sometimes, while population doing it occasionally and never wear 0 %.

After COVID-19

There was no such difference in covering the mouth while coughing/sneezing from the data shown during the COVID-19. In the case of after covid-19 data, 56.7% of sampled populations do it always, 18.1% follow it often while 25.2 % of the

population do it sometimes. In the case of after COVID-19 also there is 0% of respondents who do it never or occasionally.

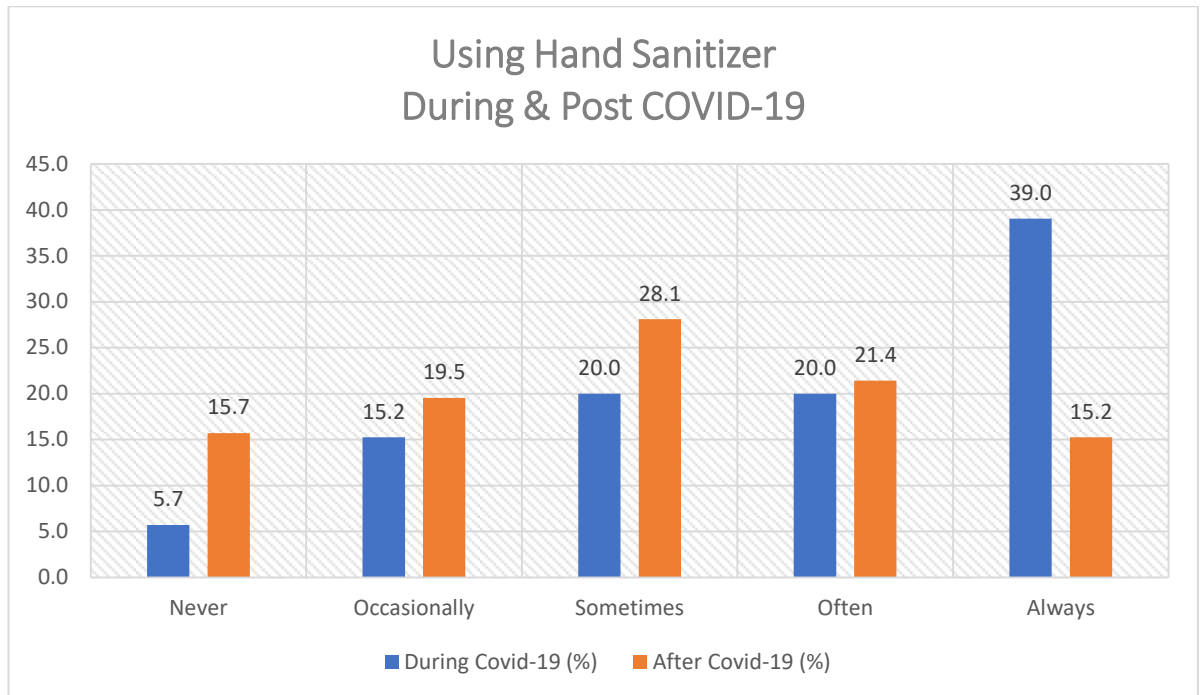


Fig. 4.43. Using Hand Sanitizer: During and Post COVID-19

During the pandemic using hand sanitizer was very common safety measures which were widely disseminated as using alcohol-based sanitizer would corona virus. Thus, many organizations also come up with this in their campaigns. Hence the above bar graph shows the difference of during and post-COVID-19 study of using Hand Sanitizer among sampled populations.

During COVID-19 : The data shows that, 39.0 % of sampled population is likely to use sanitizer always while 20 % of sampled population covers often and sometimes, 15.2 % used to do occasionally and 5.7 % never used to do it.

After COVID-19: There was a huge difference in such data from the during COVID-19 period, 15.2 % of sampled population uses sanitizer always, 21.4 % do it often, 28.1% of populations used to do it sometimes while 19.5 % do it occasionally and 15.7 % never uses sanitizer in the after COVID-19 period.

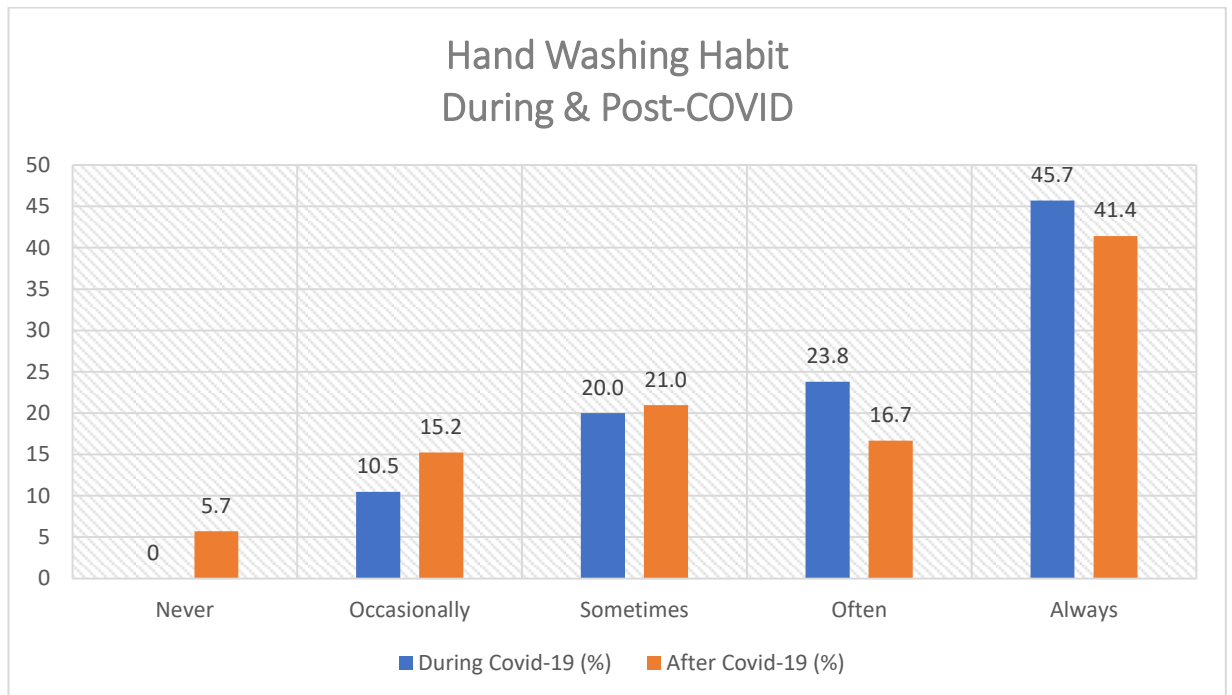


Fig. 4.44. Using Hand Washing Habit: During and post-COVID-19

The "wash your hands regularly" message was widely communicated through radio, TV, and community outreach programs. Hence the above bar graph shows the difference of Hand Washing Habit from during and post-COVID-19 period.

During COVID-19: The data shows that, 45.7 % of sampled population was likely to handwash always while 23.8 % of sampled population do it often and 20% sometimes, while 10.5% used to do it occasionally and 0 % do it never.

After COVID-19: There was no such huge difference in study from the during COVID-19 period, 41.4 % of sampled population do hand wash always, 16.7 % do it often, 21.0 % of populations used to do it sometimes while 15.2 % do it occasionally and 5.7 % do it never.

4.11. Urban formal settlement residents and Step-by-Step Communication flow during COVID-19

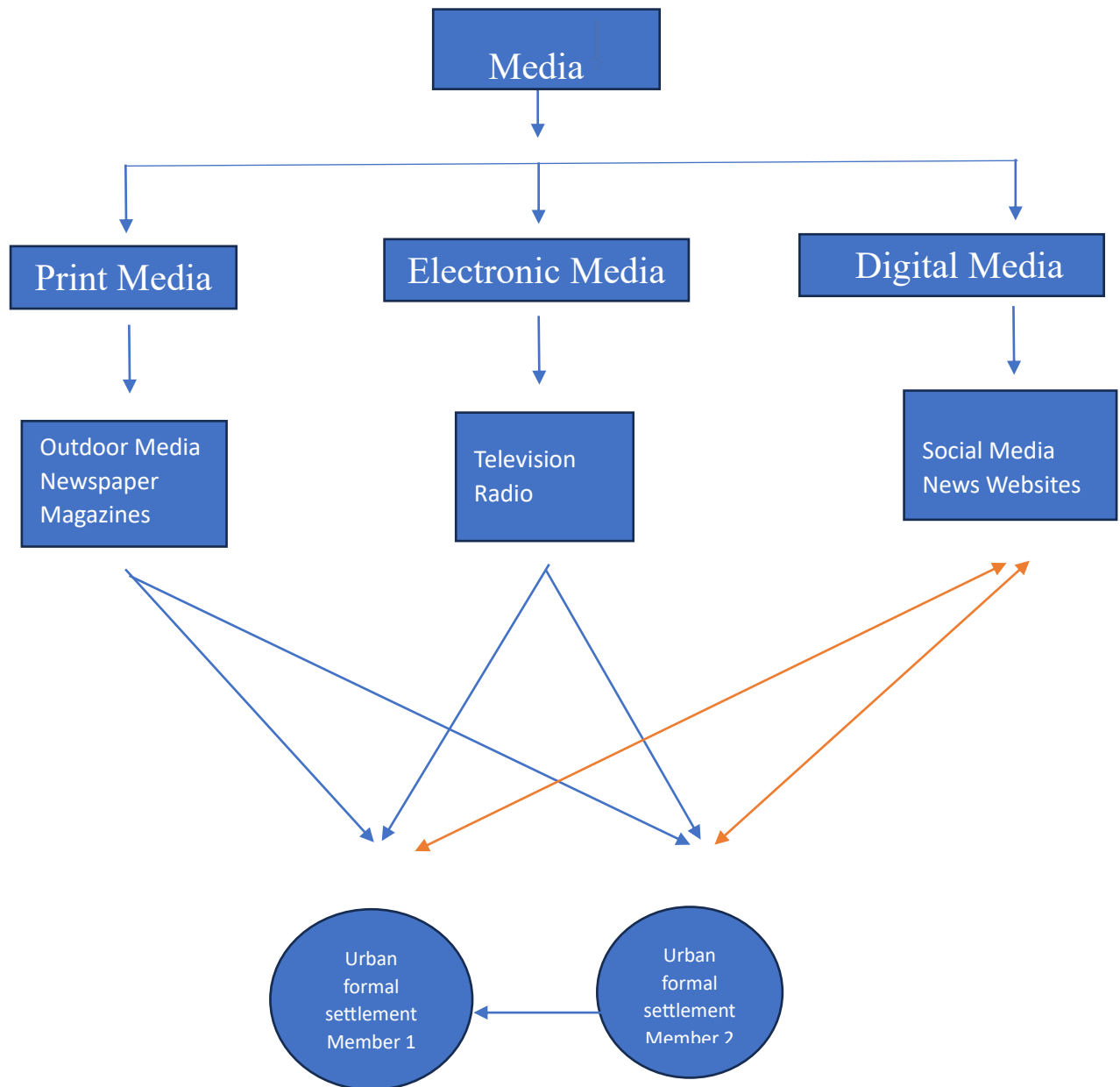


Fig 4.45. Flow of Information among Urban formal settlement regions

4.11.1 Types of Communication Flow during Pandemic among Urban formal settlement residents

Communication during a pandemic follows different channels and directions. It can be categorized as:

4.11.1.a. Top-Down Communication (Government to Public)

- **Government Agencies and Health Authorities:** The information flows from higher governmental authority (e.g., WHO, CDC, national health departments) about the official guidelines, warnings, and updates about the virus among the Urban formal settlement members of society.
- **Press Briefings and Public Announcements:** These agencies used regular briefings to inform the public about the latest developments, infection rates, new guidelines, and safety measures, which helps Urban formal settlement members to directly get the information without any biasness and alteration in between sender and receiver.
- **Digital and Mass Media:** Information was broadcasted through television, radio, social media, and government websites. The aim was to reach as many people as possible and ensure widespread awareness, which helps Urban formal settlement members to get different insight of information through availability of various media.
- **Public Health Campaigns:** These included advertisements, social media posts, posters, and health videos, encouraging preventive behaviors and providing information on where to get tested or vaccinated, including awareness about the safety measures and other mandatory precautions.

4.11.1.b. Bottom-Up Communication (Public to Health Authorities)

- **Social media and Online Platforms:** During the pandemic, social media became a space for public discourse, where individuals could share their experiences, spread information, or express concerns. The Urban formal settlement members tend to use it massively to get solutions of their query and other updates regarding corona such as availability of oxygen cylinder,

vaccination center and others. It works as a feedback system, giving opportunity and space to get space to be listened to.

4.11.1.c. Lateral or Peer-to-Peer Communication

- Family and Social Networks: Communication flowed informally through families, friends, and colleagues. This form of communication played a critical role in spreading personal experiences and coping mechanisms.

4.12. Semiotic Analysis

The Swiss linguist Ferdinand de Saussure originally described semiotics, which is identical with semiology, as "the science of signs." Following World War I, semiotics—the science of sign—became a field of study. Applied semiotics is the study of semiotics in the particular setting of signs. As a visual study, semiotics also serves as a conceptual foundation for the development of drawing theory. Posters, designs, images, sketches, paintings, photographs, colors, print advertisements, movies, diagrams, traffic signs, and maps are all included in the visual study (Fiske, 1990). To uncover the meanings included into posters, semiotic analysis is one of the most popular techniques. A poster is seen as a sign. Unquestionably, the image's meaning is deliberate in posters (and advertisements). Presumably, certain aspects of the image serve as the signifiers for the messages on the poster. To be considered effective, these signifiers need to be communicated clearly. Furthermore, according to Roland Barthes, semiotics seeks to comprehend any system of signs, regardless of its content or boundaries, including objects, gestures, images, and musical sounds (Barthes, 2015).

4.12.1. Semiotic Analysis of COVID-19 Campaigns: Posters and Videos

The COVID-19 pandemic prompted various public health campaigns aimed at modifying social behaviors to mitigate virus transmission. These campaigns were designed to influence public behavior, spread awareness, and encourage adherence to public health guidelines. The primary aim was to increase public awareness of the virus, the importance of social distance, wearing masks, hand hygiene, and the need for vaccination. These campaigns also focused on encouraging behaviors such as

staying home during lockdowns and seeking medical help when necessary. Analyzing the effectiveness of these campaigns reveals insights into how social and behavioral changes were facilitated during the pandemic.

A poster is a visual representation of words and/or images. According to (Gokasan, 2017), it is made on the "basis of design and artistic thinking". Text is visualized as the interaction of spoken and nonspoken words through the use of graphics and photographs in compositions (Bouzida, 2014). A poster is a communication tool that can be used to inform, convince, influence, and inspire people, among other things. The purpose of posters used in social media campaigns is to elicit mental assessments from readers (Intan Siti Nugraha; & Haq, 2021). (Gokasan, 2017) claims that posters fall into a variety of categories, including commercial, cultural, social, and political. Posters are used in the health sector to disseminate information, raise awareness, and influence people's thoughts and actions via communicating messages. According to some research, posters are a useful tool for raising awareness and encouraging positive behavior in health campaigns.

4.12.2. Major National Campaigns based on COVID-19

For the present study five major campaigns were taken for study, based on their recognition and recall method by the respondents of both class Urban informal and formal settlement. ***#IndiaFightsCorona: Do gaj duri, mask hai jaruri, Corona harega, aur India Jeetega***

The #IndiaFightsCorona campaign was one of the major national efforts launched by the Indian government to raise awareness and promote public health measures during the COVID-19 pandemic. It was a multi-faceted campaign designed to educate citizens, encourage safety practices, and build collective responsibility.

a) *#StayHomeStaySafe*

This was one of the initial public health campaigns to encourage people to stay indoors and adhere to social distancing norms during the lockdown periods.

The government and various organizations emphasized safety protocols like wearing masks, frequent hand washing, and maintaining physical distance.

b) *Aarogya Setu App*

The Indian government launched the *Aarogya Setu* app in April 2020 to help trace and track COVID-19 cases. The app was aimed at notifying individuals if they had been in contact with someone who had tested positive for the virus.

It was promoted as a tool for risk assessment and to help with quarantine measures

c) *Janata Curfew*

Launched in March 2020, Prime Minister Narendra Modi called for a voluntary curfew (Janata Curfew) as a measure to curb the spread of the virus. People were urged to stay at home and not step out unless absolutely necessary.

The curfew was followed by nationwide lockdowns to enforce social distancing.

d) *Har Ghar Dastak 2.0 Campaign*

HarGharDastak campaign 2.0” to accelerate the pace and coverage of COVID19 vaccination across States and UTs has commenced across the country. Being implemented in a ‘Mission Mode’, States and UTs have been advised to give an intensive push towards full COVID19 vaccination coverage by vaccinating all eligible beneficiaries. This was communicated to all States and UTs by Shri Rajesh Bhushan, Union Health Secretary as he reviewed the status of COVID vaccination with Health Secretaries and NHM MDs of States and UTs last week.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1830032>

4.12.3. Major State Campaigns based on COVID-19

The largest and most populous state in India ‘Uttar Pradesh,’ having 230 million residents, faced an extremely difficult task in terms of prevention, containment, and in spreading of the COVID-19 virus during both the first and second waves of

pandemic in India. With the massive team of health workers and efficient usage of campaign, that helps in reaching every nook of city.

- a) ***We Care:*** The UP government launched the "*We Care*" campaign to raise awareness about COVID 19 preventive measures. The focus was on promoting hygiene practices like wearing masks, frequent handwashing, and maintaining social distancing. The campaign was aimed at educating the general public through posters, social media, and announcements. During the pandemic, senior people who are most at risk for COVID-19 infections and other health problems require assistance and protection.
- b) ***No Mask, No Entry:*** In a bid to ensure public compliance with mask-wearing, the UP government ran a "*No Mask, No Entry*" campaign. The initiative required people to wear masks in public places, and non-compliance led to fines or refusal of entry to certain public areas like markets, offices, and shops. The initiative mandates that all bus, taxi, and autorickshaw drivers wear masks while on the road. Spread knowledge about mask wearing, COVID safety, and protection by using a public speech system.
- c) ***Meri Gali Meri Zimmedari:*** It was launched in the early months of the pandemic, and focused on making local communities and neighborhoods responsible for implementing COVID-19 safety norms. It encouraged people to maintain social distancing, practice hygiene, and ensure their neighborhood stays safe from the virus. Community participation was emphasized. Campaigns like "*Meri Gali Meri Zimmedari*" (My Street, My Responsibility) used local community engagement to ensure norms were effectively communicated and understood. These efforts were particularly successful in rural and peri-urban areas, where local leaders played a vital role in influencing behavior.
- d) ***CM Helpline for COVID Assistance:*** The UP government set up a helpline under the *Chief Minister's COVID-19 Assistance Scheme*, aimed at providing

assistance to citizens in need of medical help, transportation, or food. The helpline served as a critical resource for people to get timely support during the pandemic.

- e) **Chalo Ghar, Chalo Safe:** This campaign was launched to help migrant workers and individuals stuck in other parts of the country due to the lockdown. The UP government facilitated transportation back home through special buses and trains. The slogan “Chalo Ghar, Chalo Safe” urged migrants to return home safely while adhering to health and safety protocols.
- f) **Vaccination Mahabhiyan:** Uttar Pradesh's vaccination campaign was one of the largest in India, and the state launched the "*Vaccination Mahabhiyan*" to ensure that the maximum number of people were vaccinated as quickly as possible. The state government worked to create awareness about vaccines, combat vaccine hesitancy, and ensure that vaccines reached rural and remote areas.
- g) **UP's Corona-Free Village Campaign:** The UP government implemented this campaign to make villages "corona-free" by isolating potential COVID-19 cases, ensuring proper quarantine measures, and taking strict actions to prevent the spread of the virus in rural areas. Local authorities were responsible for monitoring villages and promoting social distancing, sanitization, and other safety protocols.

4.12.4. Analysis of Print Advert based on COVID-19

4.12.4 (1.a) Semiotic Analysis of ‘Do Gaj Duri, Mask Hai Jaruri’



Image 1



Image 2



Image 3

The "Do Gaj Duri, Mask Hai Zaroori" (translated as "Maintain Social Distancing, Masks are Important") campaign was an essential part of India's response to the COVID-19 pandemic, especially in promoting public health and safety.

All the three images under #IndiaFightsCorona contains linguistic signs and image signs. Among three, in two poster there are only one linguistic sign, main text *Do gaj duri, Mask hai Jaruri* (Two-meter distance and mask is mandatory) while in third one there are two linguistic sign main text plus other body copy *Ghr se bahr hamesha Mask lagakr nikle and Sarvarjinik eesthano pr Do gaj ki duri ka palan karen*. However, the text is more clearly understood with the image attached to it. The main text consumes larger space, bold and bigger in size.

The illustration of people in all three images shows, people are wearing mask and performing their daily life work. In fig.1 the illustration of a faceless person serves as a symbol for the idea of an unidentified individual. While one with the turban and showing how distancing symbols is been used in public area such as Bus stand, and individual should adhere it to be safe from corona denoting the title of poster. In fig.2

vegetable market is shown where crowd is quite high and social distancing is very low. Corona virus is also shown moving all around aligning with the dull and dark color used in the image also connotes the negativity of the virus all around the people in crowded area and denotes if people will not use mask and maintain 2-meter distance virus may affect them. So, following simple rules of wearing mask and following the social distancing rule. Even the image is placed above the title giving importance to the image that of following the act of do Gaj Duri, mask Hai Jaruri is crucial. In fig. 3. The poster shows simply two men standing apart with mask on there face and in between the title is mentioned that *Do Gaj Duri, mask Hai Jaruri*, denotating they are talking to each other and adhering the safety rules. While the poster denotes the informed citizen who are well aware of the safety rules of COVID-19 and tries to bring the adequate change. Below in the body copy it elaborates the title that, always wear masks while stepping out of home and secondly maintain distance of two meter at public places. In this figure light shades of colours, pink, blue and white is used which shows the positive impact of the poster on behaviour and from which the audience is already aware.

4.12.4 (1.b) Textual Signifier of campaign ‘Do gaj duri, Mask hai zaruri’

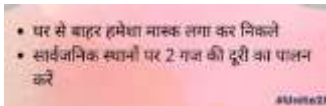
Verbal Text	Signifier	Signified
Fig. 1,2, 3		The main tagline of campaign, encouraging people of following the safety measures with giving on emphasis or showing necessity while using term necessity
Fig. 3		The body copy of advert, elaborating the main tagline but disseminating the same message of following the safety rule

Table. 5 Textual Analysis of ‘Do Gaj Duri, Mask hai Zaruri’

- The phrase "Do Gaj Duri" (Two yards of distance) is a clear and simple directive. The signifier of "two yards" is used to create a mental image of physical space and separation, which resonates with the idea of safety and precaution.
- The phrase "Mask Hai Zaroori" (Mask is necessary) is a direct, unequivocal call for action. The mask here becomes a symbol of protection and personal responsibility, emphasizing the role of individuals in curbing the spread of the virus.
- **Call to Action:** The advertisement ends with a clear, actionable directive — "Do Gaj Duri, Mask Hai Zaroori." This encourages immediate compliance, a typical feature of public health campaigns designed to provoke a quick change in behavior.
- **Rhetorical Strategy:** The ad uses imperative language ("Zaroori" - "necessary") to command action. This creates a sense of urgency and obligation, motivating individuals to follow health protocols without delay.
- The use of simple, straightforward language and visual symbols ensures that the message is understood across various demographic groups, transcending literacy levels and education giving universal appeal.
- The phrase "Zaroori" (necessary) brings in a sense of urgency and obligation. This is a culturally loaded term, emphasizing that this is not just a suggestion but a national imperative.

4.12.4 (1.c) Visual Signifiers of campaign ‘Do gaj duri, Mask hai zaruri’

Visual

	Signifier	Signified
Fig. 1.		The visual of Bus stand signifies that one should follow COVID-19 safety measures at public places also. The graphic image was shown

	with mask wearing and adhering the rule of 2-meter social distancing
Fig. 2	 The visual signifies people are following their routine work amidst global pandemic, while taking precautions and wearing mask. The image also signifies that social distancing is not followed hence corona is all around us. So along with mask, social distancing is also mandatory.
Fig. 3	 Two men directing hands towards message of wearing mask and following social distancing. They were also following the same message highlighting the informed citizens

Table. 6 Visual Analysis of ‘*Do Gaj Duri, Mask hai Zaruri*’

- **Masks:** In the advertisement, masks are frequently portrayed as a mandatory and visible symbol of safety. The mask transcends its role as a simple object and becomes a sign of collective responsibility.
- **Social Distance Indicators:** Images or graphics showing people standing apart, often with visible lines or markers, signify the importance of maintaining physical distance to prevent the spread of the virus.
- There is a clear binary opposition between "safe" and "unsafe," reinforced by the symbols of masks and physical distancing. The ad constructs a dichotomy where wearing a mask and maintaining distance is associated with safety and health, while neglecting these actions is linked to danger and illness.

4.12.4 (1.d) Rhetorical appeals of ‘*Do Gaj Duri, Mask hai Zaruri*’

Logos:

Simple, clear message: "Do Gaj Duri" (Two yards of distance) and "Mask Hai Zaroori" (Mask is necessary). These are factual, straightforward statements grounded in public health logic.

Instructional nature: The ad provides specific, actionable advice — maintaining physical distance and wearing a mask. The clarity of the message aims to make it easier for people to follow the guidelines.

Health-related rationale: The visual and textual cues rely on the idea that social distancing and mask-wearing are scientifically proven to prevent the spread of COVID-19.

Ethos:

Government-backed authority: The message conveys an official tone, representing the Indian government’s health initiative. This appeals to the trust people place in government directives during a public health crisis.

Public health expertise: The message is rooted in health expertise, relying on the authority of experts (doctors, health organizations) to advocate for masks and distancing as protective measures against COVID-19.

Moral responsibility: The campaign constructs the idea that wearing masks and maintaining distance is part of one’s ethical duty to the community, aligning with social responsibility and civic duty.

Pathos:

Fear and urgency: The ad evokes a sense of fear by emphasizing the necessity of wearing a mask and maintaining distance. The word "Zaroori" (necessary) adds a sense of urgency and importance, urging people to act immediately to protect themselves and others.

Empathy and care: The message taps into a collective feeling of responsibility for the well-being of others. It aims to create empathy by showing that taking these actions not only protects you but also your loved ones and the broader community.

Sense of unity: It creates an emotional bond by reinforcing that everyone must follow these measures together. The visual and textual messaging suggest a shared experience, urging everyone to contribute to a common cause for public health.

4.12.4 (1.d) Appeal for Social and Behavioural Change

The ad uses simple, easy-to-understand symbols that have wide cultural resonance in India. The mask, for instance, is now linked to the concept of health and survival, while maintaining physical distance has become a societal norm. The ad aligns with the creation of new social norms. The mask and physical distancing are no longer just medical advice but signs of responsible citizenship. These visual and textual signs work to reinforce new behavioral expectations that are essential in preventing the spread of COVID-19. In conclusion, the semiotic analysis of the "Do Gaj Duri, Mask Hai Zaroori" advert reveals a clever use of symbols, language, and visual cues to convey a clear and urgent health message. It constructs new social behaviors and norms around the need for social distancing and wearing masks to combat the spread of COVID-19. These rhetorical appeals work together to make the advertisement both persuasive and effective.

4.12.5 (1.a) Semiotic Analysis of 'Stay home, Stay Safe'



Image 4

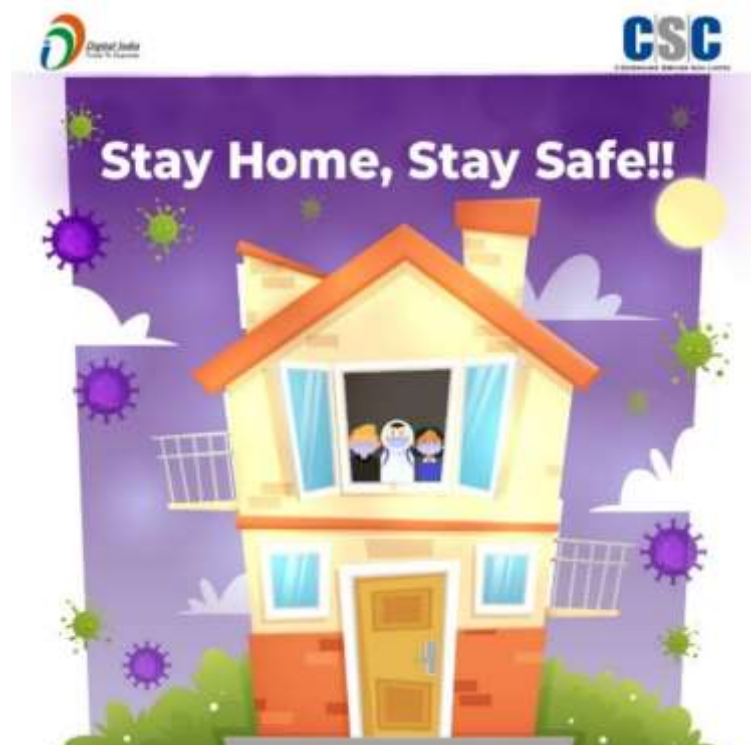


Image 5

Both the Pictures 2(a) and 2(b) contain linguistic and image signs, with the title line *Stay home, Stay Safe* in a big bold letter. While picture 2(a) accompanies with more body copies *What is the purpose of a lockdown? Nationwide lockdown is necessary to break the chain of COVID-19 infections; Stay home, Stay Safe; Together we will fight COVID-19* answering the necessity of lockdown. Denoting that people should be aware of this crucial step of lockdown and wholeheartedly follow the precautions. While all the body copy is written in different font connoting the importance and relevance of all four, and the dark, bold color -black and brown signifies the alarming situation that needs to be addressed. The picture in the poster directly aligns with the title, showing a small family- mother, father and a girl child staying in the house and outside there are lots of corona virus roaming all around. It connotes that one is safe inside home even without a mask and your house acts as a shield. The blue and white color of the house shows positivity and a safe atmosphere where dusky brown outside signifies the pollutant and negativity.

Whereas in picture 2(b) only one title is present: *Stay Home, Stay Safe* above the image, making it more crucial to be noticed. The big house is shown with the image of a short family- father, mother and child wearing mask and looking from the window, denoting one is safe at home. As the images of corona virus all around the house denote, one is safe here within the house. The picture also denotes that in such a big house only three people are staying and wearing mask and following social distancing. The "Stay Home, Stay Safe" campaign run in India during the COVID-19 pandemic was a pivotal public health initiative. Its semiotic analysis focuses on how the campaign utilized signs, symbols, and cultural elements to convey its message. Here's a breakdown of the semiotic analysis:

4.12.5 (1.b) Textual Signifiers of ‘Stay home, Stay Safe’

Verbal text	Signifier	Signified
Fig .1. & 2		The main tagline of the campaign, says that you will be safe while staying at home. The term home signifies protection, shelter and security during crisis.
Fig .1.		The second tagline, signifies irrespective of Indian diversity, if we stand together this time of corona, we all will fight corona
Fig .1.		The body copy message answers the reason behind the lockdown, giving logical appeal to audiences behind the lockdown

Table. 7. Textual Analysis of ‘*Stay home, Stay Safe*’

- **"Stay Home"**: This part of the slogan signifies the act of self-isolation or quarantine. "Home" here is presented as a safe haven, a place of protection, shelter, and security during the crisis. The directive "Stay" is a command urging individuals to stay in place to prevent exposure to the virus.
- **"Stay Safe"**: The phrase emphasizes the importance of safety and security, directly correlating staying at home with protecting oneself from potential harm, especially the virus. It transforms "home" into a symbol of safety and survival, directly contrasting with the dangers outside.

- **Rhetorical Strategy:** The use of simple, memorable language, with the repetition of the "Stay Home, Stay Safe" phrase, makes the message easy to internalize and spread. The rhetorical simplicity of the phrase enhances its effectiveness in reaching a wide audience, ensuring that the message is understood across demographic and linguistic boundaries.
- **Metaphor:** *Boundaries between safety and danger* The closed door or window serves as a boundary between the external world (dangerous and uncertain) and the safe, controlled environment inside the home. This metaphor creates a clear separation between the risky world outside and the safe space at home.
- **Binary Oppositions:** The ad sets up a binary opposition: staying at home (safe) vs. going outside (unsafe). The imagery and message constantly reinforce the importance of remaining indoors for safety. **Action vs. Inaction:** By urging people to stay home, the campaign contrasts inaction (staying home) with action (leaving home), where leaving home is associated with risk, while staying home is a passive action associated with safety.

4.12.5 (1.c) Visual Signifiers of ‘Stay home, Stay Safe’

Visual	Signifier	Signified
Fig.1		The visual signifies, family of three which is happy at their home and the hand gesture of parents on their daughter signifies they are relaxed, while staying at home. Whereas the outer world is full of corona

Fig.2



The visual signifies a family of three has locked themselves in their big house just to be safe from this corona crisis. Also wearing a mask, as outer the atmosphere is full of corona virus. This signifies one should lock themselves at home and be safe from COVID-19.

Table. 8. Visual Analysis of ‘*Stay home, Stay Safe*’

- **Home imagery:** In many iterations of the campaign, visuals featured cozy, domestic settings, homes with closed doors, or families together indoors. This reinforced the idea of "home" as the safest environment during the pandemic. The house becomes an iconic symbol of protection.
- **Lockdown or closed doors:** Representing barriers to the outside world, images of locked doors or windows indicate a controlled, isolated space for safety. These visuals highlight the boundaries between danger (outside) and safety (inside).
- **People at home:** Visuals of people engaged in everyday activities (cooking, working, playing with children, etc.) served to normalize staying home and made it relatable to audiences.
- **Government logos or health symbols:** Logos from the government or health departments often accompanied the campaign, lending credibility and associating the message with trustworthy sources of authority.
- **Symbolism of Safety:** The repeated association of "home" with "safety" makes the home itself a symbolic fortress against the threat posed by the pandemic. This symbolism supports the idea that the home is the safest place during a health crisis.

4.12.5 (1.d) Rhetorical Appeal of ‘Stay home, Stay Safe’

Ethos:

Government and authority figures: By using government and health organization endorsements, the campaign establishes its ethos, leveraging the trust and authority of these institutions. The message comes across as credible, as it is backed by official health directives.

Public health expertise: The campaign reflects the voice of health experts and medical professionals, making the directive trustworthy and authoritative. The consistent use of official sources, including statements by the Ministry of Health and Family Welfare, reinforced the campaign’s credibility.

Emotional Appeal (Pathos):

- **Fear and Protection:** The message taps into the widespread fear of the virus and death. "Stay Home, Stay Safe" evokes a sense of personal and collective safety. Staying home is framed as the most effective way to protect oneself and loved ones from the threat of COVID-19.
- **Sense of Responsibility:** The campaign also appeals to the emotions of duty and social responsibility. It underscores that by staying home, people not only protect themselves but also help prevent the spread of the virus to vulnerable groups like the elderly and sick, creating a sense of solidarity.
- **Empathy for others:** By staying home, individuals can protect not just themselves but also their communities. This appeals to the emotional value of empathy and collective care for others.

Logical Appeal (Logos):

- **Cause and effect:** The logical structure of the message is straightforward: staying at home reduces the chances of exposure to the virus, thus keeping individuals and communities safe. This is rooted in the logic of preventing disease transmission, based on scientific advice and evidence.

- **Scientific rationale:** The logic of social distancing and self-isolation is implied, where staying at home directly correlates with reducing the likelihood of contracting and spreading the virus. This aligns with public health recommendations and reinforces the scientific basis for staying indoors.
- **Clear directive:** The message is direct and actionable: stay home, stay safe. There is no ambiguity in the instruction, which enhances the effectiveness of the campaign.

4.12.5 (1.e) Appeal for Social and Behavioural Change

The notion of 'home': In Indian culture, the concept of "home" is deeply tied to family, safety, and tradition. The home is considered a sacred space, and encouraging people to stay home aligns with values of familial closeness and protection.

Constructing Social Norms:

- **New normal:** "Stay Home, Stay Safe" is part of the larger effort to normalize quarantine, self-isolation, and social distancing as acceptable behaviors in response to a public health emergency. The campaign helped people adjust to these new social norms by reinforcing the importance of staying indoors as the safest option.
- **Community responsibility:** The message also emphasized that the responsibility for containing the virus was shared by everyone. It introduced the concept that safety was not just an individual concern but a collective one, where everyone's actions could contribute to the community's well-being.

4.12.6 (1.a) Semiotic Analysis of 'Arogya Setu'



Image 6



Image 7



Image 8

Aarogya Setu (translated as "Bridge of Health") is a meaningful name that acts as a **symbol** of the app's purpose. The word “**Aarogya**” directly refers to health, and “**Setu**” means bridge. The name positions the app as a bridge between individuals and public health, a tool that connects personal responsibility to national health objectives. It symbolizes a means of communication and protection, creating the image of a technological bridge that helps individuals and society to stay safe during the pandemic. In Picture 3(c) both linguistic and image sign are present, in linguistic Aarogya Setu is been highlighted dark and boldly with blue in color, below that tagline *mei surakshit | hum surakshit | bharat surakshit* (english), while on the phone it is mentioned that “With Aarogya Setu you can protect yourself, your family and friends, and help our country in the effort to fight COVID-19. If we are safe India is safe”. The image denotes you being in the centre and other people using this application at your distance whether they are COVID positive or negative.

4.12.6 (1.b) Textual Signifiers of ‘Aarogya Setu’

Verbal Text	Signifier	Signified
Fig.1		The main tagline along the application name signifies if you will use this, it will make your surrounding safer, and automatically India would be safe from corona.
Fig.2		It highlights the bandwagon effects and signifies 6 crore people have already downloaded it which mean you also join the league and make the country safer.
Fig.3		It signifies as recall method that if you have forgot it by mistakes or ignoring it, so don't ignore and download it, for your and country safety

Table. 9. Textual Analysis of ‘Aarogya Setu’

- **Directive and Command:** The ad’s slogan uses the **imperative mood** ("Download") to create urgency. It calls people to take action, aligning with the idea that individual efforts (downloading and using the app) are crucial for the collective well-being.

- **Clear Objective:** The phrase "**for your safety**" personalizes the message, suggesting that the app is specifically designed to protect the user, thus appealing to the viewer's need for self-preservation.
- **Metaphor : "Bridge of Health":** The name **Aarogya Setu** itself is a **metaphor** for the app's role in connecting individuals to the broader effort to combat COVID-19. A bridge serves as a **connector**, symbolizing the link between personal health decisions and public health objectives. This metaphor aligns with the app's function of tracking potential exposure to the virus, serving as a lifeline to health safety.
- **Barrier between Safety and Danger:** The app can be viewed as a metaphorical barrier between the individual and external dangers (the virus). By identifying potential risks (such as proximity to an infected person), the app helps users maintain a distance from exposure, creating a safety zone. This aligns with the metaphor of the closed door or boundary—the app acts as a protective barrier between the user and the risk of infection.
- **Call to Action:** The main rhetorical strategy is the call to action ("Download the app for your safety"). It appeals to self-preservation and community solidarity, urging viewers to take immediate action to protect themselves and others.

4.12.6 (1.c) Visual Signifiers of '*Aarogya Setu*'

Visual	Signifier	Signified
Fig.1		The interface from the application show how easily one detects the corona patient around just through one click, and makes you and the world safer.



Fig.1

The heart shape logo with orange, blue and green signifies the tri color of nation, the feeling towards unity of India. The heart shows all Indians are connected through this application and helping in making a safer nation.



Fig.2

The man using phone signifies plain folks appeals that people like us are using applications, so we should also join them and make the country safer.

Table. 10. Visual Analysis of '*Aarogya Setu*'

The **visual elements** of the campaign are designed to reinforce the messaging of safety, technology, and collective responsibility.

- **Smartphones and Bluetooth Icons:** The ad often shows people using smartphones, with the app interface visible on the screen. This imagery immediately positions the app as a **technological tool** that is accessible and easy to use. The **Bluetooth icon** visible on the app's interface further signals the app's function of tracking exposure and proximity to infected individuals. The app's interface is depicted as simple, clean, and easy to navigate, which

appeals to a broad audience by emphasizing **accessibility** and **user-friendliness**.

- **Diverse Representation:** The campaign shows a range of people using the app, including individuals from different age groups, genders, and ethnic backgrounds. This visual diversity underscores the idea that the app is for everyone, promoting inclusivity and a universal call to action. The diversity also reinforces the message of collective responsibility, showing that people from all walks of life must unite to combat the pandemic.
- The visuals often feature people engaging in healthy behaviors, such as wearing masks, practicing social distancing, or staying at home. These actions are paired with the Aarogya Setu app on their phones, demonstrating that using the app complements these health-conscious behaviors.

4.12.6 (1.d) Rhetorical Appeals of Aarogya Setu

Ethos

The ad strongly appeals to ethos by prominently positioning the *Aarogya Setu* app as an official initiative by the Indian government. By emphasizing that the app is government-endorsed, it establishes authority and trustworthiness. The ad might even feature visuals of official government logos or authoritative figures (health ministers, doctors, etc.), which further enhance the credibility of the app. The use of the phrase "Official Government App" reinforces that the app is not just another app but one backed by trusted institutions. The government's involvement lends the app credibility, reassuring citizens that the app is safe, legitimate, and a critical tool in combating the pandemic. The ad might also include endorsements from health experts, doctors, or scientists, which further solidifies the app's credibility. These authoritative figures provide a sense of expert validation, ensuring that the app's design and purpose are based on sound scientific and medical principles.

Logos (Reason and Logic)

Logical Appeal of Safety and Protection: The ad appeals to logos by explaining the functional benefits of the app in a clear, logical manner. It might include statements like, “Track your health status,” “Get alerts about possible exposure,” or “Protect yourself and your loved ones from COVID-19.”

Statistical Evidence: While not always explicitly shown in the visual elements of the ad, the underlying message of the campaign is that downloading the app contributes to national efforts in fighting the pandemic. The use of data in the app (such as tracking COVID-19 hotspots or exposure levels) provides a logical justification for its necessity, turning the act of using the app into a rational decision rooted in public health.

Pathos

Fear and Anxiety: The ad employs **pathos** by tapping into the audience's **fear and anxiety** about the pandemic. The campaign uses visuals and messaging that highlight the severity of the crisis, the potential threat of the virus, and the need for immediate action.

Reassurance and Comfort: Along with fear, the ad also aims to reassure the audience. It positions the app as a solution, offering a sense of control over an otherwise chaotic and frightening situation. By emphasizing that “Aarogya Setu” helps “keep you safe”, the ad appeals to the audience’s desire for security and protection in uncertain times. The act of downloading the app is framed as an **empowering** choice, offering users a means to take control of their health and well-being.

Sense of Collective Responsibility: The emotional appeal is also rooted in the concept of **social solidarity**. The ad emphasizes **community health** by using phrases like “**Together, we can fight COVID-19**”. This message plays on feelings of **belonging** and **duty**—reminding people that their actions contribute not only to their own safety but also to the safety of others. This appeals to a collective, socially responsible emotional drive to protect the greater community.

4.12.7 (1.a) Semiotic Analysis of ‘Janta Curfew’



Image 9

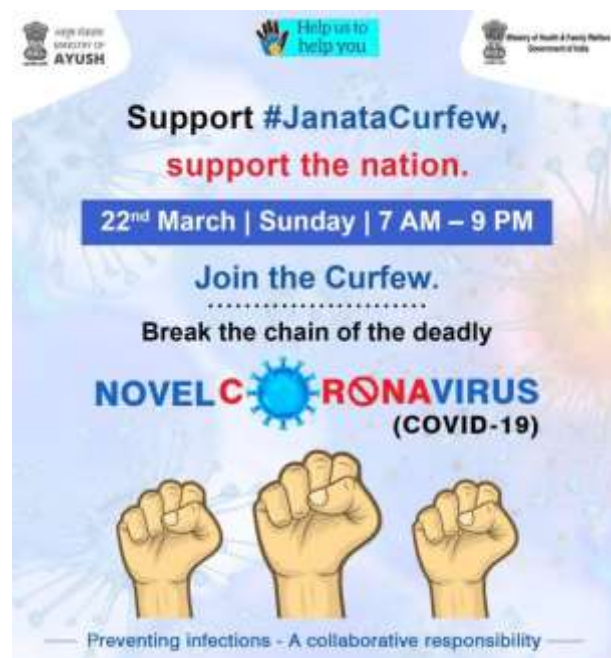


Image 10

The "I Support Janta Curfew" campaign was an essential public health communication strategy during the COVID-19 pandemic. Featuring a hand with a fist, the campaign used powerful symbols to encourage voluntary adherence to the nationwide curfew. In picture 4(a) and 4(b) both linguistic and visual signs are used. In linguistic element #IndiaFightsCorona, I Support Janta Curfew in bold dark font mentioned, where Janta curfew was written in red color highlighting its importance and significance. Where in the visual both the poster (a) and (b) element's tight closed fist is shown denoting the support of people along the fist green large-sized corona is shown surrounding the fist. It connotes that irrespective of what you are, which gender you belong-male, female or other full support of people is shown.

In picture 4(b) more body copy is mentioned along with the title Support #JanataCurfew, support the nation, where in blue and red, resembling the peaceful way joining the motive and addressing it's a voice from people while red shows some urgency, quick step that is also likely with the title support the nation. While in the body copy *Join the curfew* also in blue shows peacefully insisting people towards joining the motive. Below the dotted line signifies the long pause as it is crucial before any major drastic step of saying *break The Chain of the deadly Novel Coronavirus*. Here also novel and virus is written in blue, and corona is in red, signifying danger, threat and evil of nature.

4.12.7 (1.b) Textual Analysis "I Support Janta Curfew"

Verbal		
Text	Signifier	Signified
Fig.1		The main tagline of the campaign including the alphabet 'I support Janta curfew' signifies that individuals stand together as strength and come forward for the

wellness of common people.

Fig. 2



The body copy of the main tagline, describing about the event with the firm advice that supporting Janta curfew will help in supporting the nation eventually.

Table. 11. Textual Analysis of ‘*Aarogya Setu*’

- "I": The personal pronoun symbolizes individual responsibility. The fist shows that each individual is actively participating, thus highlighting the agency in this act of support.
- "Support": The term suggests active participation, not mere compliance. The clenched fist amplifies this by visually representing commitment and strength.
- "Janta Curfew": This phrase is a direct reference to the government-enforced lockdown for citizens, a restriction aimed at preventing the spread of the virus. The curfew serves as both a control mechanism and an urgent call for collective action, linking it with a sense of discipline.
- Strength vs. Weakness: The fist signifies strength and resolve, implying that those who support the curfew are demonstrating courage; while opposing it (or ignoring the curfew) might imply weakness or lack of discipline.

4.12.7 (1.c) Visual Signifiers of "I Support Janta Curfew"

Visual	Signifier	Signified
Fig.1		The clenched fist, surrounded by corona viruses signifies we have to fight against corona, asking people to come forward and let's fight. Ratio of corona is more than hand, alone we can't together we can
Fig.2		The clenched three hand signifies unity, strength and shows people are together in this fight but more people need of hour to fight against this deadly corona.

Table. 12. Visual Signifiers of 'Aarogya Setu'

The image of a clenched fist is a potent symbol of unity, strength, and resilience. It is often associated with resistance, defiance, and empowerment. In this context, it represents the power of collective action in the face of a national crisis. By showing solidarity and strength, the fist suggests that the act of supporting the curfew is an empowered decision, positioning individuals as active participants in Fight against the pandemic.

The fist connotes collective resistance against the pandemic, emphasizing that individual actions matter and that staying home is a form of strength. The image evokes a sense of determination—you are not just waiting for the virus to pass, you are actively contributing to its suppression.

It also connotes a kind of rebellion against the virus, a kind of action against the unseen enemy of COVID-19, portraying the curfew not as a restriction but as an empowering decision.

Furthermore, the fist connotes solidarity, uniting individuals in a national effort. It creates a cultural reference to collective action, referencing the historical use of the fist in social movements where people come together for a common cause (e.g., labor strikes, anti-colonial movements, civil rights).

4.12.7 (1.d) Rhetorical Appeal of "I Support Janta Curfew"

Ethos

The fist establishes credibility by evoking the strength and authority of a collective national effort. The symbolism connects to historical and political movements that have fought for significant social change, positioning the curfew as a legitimate, empowered effort in Fight against the virus.

Additionally, the association with the government's initiative helps the ad appeal to national loyalty and a shared commitment to public safety. The hand with the fist is a call to action from a place of trust, encouraging people to believe that following the curfew is the right thing to do.

Pathos

The fist is a powerful emotional symbol. It taps into feelings of pride, unity, and collective strength. The clenched fist, when seen in the context of the campaign, evokes emotions of resolve and empowerment, motivating individuals to take action for the safety of their community.

There is also an emotional appeal to the idea of national solidarity. The fist creates an image of togetherness and shared sacrifice, reminding individuals that their actions matter for the collective well-being. The fist appeals to patriotism, as it is often used as a symbol of defiance against adversity, encouraging the public to see the curfew as a patriotic act.

Logos

The logical appeal here lies in the clear and simple message: by supporting the Janta Curfew (symbolized by the fist), individuals contribute to public safety. The fist also symbolizes action: that by staying home, individuals are actively fighting the pandemic. The imagery is designed to empower people, conveying that the curfew is not about inconvenience, but about making a meaningful contribution to national health efforts.

Additionally, the simple slogan "I Support Janta Curfew" coupled with the image of the fist makes the rationale easy to understand: if everyone acts together, we can overcome the virus. The logic is clear—unity is strength in this collective effort.

Kairos (Timeliness)

The timing of this campaign during the early stages of the pandemic capitalizes on the sense of urgency. The clenched fist appeals to the moment of crisis, underscoring the necessity for immediate action. By showing that every individual's contribution counts, the ad works within the context of a global crisis that demands swift, decisive action.

4.12.8 (1.a) Semiotic Analysis of 'Har Ghar Dastak'

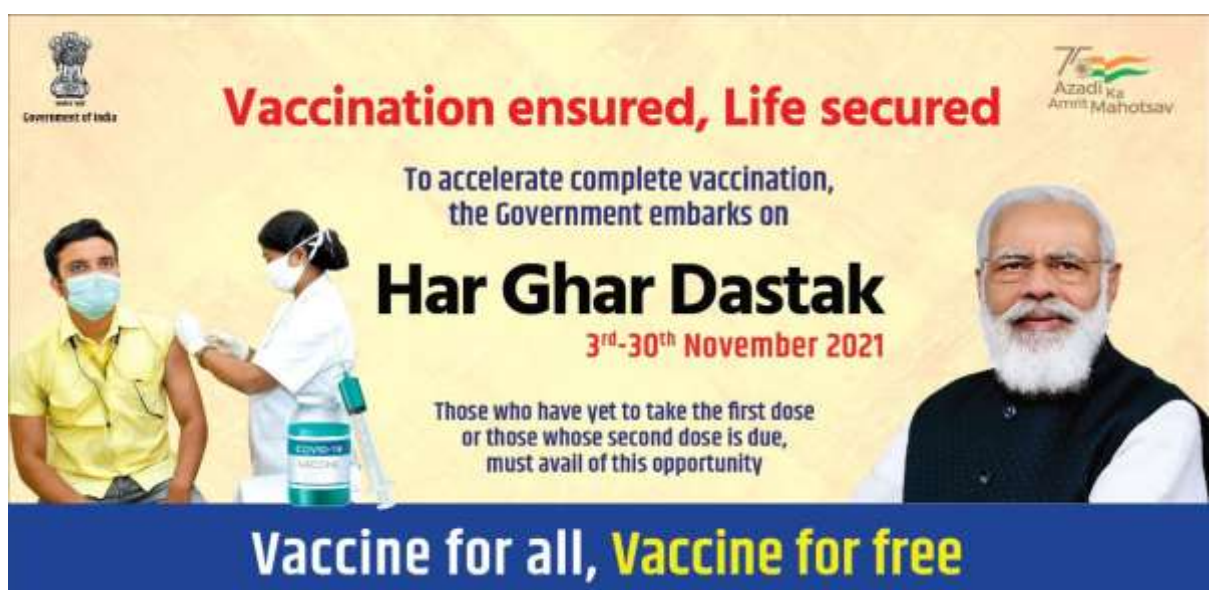


Image 11



Image 12



Image 13



Image 14

The "Har Ghar Dastak" campaign for COVID-19 was launched as part of the government's effort to ensure that every household in India was aware of, educated about, and prepared for dealing with the pandemic. The campaign aimed to encourage COVID-19 safety protocols like testing, mask-wearing, hand hygiene, social distancing, and vaccination. Using the "Har Ghar Dastak" slogan, the campaign reached out to citizens directly at their homes, bringing vital information and services to every doorstep. In the chosen poster's linguistic and visual sign both are present along with the detailed body copy, that elaborated the title *Har Ghar Dhastak*. For the title to stand out, it is placed in a bigger size in dark bold color-blue and black is taken representing a new alarming step that everyone should be aware about of. Denoting authority, knowledge and trust, which this campaign aims to strive. While the font style is same in two of the posters, that helps in better recognition but in 5(c) the font style of title is different, accompanying with small illustrated house, to make it more creative and stand out. The third poster 5(c) comes with tagline *Vaccination ensured, Life Secured* on the top in red color signifying sensuality, Power and Urgency and at the bottom *Vaccine for all, in white* connotating honesty, beginnings and *Vaccine for free* in yellow color, shows happiness with optimism.

The body copies in the poster give detailing of the title that when the vaccination drive will occur, if you had missed your vaccine so this is the time. While the lines are like in the pic. 5(a) *avail this opportunity* in bold, pic. 5(c) *must avail this opportunity* to denotes quick- bits like something which is of limited time, so user must avail before it ends. Similarly in pic. 5(b) the highlighted body copy *low vaccination rates* and *aims to vaccinate* trigger the thought of deficiency and lacking that urge people to pursue.

The visual elements of posters 5(a) and 5(c) shows individuals getting vaccinated and availing the benefit from the campaign. The realistic image rather than illustrated graphic creates a sense of reliability among the audiences. The photograph of real vaccinated people also arises the sense of plain folks' propaganda technique among the audience, and the experiences of people like yourself. The visual also ensures that everything is performed in a safe setting, health workers are shown in proper mask

gloves, prompting the thought of reliability. In picture 5(a) of village women being vaccinated near the agriculture field, arose sense of bandwagon arose among rural India. The graphic in pic. 5(b) denotes the doctors are ready for our care along with covid vaccine, also doctor rely over vaccine bottle shows confidence that we are there for you. The large size bottle creates a sense of urgency and importance.

4.12.8 (1.b) Textual Signifiers of 'Har Ghar Dastak'

Textual	Signifier	Signified
Fig. 1		This is the second tagline, signifying if you have taken a vaccine your life is safe and secure. A simple vaccine can easily save you from deadly virus like corona
Fig.1		The body copy along with the tagline gives more logical appeal and answers why the government has initiated this extensive vaccine drive. It describes the date along advises people about their both the doses, to grab this opportunity.
Fig. 1		The third tagline signifies its completely free, for everyone to avail this offer soon.
Fig.2,3, & 4		The main campaign tagline signifies every house will count and every house vaccine will reach. Also, to fight against corona every house matters a lot.

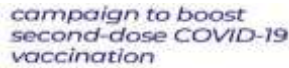
Fig. 3		It straight forwardly signifies that we disseminating information regarding second dose of vaccine among people
Fig. 4		This is the extended version of tagline signifying that vaccine is reaching every household and each and every house matters for this vaccination

Table. 13. Textual Signifiers of ‘Har Ghar Dastak’

- "Har" (Every): The use of "every" emphasizes inclusivity and universality. It reflects the all-encompassing approach of the campaign, aiming to leave no one behind in Fight against COVID-19. The message implies that every household is a part of the effort, reinforcing the collective responsibility of the nation to curb the spread of the virus.
- "Ghar" (Home): The word "Ghar" in this context signifies the safety and security of the home. During a pandemic, homes represent places of shelter and protection from the virus. The home is not just a private space, but now also a center for public health intervention, where the virus is kept at bay, and preventive measures are implemented.
- "Dastak" (Knock): Dastak translates to "knock", which symbolizes proactive outreach and direct intervention. It reflects the government's intention to personally connect with households, to educate and distribute essential resources such as masks, sanitizers, vaccination information, and testing services.

4.12.8 (1.c) Visual Signifiers of ‘Har Ghar Dastak’

Visual	Signifier	Signified
Fig.1		The visual shows a young man, who also seems educated (from specs and earphone), and an aware citizen (wearing a mask) giving importance to vaccination drives and as a citizen of the country fulfilling his duty. The nurse with proper mask and hand gloves and her concentration on giving vaccination a good precaution would be taken by nurses who approaches your house
Fig.2		The visual of rural India signifying the vaccination drive is not limited to urban people, it is reaching every nook of the country. The vaccine carrier signifying all the precautions are taken by health workers. Also, the advert widely disseminates the plain folks appeal, that the common person is availing the benefit, you should also join the race.
Fig.1		The image of our Prime Minister Narendra Modi, signifies ethical and credible appeal to the masses, that initiative is under the

supervision of the government.

Fig.3



The graphical image of a doctor, bottle of corona vaccine and injection metaphorically resembles them as fighters with their swords to fight against corona as enemies to save our country.

Fig. 4



The visual again gives a plain folk appeal that workers like us are getting vaccines we should also join them and save the country from the deadly virus like corona.

Table. 14. Visual Signifiers of ‘‘Har Ghar Dastak’’

- **Healthcare Workers at Doorsteps:** The images often show healthcare workers or volunteers at people's doors, symbolizing direct engagement and outreach. This visual emphasizes that the government and health authorities are not waiting for citizens to come forward but are instead coming to their homes to make the information accessible.
- **Masks and Sanitation Tools:** Visuals associated with the campaign often include masks, sanitizers, and other healthcare paraphernalia. These items represent the preventive measures recommended to protect oneself and others from COVID-19. They serve as tools of empowerment, allowing individuals to take control of their health and safety.
- **Vaccine and Test Promotion:** Another visual element in the campaign might include vaccination drives and testing kits, positioning them as essential to

overcoming the pandemic. This visual communicates that getting tested and vaccinated is a duty toward protecting oneself and the broader community.

4.12.8 (1.d) Rhetorical Appeals of ‘Har Ghar Dastak’

Ethos (Credibility)

The campaign is backed by the government and health authorities, lending it significant credibility. The imagery of healthcare workers knocking on doors is meant to build trust, showing that the government is not just issuing orders but is actively involved in helping citizens through face-to-face outreach and providing tangible support.

Pathos (Emotional Appeal)

The imagery of healthcare workers knocking on doors appeals to emotion, emphasizing care, concern, and solidarity. The health workers are often depicted as friendly, helpful, and approachable, encouraging citizens to trust them. The campaign plays on the fear of the virus by framing the knock as a reminder to act responsibly and prevent harm to one's family.

The concept of the home as a sanctuary also taps into emotions of safety and protection. It encourages citizens to keep their families safe by following guidelines, getting vaccinated, and following health protocols.

Logos (Logical Appeal)

The campaign makes a logical appeal by presenting the idea that the best way to prevent the spread of COVID-19 is through comprehensive action. The knock on the door is an intervention that makes healthcare resources accessible to people in their own homes. It emphasizes that health checks, vaccinations, and prevention measures are essential to stopping the pandemic. The message suggests that by being proactive and allowing health workers to help, the spread of the virus can be minimized.

4.13 Conclusion

Over time, wearing masks, sanitizing hands, and maintaining physical distance became widely accepted social norms, especially in public and workplace settings. However, these behaviors were harder to instill in rural areas or communities with lower levels of awareness or where misinformation had spread. However, in some communities, fear-based messaging led to resistance, especially when the messages were perceived as overly alarming or when the public's trust in the government was low. People in some regions felt frustrated by prolonged lockdowns or restrictions, which caused fatigue and led to non-compliance in the later phases of the pandemic. Community-based approaches, such as organizing village-level health drives and leveraging local languages and culturally relevant content, helped ensure that information was effectively communicated and adopted (Bavel et al., 2020). Despite initial successes in changing behaviors, studies indicate challenges in maintaining adherence to preventive measures over time, particularly as the pandemic transitioned from a crisis phase to an endemic state. Continuous engagement and adaptation of communication strategies are necessary to sustain preventive behaviors against future outbreaks.

CHAPTER- FIVE

MAJOR FINDINGS, DISCUSSIONS, CONCLUSION, RECOMMENDATIONS AND FUTURE SCOPE

5.1 Introduction

Health communication aims to educate the public on health management challenges, concerns, and approaches; contemporary health organizations employ a variety of media, strategies, techniques, and technologies. In addition to mass media, social media platforms and new communication technologies have expanded the scope of health communication in society. From the perspective of participatory health communication, interpersonal health communication channels and extension communication tools have surpassed other health communication media. Enlisting the active participation of the general public in health management activities is the ultimate goal of health communication. Research on health communication offers effective communication techniques to enhance people's general health. COVID-19 pandemic had disturbed every individual life, disturbed their daily setting and surrounded and had affected every stratum of society either residing in Urban formal and informal settlement areas. To combat the challenges of pandemic health communication had an essential role of updating and informing residents about the safety measures. The post study on corona analyzing the role of communication campaigns in bringing awareness. The present investigation primarily focused on the role of campaign during covid-19 in bringing significant social and behavioral changes. The major findings of the study, discussion, conclusion, limitations of the study, implications of the study and suggestions for future research are presented in this chapter.

5.2 Media engagement during the COVID-19

During the COVID-19 pandemic, diverse mediums and media instruments were heavily utilized to keep people connected, informed, entertained, and educated

despite physical distances. Here are some key mediums and instruments that were engaged during the pandemic:

a) **Mainstream Media:** During the lockdown period of COVID-19, mainstream media such as Television, Newspaper and Radio has come up with unique shows and programs which tends to update the audiences. The availability of mainstream was high in formal settlement section of society, while in urban informal settlement residents only 22 % of sampled population has television, but among that only 8 % of them uses it for watching shows and very few nearly 2-3% uses it for watching news channel during pandemic. 8 % of respondents avail for newspaper or get to read at their workplace (Nagar Nigam and Household), and only 1% of sampled respondents were using it during pandemic. Mobile phones were highly available and used convergent media, accounting for 70 % of respondents but the radio features of mobile phones were used by 6% of them.

b) **Digital Media:** It has played a crucial role in disseminating the information to the audiences, accompanying social media and news websites under it. Through this people were able to grasp every second's information. You Tube was highly used platform in both the region formal and informal settlement accounts (92.9 %) and (65.6 %), followed by in both region Social Media accounts (84.4 %) and (64.4 %) and lastly New Websites (78.6 %) and (28.9 %). While usage of social media shows WhatsApp were highly used social media among formal settlement class accounting (100 %), followed by Facebook (76.2 %), Instagram (47.6 %) and 'X' formerly Twitter (42.9 %). The role of LinkedIn was minimal, on the other hand, in slum region 35.6 %informal settlement groups did not use any social media and WhatsApp was also highly used among them accounting 40%, while Facebook 13.3 % and Instagram 4.4% among slum regions of Lucknow. Moreover, among the digital media the Aarogya Setu app has been used by the formal settlement people, while not much in the informal settlement group.

c) **Outdoor Media:** This accompanies the hoarding, banner, murals, health workers awareness campaign which benefited all the informal settlement groups of Lucknow by providing vaccine, mask and sanitizers like facilities. The outdoor media contains

more visuals than text, hence catches more attention and is found to be very helpful because of low literacy rates in slum regions (88.9 %). Outdoor media helps around (47.04 %) of informal settlement groups, while (31.73 %) of respondents benefited from Police announcements and (31.42 %) from Government health workers.

While for formal settlement groups, around (9.5 %) of respondents believed they have gained valuable insight from outdoor media, while around (14.3 %) of them benefited from police announcement and (9.5 %) had also acquired information from health workers in their colonies. In contrast, the formal settlement group also believed outdoor media was just a political vote game, rather than any source of information, and tends to neglect the information in it.

d) Podcasts and audio Media: These are highly booming media platforms, during covid pandemic podcasts and audio media were very effective in disseminating awareness. Podcasts such as Spotify, Audible and Wynk Music, were coming with short ads and policy awareness voice notes in between of their songs which were highly noticed by the formal settlement groups, but least by slum regions. Also, the telephonic call audio of Amitabh Bachchan has high recognition among formal settlement group, they can recall the safety measures delivered in caller tune but cannot recall the full helpline number delivered, while asking for reason they stated that they tend to get impatient for getting answer of their call, also found it monotonous throughout and too long to hear it patiently. Whereas on the other hand, informal settlement regions did not get benefitted from the podcast and hardly remembers the Amitabh Bachchan telephonic call audio.

e) Extensive coverage of Campaign and Advertisements: During the pandemic many organizations including government came forward with their extensive campaign such as Janta Curfew, Har Ghar Dhastak 2.0 covering whole nation while for Uttar Pradesh there were several campaigns running on ground such as No Mask, No entry, Meri Gali Meri Zimedari. This has really benefited both the class of society in making citizens more informed and rewarded in terms of safety measures and reviving the protocols. It is also believed that pandemic has brought new creativity in the world of ads; many organizations have come up with interesting

slogans and catchy lines to hold the eye of viewers. The prominent slogans which audience easily recall were by formal settlement Class were Do gaj duri Mask hai jaruri (100 %), Jab tak Dawai nahi Tab Tak Dhilayi Nahi (86.2 %) and Corona Harega India Jeetega (78.6 %), while for informal settlement they have listened but cannot recall. The government has also come up with public service adverts, informing about the hand washing techniques, vaccination, wearing mask mandate and others, this includes the percentage of viewers for formal settlement class were 91.4 % Outdoor Billboard (Narendra Modi &Yogi), 20.5 % Public Service (Akshay Kumar), 81.9 % Aarogya Setu (Ajay Devgan) and 85.7 % Caller tune (Amitabh Bachan).

5.3 Social and Behavioral modifications induced by the COVID-19-based health communication campaign in Urban informal settlement region

The COVID-19 health communication campaigns in Lucknow district, like in many other parts of India, played a crucial role in shaping the social and behavioral responses to the pandemic. These campaigns were designed to educate, inform, and influence public attitudes and behaviors to reduce the spread of the virus. The social and behavioral modifications induced by these campaigns were widespread, and they focused on both public health practices and socio-cultural changes. To get comprehensive insight Urban informal and formal settlement were discussed here with:

5.3.1 Urban informal settlement group pertaining for Social Change

During the pandemic, social change was also a widely discussed topic. The campaign and health workers targeting informal settlement residents persuading them for social change for maintaining healthy lifestyle and were witnessed by them such as- Restricted travel (19.4 %), Healthy good Intake (28.9 %), Sanitation in Public Places (23.3 %), Online Education (12.8 %) and digital transaction (15.6 %). Although despite extensive coverage by national and regional media towards corona social change only 8.3 % of respondents strongly agree, that they have found the positive social changes in themselves even after the pandemic, while 14.4 % of individuals were agreed, 25.6% were found to neutral with statement, 17.2% were found to be

disagree and 34.4% were found to be strongly disagree. The major influencing factor of social changes among informal settlement groups were – (31%) Community Behavior, (13%) Media Campaign, (7%) Interpersonal Communication (8%) Personal & Emotional facts and (41%) of dwellers did not find any change among them.

5.3.1a. Shift to Online Platforms and Digital Behavior

- Digital Transactions:** The pandemic has brought huge slurs towards the digital world, a shift from cash-based society to digital transactions. During the period it was widely advised about being in less contact with others, doing minimal cash exchange, to resist the flow of corona virus. Hence, leading to increased adoption of mobile wallets, UPI-based transactions, and online shopping among informal settlement groups, even though most of them run small scale shops like pan-masala, vegetables etc., they started putting QR scanners for digital transactions. In Fig. Digital Transaction: During and After COVID-19 (slums), the data shows that, during COVID-19 (29.4 %) sampled population is likely to perform digital transaction always, (25.6 %) of sampled population used to do it often, while there is slight hike in digital transaction among informal settlement groups after COVID-19, 32.2% of sampled population perform always, 25.6% do digital transaction often. While still there is some group of respondents who are not interested in digital transaction even during and after the COVID-19 pandemic- such as 12.8 % of respondents never did digital transaction during corona and 10.6 % tends to do never after pandemic.
- Online Education:** Education among informal settlement groups was quite uncommon, most of their children are involved in activities with them such as rag picker and doing household chaos. While in the huge hike in the digital world, few families have smart phones but not efficiently used for education purposes. In fig. Online Education: During and After COVID-19, the data of during corona shows that 3.9% of respondents perform always, 6.7 % of respondents perform often, 11.7 %

used to do sometimes, while 46.7 % of informal settlement groups never go for online education but on contrast the graph after COVID-19 shows no change in online education pattern. In this phase 2.8 % of respondents used to go for online education always, 7.8 % perform online education often, 19.4 % tends to perform online education sometimes, while 38.9% of sampled population never led their students open for online education, this group also consist of people having no children in age of education especially schooling.

5.3.1b. Awareness in Social Norms and Hygiene

- Restricted Travel:** During the pandemic it was advised to restrict your travel and try to be at home. During the period when travel was restricted by governments, informal settlement groups did not step out of house, while many of them migrated to their hometown and villages. On the other hand, after the pandemic, they cannot restrict their travel in search of daily wages and income. In the fig. Restricted travel: During & After COVID-19, the data shows that during pandemic 26.1 % of informal settlement groups had restricted their travel always, 23.3 % of sampled population used to do so often. On the other hand, there was a decline in restricted travel among the urban informal settlements in post COVID period, only 8.9 % of informal settlement groups have been restricted their travel always, while 14.4 % had restricted their travel often. While during corona 6.7 % of the sampled population had never restricted their travel, whereas 19.4 %.
- Using sanitation facilities at Public Places:** During the pandemic it was highly recommended to follow cleanliness, maintaining hygiene and usage of sanitation facilities especially at public places. In fig. using sanitation facility at Public Places: During & After COVID-19 the data of during corona shows that 14.4% of respondent was likely to use sanitation facility always and often available at public place, 19.4 % of respondents were likely to use sometimes, while there was slight decline in sanitation usage pattern after corona 15 % of informal settlement groups used to it

always, 13.3 % of respondents uses it often, 28.3 % of respondents tends to use it sometimes. While 28.9 % tends to use it never during pandemic and 23.9% after pandemic.

Key Findings:

- Social Change messages in COVID-19 Campaign witnessed by informal settlement groups were: Restricted Travel (85.0%), Sanitation in Public Places (83.9%) {prominently seen} and lastly Online Education (76.7 %).
- 41 % of sample Urban informal settlement respondents were influenced by nothing for Social Change . While the major factor that influenced them was Community behaviour (31%), Media Campaign (13%), Personal and Emotional Factor (8%) and Interpersonal Communication (7%). Groups 53.9 % found significant social change after the two years of global pandemic.
- During & After figures of Social Change were: Digital Transaction, Online Education and Using sanitation facility at Public Places is increased after COVID-19 pandemic, while restricted travel is decreased in after corona

5.3.2 Behavioral Change: Enhanced Awareness and Acceptance of Government Guidelines among Urban informal settlement

5.3.2a Public Health Campaigns: During pandemic there were campaigns designed while considering the marginalized section of society such as informal settlement groups. These groups were mostly illiterate, so campaigns consisting of more visual elements so that it can be easily recognized by them. While the safety measures covered by the public health campaign were as shown in fig. Behavior you have seen in COVID-19 Campaign (Urban Informal settlement) consisting of elements like wearing mask, Social Distancing, Washing Hand with soap, Avoiding Handshakes, covering mouth while coughing/sneezing and vaccination usage. Whereas wearing masks was widely covered in campaigns and seen by informal settlement groups 52.8 %, 25.6 % of them saw it often and 21.7 % had seen it sometimes. Secondly, vaccination drives were noticed by informal settlement groups 47. 8 % always, 20 % of informal settlement groups had seen it often, 17.8 % of them had witnessed it

sometimes. Then it was followed by social distancing. 30.6 % had seen it always while 43.3% of them had witnessed it always. Other important safety measures seen always during pandemic were washing hands frequently 36.1%, followed by avoiding 18.9 %, covering mouth while coughing/ sneezing 19.4 % and lastly using sanitizer 9.4 %.

5.3.2b Increased Vaccination awareness: For health information about vaccination awareness was majorly covered by campaigns. 47. 8% of informal settlement groups had seen the vaccine related information always, 20 % of them had come across quite often, 17.8 % had witnessed it sometimes, 6.7 % had seen it rarely, lastly only 7.8% had seen it never.

5.3.2c. Health Workers: Workers such as Agankari, ASHA's used to visit the slum region with the kit of covid vaccination. There they provide vaccination services and update the informal settlement groups with the safety measures and healthy habits to be followed, instructing them with hand washing habits, wearing masks and maintaining distances among individuals.

5.3.3. Mapping Behavioral Change among informal settlement groups: During and After COVID Analysis

5.3.3a. Mask Wearing Habit: During and After COVID-19

Mask Wearing was highly recommended during the pandemic, while it was difficult for informal settlement groups to bring that behavioral change due to their lack of knowledge and resources. While the crucial steps taken by the government and health workers, such as asking them to wear masks before collecting the free rasans provided by the government during the period. In fig Mask Wearing Habit: During and post- COVID-19 (Urban Informal Settlement), the data shows that, during corona 30.6% of informal settlement groups were used to wear mask, where 8.9 % of respondents wears it often, 27.2% of informal settlement residents wear it sometimes, 8.3% of respondents wear it occasionally and 25.0 % wear never. There was a stark decline observed in mask wearing habits after COVID-19 period. Only 10.6 % of informal settlement groups used to wear it always, 12.8 % wear it often, 21.7 % informal settlement groups wear it sometimes, 18.9 %informal settlement

groups wear it occasionally, while majority of the informal settlement groups 36.1% wear never in the covid period.

5.3.3b. Mouth Covering while Coughing & Sneezing: During & After COVID 19

Mouth covering while coughing and sneezing were healthy and hygiene habits that were highly followed among the educated class of society. While persisting such change for uneducated slum workers was a bit challenging task. The health workers visit door-to-door campaign had motivated the informal settlement groups of Lucknow for such healthy change. In Fig. *Covering mouth while coughing/ sneezing: During and post- COVID-19*, the data of during pandemic shows that 11.7 % of respondents always use to cover their mouth, 21.7 % of informal settlement groups used to do often, 19.4 % of informal settlement groups were used to do sometimes, while 23.9 % of respondents do it occasionally while 23.3% of informal settlement groups used to do never. There was no major difference in during and after covid-19 period. 13.9 % of informal settlement groups used to cover their mouths always, 11.1% of respondents used to do it often, 21.7% of informal settlement groups sometimes, 25 % used to do it occasionally, whereas 28.3% of respondents do it never. This shows the positive effect of door-to- door campaigns run by the government.

5.3.3c. Washing Hand with Soap: During & After COVID-19 (Urban Informal settlement)

Slum dwellers being the uneducated class, with lack of resources had the habit of using mud for washing hands, but during corona with the government initiative of providing safety kit and rasans they adhere the habit of using soap for washing hands, that too frequently during corona. In Fig. *Washing Hand with Soap: During & After COVID-19 (Slum)*, the data shows that 23.3 % of slum dweller always uses soap for handwashing, 21.7 % of respondents uses it often, 30.6 % of informal settlement groups do it sometimes, 15.6 % of informal settlement groups do it occasionally where as 8.9% of individuals tends to do it never. While in the after pandemic period, there were minor differences seen in after COVID-19 period. 25.0

% of respondents were seen doing it always, 13.9 % of informal settlement groups were seen doing it often, 30 % of informal settlement groups using it sometimes, 21.1% of informal settlement groups used to do it occasionally while 10.0% of informal settlement groups did it never.

5.3.3d. Social Distancing Habit: During & After COVID-19

Slum dwellers mainly reside in the encroachment area, hence with family members of seven and eight residing in compact regions, exhibiting the rare chance of following social distancing at home, while in the discussion it was found they tried to maintain social distancing at their workplace. Social Distancing Habit: During & After COVID-19 (Slum) the data shows that 6.7 % of informal settlement groups follows social distancing habit always, 14.4 % of informal settlement groups were used to do often, 28.9 % of informal settlement groups used to do sometimes, 22.8 % of respondents follows it occasionally, while 27.2 % of informal settlement groups used to do never. While there was a slight difference in post pandemic, 5.6 % of informal settlement groups were used to follow social distancing habit always after pandemic, 8.3 % of individuals tends to it often, 21.7 % of respondents to it sometimes, 30 % of respondents follows it occasionally, while majority 34.4 % of informal settlement groups follows never.

Key Findings:

- Behavioral Change message in COVID-19 Campaign witnessed by informal settlement groups were : Wearing Mask (100 %), Social Distancing (100 %), Washing Hand Frequently (92.8 %) and Avoiding Crowded Place (91.7 %) {prominent} Using Sanitizer (73.3 %) was least.
- The major factor that influenced informal settlement groups for Behavioral Change was Reward System (53 %), Health Worker (23%), Media Campaign (17 %) and Self Thought (7%) and 73.8 % of them found significant change after the two years of global pandemic.

- Hence, Wearing Mask, Social Distancing had decreased after COVID-19 while Covering mouth while coughing/sneezing and Washing Hand with Soap remain unaffected there is minimal change.

5.4. Individuals pertaining for Social Change (Formal Settlement group)

During the pandemic, internet was full of COVID-19 campaigns disseminating awareness about the healthy lifestyle to boost our immunity pertaining people for social changes through the campaign, which have been witnessed by people highlighting aspects- such as restricted travel (34.3 %), Healthy good Intake (10.5%), Sanitation in Public Places (26.7%), Online Education (15.2 %) and digital transaction (27.6 %). Even 36.2% of respondents strongly agree that they have found positive social changes in themselves even after the pandemic, 26.7% of individuals agreed, 21.4% were found to be neutral with the statement, while 11% were found to disagree and 4.8% were found to strongly disagree.

The major influencing factors of social changes were – (30 %) Community Behavior, (12 %) Media Campaign, (30 %) Interpersonal Communication and (28 %) Personal & Emotional facts that people account for behavioral changes.

5.4.1a.Shift to Online Platforms and Digital Behavior

- **Digital Transactions:** The pandemic promoted a shift from cash-based to digital transactions for safety and convenience. Health campaigns highlighted the reduced risk of virus transmission through digital payments, leading to increased adoption of mobile wallets, UPI-based transactions, and online shopping. In Fig. Digital Transaction: During and After COVID-19, the data shows that, during COVID-19 43.3 % sampled population is likely to perform digital transaction always, 19.5 % of sampled population used to do it often, **while there is hike in digital transaction among individual after COVID-19**, 46.2 % of sampled population perform always, 21 % do digital transaction often. While, there is still some group of respondents who are not interested in digital transactions even during and after the COVID-19 pandemic- such as 12.4

% of respondents never did digital transaction during corona and 6.7 % tends to do never after pandemic.

- **Online Education:** Schools, colleges, and coaching centers in Lucknow transitioned to online learning platforms. The campaign emphasized the importance of adapting to digital education. Families with access to smartphones and the internet began to prioritize digital literacy to ensure their children could continue their education. In fig. Online Education: During and After COVID-19, the data of during corona shows that majority of individual has shifted in online education pertaining 36.7 % of respondents perform always, 26.7 % of respondents perform often, 20 % used to do sometimes, **but on contrast the graph of post COVID-19 shows decline in online education.** In this phase only 33.3 % of respondents used to perform always, 32.4 % perform online education often, 15.2 % tend to perform online education sometimes, and also there exist some group who never do online education during- covid 4.3 % and post- covid 11%.

5.4.1b. Awareness in Social Norms and Hygiene

- **Avoidance of Social Gatherings and Restricted Travel:** Social gatherings and travel were significantly reduced in the city due to the COVID-19 communication campaigns awareness. Religious leaders and local influencers promoted smaller, safer gatherings, and people modified traditional social practices, such as large weddings or religious processions, to align with public health guidelines. In the fig. Restricted travel: During & After COVID-19, the data shows that during pandemic the respondents have majorly restricted their travel 38.6 % of sampled population and has limited their travel always and 21.9 % of sampled population used to do often. **There was a decline in restricted travel amongst the sampled population in post COVID period,** only 11.9 % of the population have been restricted their travel, while 24.8 % have restricted their travel often. While there was a group who has shown no restriction even during corona such as 11% did it occasionally and 7.1%

have never restricted whereas after corona 18.1 % used to do occasionally, whereas 13.8 % have never restricted in after COVID-19 period.

- **Using sanitation facilities at Public Places** During the pandemic it was highly recommended to follow cleanliness, maintaining hygiene and usage of sanitation facilities especially at public places. In fig. *Using sanitation facility at Public Places: During & After COVID-19* the data of during corona shows that 37.6% of respondent was likely to use sanitation facility always available at public place, 29.5 % of respondents used it often, 19.5 % of respondents were likely to use sometimes, **while there was slight decline in sanitation usage pattern after corona 30.5 %** of respondents uses it always, 29.5 % of respondents uses it often, 28.6 % of respondents tends to use it sometimes. While 4.3 % tends to use it never during pandemic and 5.2% after pandemic.

5.4.2. Behavioral Change: Enhanced Awareness and Acceptance of Government Guidelines among Formal Settlement group

- **Public Health Campaigns:** The government's health communication campaigns through community radio, local news channels, and even loudspeakers in public spaces successfully raised awareness of government guidelines and COVID-19 protocols, such as restrictions on large gatherings, quarantine requirements, and testing. While the health campaign encompasses safety measures like in Fig. *Behaviour you have seen in COVID-19 Campaign (%)* Wearing Mask, Social Distancing, Using Sanitizer, Washing Hand frequently, Avoiding Handshakes, Avoiding Crowded place, covering mouth while coughing/sneezing. The formal settlement class highly seen hand washing habit (64.8%), covering mouth while coughing/ sneezing (31.4 %), social distancing is (22.9 %), avoiding crowded place was 18.1%, avoiding handshakes 13.8 %, while using sanitizer was minimal 5.7 %.

- **Increased Vaccination Awareness:** Campaigns specifically targeting the importance of COVID-19 vaccination led to higher awareness levels among the population about the benefits of vaccination. Despite initial hesitancy, by conducting door-to-door campaigns, using religious leaders and local influencers, and promoting success stories, the government managed to gradually increase vaccination rates in Lucknow. The majority of the formal settlement group has witnessed in *Fig 1: Major Sources of COVID-19 Information (%)* that vaccination drives through outdoor advertisement, where 9.5% of the sampled population has gone through it.
- **Health workers:** This includes government health workers 9.5% and Police announcements 14.3 % which helps in disseminating health related information among the sampled formal settlement groups.

5.4.3. Adoption of Preventive Health Measures: Analyzing during and Post COVID-19 among formal settlement group

- **Wearing Masks:** Wearing masks became a social norm in Lucknow. The health communication campaigns heavily stressed the importance of mask-wearing, both in personal interactions and public spaces. Visual media, such as posters and video ads, played a role in reinforcing this behavior. While in the figure *Mask Wearing Habit During and post-COVID-19* data shows during COVID-19 (15.2 %) sampled population is likely to wear mask always, 28.6 % of sampled population wears often, 43.8 % used to wear sometimes, while 7.6 % wears it occasionally and lastly, 4.8 % wear never. While after COVID-19 there was a major hike in never mask wearing habits which is 26.7 % of sampled population, 21.9 % wears it occasionally, 39 % wears mask sometimes after covid-19. While there is the least number of sampled populations who wear often 5.7 % and always 6.7%. Hence, showing decline in mask wearing habit among the sampled formal settlement group.
- **Covering mouth while coughing/ sneezing:** This is a very common healthy habit and many people already used to follow before COVID-19,

but during the pandemic it was heightened to make it follow without any failure so as to avoid the corona particles in air. In the Fig. *Covering mouth while coughing/ sneezing*, the data shows that, 54.8 % sampled population is likely to cover mouth while coughing/sneezing, 23.8 % of sampled population covers often, 21.4 % used to cover sometimes, while population doing it occasionally and never wear 0 %. While after COVID-19 there was no such difference in covering mouth while coughing/sneezing from the data shown during the COVID-19, 56.7% of sampled populations do it always, 18.1% follow it often while 25.2 % of population do it sometimes and like in during COVID-19 case there is 0% of respondent who do it never or occasionally.

- **Using Hand Sanitizer:** During the pandemic using an alcohol-based sanitizer hand was very common safety measures. Many organizations also come up with this in their campaign. In the fig. *Using Hand Sanitizer: During and Post COVID-19*. The data shows that, 39.0 % sampled population is likely to use sanitizer always while 20 % of sampled population covers often and sometimes, 15.2 % used to do it occasionally and 5.7 % never used to do it. In contrast there was a huge difference in data from the during COVID-19 period. It shows that only 15.2 % of sampled population uses sanitizer always, 21.4 % do it often, 28.1% of populations used to do it sometimes while 19.5 % do it occasionally and 15.7 % never use sanitizer in the after COVID-19 period.
- **Hand Washing Habit:** The "wash your hands regularly" message was widely communicated through radio, TV, and community outreach programs. There was a noticeable increase in people using hand sanitizers and washing hands frequently, especially before meals and after touching public surfaces. In the fig *Using Hand Washing Habit: During and post-COVID-19*. The data shows that 45.7 % of sampled population was likely to handwash always while 23.8 % of sampled population do it often and 20% sometimes, while 10.5% used to do it occasionally and 0 % do it never. While there was no such huge difference in study from the during

COVID-19 period, 41.4 % of sampled population do hand wash always, 16.7 % do it often, 21.0 % of populations used to do it sometimes while 15.2 % do it occasionally and 5.7 % do it never.

Key findings

- Social Change messages in COVID-19 Campaign witnessed by formal settlement groups were: Wearing Mask (100 %), Washing Hand Frequently (100 %) and Social Distancing (100 %) {*prominent*, Using Sanitizer {*least*}
- The major factor that influenced Formal settlement groups for Behavioural change was Community behaviour and Interpersonal Communication (34%), Media Campaign (23%), Personal and Emotional Factor (9 %). Along, 75.2 % of them had found significant Behavioural change after the two years of global pandemic.
- Maintaining hygiene which includes Cover mouth while coughing/sneezing and Washing Hand with Soap were significantly followed even during and after COVID, whereas Wearing Mask and sanitizer using habit were decreased after corona

5.5. Analysis of COVID-19 based campaign using Individual Difference Theory

The COVID-19 campaigns in India were designed to be persuasive in nature, primarily aiming to influence the public's behavior and ensure widespread adherence to health protocols. The effectiveness of these campaigns can be analyzed in terms of their messaging, emotional appeal, and the behavior they sought to change. To analyze COVID-19 campaigns using Selective Exposure, Perception and Retention Theory, while interpreting the messages in these campaigns.

5.5.1. Selective Exposure

Selective Exposure explains that people tend to seek out, focus on, and retain information that aligns with their preexisting beliefs, values, and attitudes. In the context of COVID-19, this theory can help us understand how different segments of the population might have responded differently to the public health campaigns.

- **Individuals' pre-existing attitudes towards health:** People who already believed in the importance of wearing masks or social distancing were more likely to selectively expose themselves to information that reinforced those beliefs. There were some groups in Urban informal settlement region, i.e slum people who believes that corona had no effect on them or their family. Among them there was a one cremator person affirms *“During pandemic and after pandemic, I am doing the same work of cremation, even during pandemic, dead bodies family did not come closer, but I use to perform all activities. Hence, corona is for upper class people, its nothing to do with poor class people.”* Therefore, group of people who did not aligned with the thoughts tends to engage less with government campaigns or media content promoting safety measures and vice-versa.
- **Social Influences:** Selective exposure could also be influenced by ideological biases or some ideal social influencer. In some cases, individuals who ideally believed in social influence tended to follow. The Covid campaign in their starting phases only has massively launched known faces like Ajay Devgan, Amitabh Bachan, Shah Ruk Khan and Virat Kohli and others became the face of several health campaigns promoting hand hygiene and safety measures. and others, who directly connect with audiences . Those who were skeptical about the government's management of the pandemic might have avoided or dismissed official messages about COVID-19, preferring alternative sources that reflected their views.
- **Media and Information Access:** The COVID-19 campaign had a diverse medium approach, taking into account Digital media, Social media, Television, Telephonic call, Outdoor media such as- Posters, hoarding, transit media; Door-to-door campaign etc. This had connected citizens all over the platform for one motto. Given the different levels of media access, those with greater access to credible sources of information (e.g., news channels, social media, etc.) might have been more exposed to official guidelines, while others in rural or less connected areas might have been exposed to distorted or less authoritative messages.

- **Targeting all strata of Society**

- The analyzed COVID-19 based campaign shows that its content targets all strata of society like Urban and Rural; Poor and Formal settlement, Literate and Illiterate, Adult and Children. The campaign graphical elements composed of content in a manner showing the daily life for a person, such as going for vegetable buying, waiting for buses at bus stands, connecting with the majority of the audiences and also alarming awareness about awareness and safety behavioural, which is crucial to be safe from corona. There was content more with graphical elements rather than just focusing on writing, proving beneficial for the illiterate section of society. There were also caricatures and cartoon-based content targeting the children and making them aware.

5.5.2. Perception Theory

Perception theory focuses on how individuals interpret and make sense of information based on their own subjective experiences, beliefs, and context. In the case of India's COVID-19 campaigns, how people perceived the information could significantly influence their behavior.

Cognitive Biases and Interpretation:

- **Framing:** The way COVID-19 information was **framed** could influence how people interpreted it. For instance, the message “Do Gaj Ki Doori” (Two Yards Distance) might be perceived differently based on one’s understanding of risk. Some might have seen it as a reasonable precaution, while others, especially those who doubted the severity of the pandemic, could have viewed it as an unnecessary restriction on their daily life. The **frame** in which the message was presented (emphasizing protection versus restriction) affected how it was perceived and whether it was accepted. In fig.1 #IndiafightsCorona, *Do Gaj Duri Mask Hai jaruri*, shows the cross sign on the bus chair, where a person cannot sit even though seats are free and in fig 2. Showing vegetable markets might be

full of corona, one should avoid visiting it, hence this is how information could be negatively perceived. While at the same time positive believers of corona found it useful information of disseminating awareness of maintaining distance among two people. So the message of corona could have been perceived in two ways.

- **Fear and Urgency Appeal:** Some campaigns used fear appeals (e.g., "We are all at risk" or "Together, we will fight this battle"), which may have caused fear-based perceptions. The tagline in red color 'Janta Curfew' 'support the nation' and 'Vaccination ensured, Life secured' signifies danger, alarming and urgency whereas "Mask Hai Zaroori" (Mask is Necessary) signifies urgency. While the written text denotes vaccination could secure your life, so without delay one should come forward and have their vaccination. Similarly, 'Janta curfew' and 'support the nation' highlight the fear appeal and should be taken against. This led to individuals perceiving it as the virus as a serious threat and one should adhere to the pandemic safety guidelines. During the survey of informal and formal settlement groups it was found the depiction of red corona in posters lead them to feel danger and threat.
- **Social Influence:** The social norms around the virus—such as whether wearing a mask was seen as a common practice in someone's community—greatly affected people's perception of the campaign. If masks were worn by everyone in a community, individuals would be more likely to adopt the behavior themselves, as they would perceive it as socially acceptable or even expected. Therefore, campaigns designed in such a way showing masks is the most common safety practice and adhere by everyone. Along with the tagline of campaigns like *I support Janta curfew and Har Ghar Dastak*, emphasize the societal and community perspective rather than individualistic perspective. In figure *Indiafightscorona* shows the setting of people around the societal group and atmosphere such as- bus stand, vegetable shop.

Cultural Perception:

- **Informal vs. Formal settlement region's Perception:** Perception theory also explains how campaigns might be interpreted differently depending on one's context. People in rural areas, where healthcare infrastructure and access to information were more limited, might have **perceived** the virus and the associated risks differently than those in urban areas with better access to medical information. This might have led to varying levels of trust and compliance with the government's health messaging.

5.5.3. Selective Retention:

- **Reinforcing pre-existing beliefs:** Once exposed to information, people are likely to retain information that is consistent with their existing attitudes. For example, people who have already been practicing habits such as wearing masks, covering hands while coughing and sneezing, tend to follow these habits more than others. The majority of formal settlement groups were aligned with this information, whereas informal groups were having hard to follow and retain these habits. Hence, informal settlement groups who doubted the severity of the virus might have forgotten or rejected key messages from the campaign, declining the concept of pre-existing beliefs.
- **Appeal to National Pride:** The COVID-19 campaign had majorly appealed to national pride, tagline such as- *Corona Harega, India Jeetega and Support Janta Curfew, Support Nation*; making individual feel that together we can defeat, and we all have to come together as a country, irrespective of culture, caste and gender. Whereas the logo of Arogya Setu was designed using the tricolor of the Indian flag: Orange, white and green, denotating application is meant for the nation citizen and it is there as a shield.
- **Catchy Phrases and Jargons :** This is one of crucial factor for retention, making even children to remember and follow the steps such as: *Do gaj*

duri, mask hai jaruri, Corona harega India Jeetega; I support Janta Curfew, and Har Ghar Dhastak. The catchy jargon was in people's mouth and helps them to acquire a significant behavioral change of wearing a mask, maintaining social distancing.

- **Pro-longed period :** This was also one of the important reasons for retention among the population, something which lasted more than usual period, tends to automatically make people remembered even when such things were hampering the citizens.
- **Misinformation:** Another key aspect of selective retention was the **retention of misinformation**. Those who were exposed to myths about COVID-19 or false information (e.g., COVID-19 is a hoax) might have retained these beliefs, undermining the official campaigns. Whereas Whatsapp and other social media were floated with information having zero credibility about the source of the message.
- **Cognitive Dissonance:** People who experienced **cognitive dissonance** (e.g., believing that COVID-19 was not a major threat but also knowing they should follow the guidelines) might have experienced discomfort with the official health messaging. To reduce this discomfort, they might have **reinterpreted** the information in a way that justified not following the guidelines, such as denying the severity of the virus or downplaying the necessity of strict measures.

Key Findings:

Using Selective Exposure/Retention Theory and Perception Theory, we can see that the COVID-19 campaigns and slogans in India had mixed levels of effectiveness based on how people were exposed to, interpreted, and retained the messages.

- Selective Exposure and Retention played a role in determining which messages individuals were more likely to engage with and retain, depending on their pre-existing beliefs, media habits, and political orientation. Those already inclined to follow health guidelines were more

likely to adopt the messaging, while those skeptical about the pandemic's severity might have dismissed or ignored it.

- Perception Theory explains that individuals' interpretation of the campaigns was highly subjective, influenced by factors such as cognitive biases, fear, social norms, and personal experiences. People's perceptions of risk, the credibility of information, and their community's actions shaped how they received and acted upon the slogans.

5.6 Flow of Communication pattern among the respondents

5.6.1. Availability of Major Source of Information

During the pandemic mass media had played a major role, where the availability of sources of information was prevalent and abundant, providing all the relevant information to the audience. Stating the major sources of information such as - Government Agencies, Press Briefing, Digital Mass Media and Public Health Campaign. In case of formal settlement, they provide information directly to formal settlement society members where as in case of informal settlement groups, it goes across in two steps, from sources to the mediators such as Government officials/ Community leader and Nagar Nigam etc. then from here the information reaches to informal settlement groups.

5.6.2. Feedback system

The flow of information during pandemic comes with the feedback system for both groups of society Formal and informal settlement. In the chart of Urban formal settlement, the flow of information shows they tried to directly put their queries to the source such as Digital media, media and other agencies. In contrast informal settlement groups used to put their queries to the man in between sender and receiver, mostly they used to be health workers/ police men, and other government officials. Who provides information in more detail and face to face, but there are also chances of these messages getting distorted and opinionated.

5.6.3. Opinion Leaders

In the case of informal settlement groups there was a middle man in between who informed news and crucial updates about the corona to the informal settlement groups. As they have least access to all the crucial sources of media. Mediators such as health workers/ police men, and other government officials update them with the facts and sometimes news with their opinion. This aligns with the theory that suggests that there is a two-step process in which information and influence are transmitted from mass media to mass audiences. The two-step flow of theory suggests that people are more influenced by communications from opinion leaders rather than mass media. Therefore, the final arrival of information to the audience is more distorted than the real fact.

5.7. Repercussions of COVID-19 based campaign

5.7.1. Awareness and Information Access:

- The COVID-19 had affected the residents in slum areas in terms of information gain. They had limited access to formal media channels like television or newspapers. Their communication largely depended on word of mouth, community leaders, local health workers, loudspeakers, and posters in public spaces, whereas the formal settlement people had better access to digital media, television, and newspapers. As a result, they were more likely to receive health messages from the campaign.
- **Impact of Personal Communication:** Health workers or community leaders in slums played a pivotal role in disseminating information. Their knowledge and trust within the community often made them key players in conveying messages, though their reach may have been limited compared to digital or mass media.
- **Digital Literacy:** Higher digital literacy and access to smartphones and the internet meant that formal settlement residents could engage with social media, online platforms, and government apps to stay informed, which may have improved the effectiveness of the campaign among Urban formal groups.

5.7.2. Behavioral Change and Adoption of Health Practices:

The Urban formal group likely had a better understanding of the importance of COVID-19 precautions and were able to incorporate health guidelines into their daily lives more effectively resulting in health centered Lifestyle, while slum residents with overcrowded living conditions and lack of access to adequate sanitation or healthcare facilities, following safety guidelines was difficult. This could have led to lower levels of compliance with preventive measures and adoption behaviour changes- such as mask-wearing, social distancing, and hand hygiene. Many residents might have had to continue working in crowded conditions or could not afford to stay home due to financial constraints, making strict adherence to safety protocols challenging. On the other hand formal settlement residents due to better economic conditions and greater access to resources, they likely adhered to COVID-19 safety guidelines, such as wearing masks, social distancing, and staying home when necessary. Work-from-home policies and higher job security helped many people follow these protocols.

5.7.3. Health Outcomes and Impact on COVID-19 Cases:

Health communication campaigns in these areas may have been less effective in encouraging people to seek timely medical attention, leading to delays in testing and treatment in informal settlement areas. The formal settlement areas likely saw higher vaccination uptake due to better access to vaccination centers and greater trust in health communication. This group was also more likely to be aware of the benefits of vaccination through media and peer influence. With access to better healthcare, higher vaccination rates, and the ability to maintain safer living conditions (e.g., larger living spaces, ability to isolate when necessary), the Urban formal settlement population may have experienced fewer severe cases of COVID-19. Whereas due to limited access to healthcare, poor living conditions, and overcrowding, the slum population likely experienced higher vulnerability to COVID-19. Despite the efforts,

case rates may have remained higher, and the capacity of local healthcare services may have been stretched.

5.7.4. Barriers to Effective Communication:

A significant proportion of the slum population may have had low literacy rates, making it harder for them to understand written communication. This highlights the need for more tailored approaches, such as visual aids or community-based messaging. Also, rumors and misinformation were likely prevalent in slum areas. With limited access to reliable sources of information, it is possible that myths and fears about COVID-19 spread more easily. While formal settlement areas had better access to information, they also had higher exposure to misinformation, especially through social media. This could have led to conflicting views about the virus, vaccines, and safety measures, leading to confusion or a lack of trust in the official narrative. Moreover, a potential issue in formal settlement areas could have been complacency. The access to information may have led to overconfidence in the community, with some residents possibly disregarding safety measures under the belief that they were less likely to be impacted by the virus.

5.8. Discussion

The access, availability, and usage of media in the formal and informal settlement areas of society highlight the dynamic relationship between media and social contexts, which is central to media theory. In both segments, mobile phones serve as a key source of information, reflecting the ubiquity of convergent media in contemporary society. From a media and society perspective, the widespread availability of mobile phones across socio-economic strata underscores how media technology bridges certain gaps but also highlights persistent inequalities in access. Digital platforms like YouTube, social media, and news websites are more extensively used in affluent areas, where higher digital literacy and internet access align with the media dependency theory, which suggests that individuals with more access to media resources are more likely to be influenced by them. In contrast, informal settlement groups engage with these platforms to a lesser degree,

revealing the limitations imposed by lower access to technology, which reflects the concept of the "digital divide." WhatsApp, being a more accessible and universal platform, plays an essential role in communication for both groups, demonstrating the relevance of new media in enabling social change, especially in resource-poor settings.

Campaign slogans such as "Corona Harega India Jeetega" and "Do Gaj Duri, Mask Hai Jaruri," alongside outdoor billboards promoting vaccination drives, illustrate the effectiveness of visual, mass-mediated messages. These strategies resonate across both segments, underscoring the role of mass media in disseminating health information and shaping public behavior, as discussed in the public sphere theory, which emphasizes how media plays a role in public dialogue. However, for informal settlement groups, the influence of outdoor media, police announcements, and government health workers, more attuned to interpersonal communication, is more significant. This highlights the media dependency theory's assertion that people in lower socio-economic groups may rely more on interpersonal and community-based media due to their limited access to mass media. For the formal settlement group, mainstream media and digital health campaigns like "Aarogya Setu" are more effective, aligning with the concept of active media consumption in more affluent, digitally connected populations. The least effective media for both groups, such as podcasts and telephonic calls from Amitabh Bachchan, emphasize the limitations of certain media channels, as neither group could recall helpline numbers, reinforcing the importance of context and media accessibility in shaping communication strategies. This analysis reflects how media and society interact, and how media theories help explain the differential impact of media based on socio-economic contexts and access to technology.

Social and Behavioral Change Among informal settlement groups: The COVID-19 campaign brought about noticeable social and behavioral changes among informal settlement groups, with key messages such as restricted travel and sanitation in public places resonating most strongly. However, messages related to online education had a lesser impact. From a media and society perspective, this reflects how certain social change messages can become more deeply ingrained based on

their immediate relevance to daily life, particularly in marginalized communities where practical health measures like sanitation are prioritized over more abstract concepts like digital learning. Media campaigns played a critical role in spreading these messages, but factors such as community behavior and personal experiences had an even greater influence on the informal settlement groups' adaptation to these changes. Interestingly, some individuals reported not being influenced by any external factors, indicating that social change is not solely driven by media but also by deeper, intrinsic community and societal dynamics.

On a behavioral level, the campaign led to widespread changes in practices such as wearing masks, social distancing, and handwashing, which were actively promoted through various media channels. The media's role in disseminating these health behaviors was significant, as it used both mass media and localized outreach efforts to guide communities through the pandemic. However, the effectiveness of these messages varied, with some behaviors, such as using hand sanitizers, seeing less adherence. This discrepancy highlights the importance of tailoring media campaigns to the specific needs and realities of the target community.

From a societal perspective, the role of health workers and the reward system significantly influenced behavioral change, illustrating how community-based and interpersonal communication can often be more persuasive than media alone. This reflects the theory of media and society, which suggests that media is one of many factors influencing behavior; other social and contextual factors such as community norms, interpersonal relationships, and local leadership play vital roles in reinforcing media messages. Over time, while some behaviors like mask-wearing and social distancing decreased post-pandemic, other habits like handwashing remained unaffected, demonstrating that long-term societal change is not solely dependent on media exposure but also on the broader social environment and individual actions within that environment.

The shifts in social and behavioral norms among informal settlement groups underscore the complex interaction between media, society, and individual action,

where media campaigns play a crucial role in spreading health messages, but social context and community influence determine the sustainability of these changes.

Social and Behavioral Change Among Formal settlement Groups: The COVID-19 health campaign had a significant impact on the social and behavioral practices of the formal settlement group, with key messages such as sanitation in public places, restricted travel, and healthy food intake being especially prominent. However, campaigns on digital transactions and online education had a lesser influence. From a media and health communication perspective, this demonstrates how media campaigns tailored to public health and safety can be highly effective when they align with the priorities and lifestyles of affluent groups. Health communication strategies successfully addressed concerns about hygiene and public health, areas in which these communities were more likely to engage. In contrast, messages around digital transactions and online education faced challenges, as these were not as urgent or as directly tied to immediate health risks in the minds of the audience. Effective health communication often depends on the perceived relevance of the message, which is evident in how certain topics like hygiene were readily adopted, while others did not have the same level of impact.

From a societal perspective, the major influence on social change came from community behavior and interpersonal communication. Health communication, particularly in affluent groups, is not just about media messages; it also involves how those messages are received, discussed, and enacted within social circles. Interpersonal communication—whether from family members, peers, or community leaders—played a significant role in reinforcing public health messaging and encouraging compliance with new norms. Personal and emotional factors also contributed, as the health crisis led individuals to reconsider their lifestyles and safety practices. The societal contribution of these factors highlights the importance of the context in which health messages are delivered; even in well-off communities, behavior change often requires more than just media exposure—it requires ongoing dialogue and reinforcement within trusted social networks.

Behavioral changes, such as increased hygiene practices like handwashing and covering mouths while coughing or sneezing, were widely adopted during and after the pandemic. However, behaviors like wearing masks and using hand sanitizers saw a decline once the immediate threat of the virus decreased, reflecting a temporary nature of some behavioral changes. From a health communication perspective, this suggests that while campaigns can drive initial behavior change, the sustainability of these changes often depends on how integrated the new practices are into daily life and their perceived relevance in the long term. Health communication needs to shift from crisis-oriented messages to long-term health behavior promotion to maintain the positive changes sparked by the pandemic. Certain behaviors like handwashing continued, while others like mask usage decreased post-pandemic. This indicates that long-term behavior change requires continuous communication emphasizing the importance of **Sustainability of Behavioral Change**.

In terms of social change, the formal settlement group experienced a shift towards increased digital transactions, reflecting a broader trend toward digitalization. However, practices like online education, restricted travel, and the use of sanitation facilities in public spaces declined after the pandemic, highlighting the shifting nature of behaviors when the crisis phase ends. From a health communication viewpoint, this suggests that while health campaigns can catalyze widespread change, sustaining those changes requires consistent and relevant messaging that adapts to evolving societal contexts. The post-pandemic decline in certain behaviors indicates the need for continued health communication efforts that reinforce positive behaviors, especially in affluent communities where media access and literacy are high. This underscores the crucial role of health communication in shaping and maintaining societal norms, particularly as the context of public health risks shifts over time.

Selective Exposure, Perception, and Retention in COVID-19 Health Campaigns:

Selective exposure is central to understanding how individuals engage with health campaigns, shaped by their pre-existing attitudes, beliefs, and media access. From a societal perspective, people often choose to engage with media that aligns with their existing worldviews and social status. In the case of the COVID-19 health campaign,

messages targeted diverse groups, yet the media accessibility and appeal varied across societal segments. The formal settlement group, with greater access to digital platforms and mainstream media, was more exposed to campaigns featuring high-profile celebrities, such as Amitabh Bachan and Shah Rukh Khan, which enhanced the effectiveness of the messages. Meanwhile, informal settlement groups, who often had limited media exposure due to lower literacy and restricted access to digital devices, found it harder to engage with or remember the campaign's messages. In health communication, it's crucial to recognize selective exposure, as campaigns must be tailored to reach different societal groups through appropriate channels, addressing the varying levels of media access and literacy. To overcome selective exposure, the campaign strategically utilized community-driven approaches, such as door-to-door communication and local health workers, ensuring messages reached even the most marginalized groups.

Selective perception refers to how individuals interpret health messages based on their social contexts and prior beliefs. From a media perspective, the health campaign used fear-based appeals, such as "Together, we will fight this battle" and "Mask Hai Zaroori," to create a sense of urgency and collective responsibility. These messages, though similar across all groups, were perceived differently by the formal settlement group and informal settlement groups. The formal settlement group, with easier access to reliable media sources and higher education levels, more readily understood and accepted the severity of the crisis. In contrast, informal settlement groups were often influenced by their immediate social environment, such as local health workers, and may have interpreted the message based on practical realities—such as the inability to afford masks or practice social distancing in crowded living conditions. Health communication theory emphasizes the need for tailoring messages based on the audience's context, including their access to media, literacy levels, and socio-economic factors. The COVID-19 campaign needed to account for these differences in selective perception to ensure its messages resonated effectively with all societal segments.

The retention of health messages over time is a key factor in ensuring sustained behavior change, and this process was influenced by both media and societal factors.

From a societal perspective, individuals are more likely to retain messages when they are reinforced by social norms and local community influences. The campaign used social influence in various ways: formal settlement groups were influenced by celebrity endorsements and mainstream media, while informal settlement groups were more influenced by local health workers and peers. In media theory, this represents the role of media as a tool for reinforcing societal norms and behaviors, with media campaigns acting as catalysts for widespread behavior change. The use of health communication strategies, such as catchy slogans like "Do Gaj Duri" and "I Support Janta Curfew," helped embed these messages in daily conversations, facilitating retention among both groups. However, the informal settlement groups faced challenges in retaining these behaviors, as economic and infrastructural barriers often made it difficult for them to practice the recommended measures. From a health communication viewpoint, campaigns must consider the socio-economic and cultural context to enhance message retention and ensure that messages resonate and stick with diverse communities. While formal settlement groups were more aligned with these health behaviors, informal settlement groups needed further support and reinforcement through continuous communication channels to ensure sustained adoption of health practices.

In conclusion, the effectiveness of the COVID-19 health campaign in shaping behavior and social change can be understood through the lens of selective exposure, perception, and retention, all while considering the societal context, media dynamics, and health communication strategies. Tailoring the campaign to different societal segments—by recognizing the varying media access, literacy levels, and socio-cultural contexts—was key in ensuring that the health messages were not only received but also understood and retained across diverse communities. Health communication must be adapted to cater to these differences, ensuring that every group, regardless of their socio-economic status, has the opportunity to engage with and act upon public health messages.

Flow of Communication Pattern Among Respondents: The availability of sources of information reveals a significant disparity in how the formal and informal settlement access and receive information. For the formal settlement group,

communication flows directly from trusted sources such as government agencies, press briefings, and digital mass media, ensuring that they have direct access to reliable and timely information. The informal settlement groups, however, face a two-step communication process. They often rely on intermediaries—such as health workers, police officers, or local government officials—who relay the information, potentially filtered through their own perspectives. This difference in access highlights a media and societal divide, where the more privileged group has immediate access to direct, unmediated sources of information, while marginalized groups rely on secondary, sometimes filtered information.

From a health communication perspective, this disparity in the flow of communication leads to unequal levels of awareness and understanding of health messages. In the case of formal settlement groups, they can directly engage with communication sources, seek clarifications, and provide immediate feedback. This enables a more efficient feedback loop and helps reduce the spread of misinformation. Moreover, digital literacy and availability of resources enable the formal settlement group to critically evaluate the information they receive, ensuring they are less susceptible to misinformation and mental stress related to the crisis. However, even in this group, misinformation and mental stress can arise, especially when overwhelming amounts of conflicting information are available, despite their access to reliable media sources.

In contrast, informal settlement groups lack direct access to crucial sources of information, which affects the quality and accuracy of the information they receive. They are more likely to depend on opinion leaders—such as health workers, police, and other local officials—for updates on the pandemic. This intermediary role of the opinion leaders is critical, as it forms the bridge between the sender (government agencies) and the receiver (informal settlement). However, this also means that the information is often mediated through the opinion leader's own interpretation of the facts, which may introduce bias or distortion. Additionally, the lack of digital literacy and the digital divide further hinder their ability to access timely and accurate information, leading to a reliance on second-hand information that may not be entirely accurate.

From a media perspective, the communication gap between these two groups also highlights a need for tailored media strategies. Informal settlement groups, being more vulnerable, require a more robust and accessible communication system, which includes overcoming barriers such as illiteracy and the digital divide. Health communication strategies must focus on using more accessible channels, such as community-based approaches and interpersonal communication, to bridge this gap. This could involve leveraging local opinion leaders and health workers more effectively to disseminate public health information in ways that resonate with the community's daily reality. Additionally, a proper feedback system should be implemented to ensure that informal settlement groups have avenues to voice their concerns and queries about the information they receive, ensuring that the flow of communication is not one-way.

The differences in the communication flow, media access, and information dissemination between the formal and informal settlement groups underscore significant challenges in ensuring equitable health communication during a public health crisis. Society, media, and health communication perspectives must come together to create a more inclusive communication strategy that addresses these disparities, ensuring that all societal segments, regardless of their economic or educational status, have equal access to vital health information and the ability to engage in meaningful dialogue with the sources of that information.

In the context of COVID-19 health communication, the disparity in information access between Urban informal and formal settlement groups was stark. Informal settlement residents faced numerous barriers to receiving clear and reliable health information. With limited access to formal media such as television, newspapers, or digital platforms, their primary source of information came from community leaders, local health workers, loudspeakers, and posters in public spaces. This informal and often fragmented communication system meant that informal settlement groups were more likely to experience delays in seeking medical attention, and their ability to follow health guidelines was hindered by the lack of comprehensive messaging. In many cases, they also faced greater difficulty in understanding the full scope of

safety measures, which impacted their overall adherence to the health protocols outlined during the pandemic.

In contrast, the Urban formal sectors had significantly better access to formal communication channels. They were able to access health information from a wide array of media sources, including digital platforms, television, and newspapers. This easy access to diverse and reliable information helped the formal settlement group stay informed about health guidelines, vaccination drives, and other essential updates. Their higher digital literacy and better access to health resources meant they were more likely to adopt health practices such as vaccination and social distancing. Furthermore, the formal settlement groups were more proactive in seeking out health advice from trusted sources, resulting in more timely medical interventions and better compliance with health regulations.

However, despite the advantages in information access, both Urban informal and formal settlement people faced challenges in terms of misinformation. In informal settlement areas, misinformation was often spread through social networks and sometimes amplified by the lack of trust in the healthcare system. The formal settlement group, though more informed, was not immune to misinformation, especially on social media platforms, where unverified content could lead to confusion or skepticism. These challenges underscore the importance of designing health communication campaigns that are inclusive, clear, and tailored to the needs of different socio-economic groups. For more effective outreach, health communication should consider literacy levels, media access, and the socio-cultural context of the target audience, ensuring that accurate information is disseminated in ways that resonate with everyone, regardless of their social standing.

5.9 Conclusion

In conclusion, health literacy in India is not just a luxury but a necessity, and the role of health communicators becomes indispensable in ensuring that health messages are not only delivered but understood and embraced. Health communication plays a pivotal role in ensuring that medical interventions do not remain just technical solutions but are incorporated into people's everyday lives and behaviors. Without effective communication, even the most scientifically sound health measures risk being misunderstood or ignored, much like a medicine bottle with no label—ineffective and potentially harmful. In the context of the health communication campaign in Lucknow, it became evident that the effectiveness of such campaigns varied significantly across different socioeconomic groups. While the formal settlement residents, with better access to information through digital platforms, television, and print media, adhered to safety measures and saw improved health outcomes, the slum areas faced significant barriers such as overcrowded living conditions, lack of digital literacy, and limited access to reliable information, all of which undermined the effectiveness of the campaign.

From a health communication and media perspective, these disparities highlight the need for more inclusive, multi-channel communication strategies that target all segments of society, especially the underserved. Health campaigns need to go beyond merely disseminating information; they must actively engage communities, understand their unique needs, and deliver tailored messages through trusted media channels. For instance, in slum areas, where access to digital media is limited, community-based communication through health workers, local leaders, and loudspeakers, as well as outdoor media like posters, can have a greater impact. In contrast, the formal settlement population, with higher digital literacy and access to multiple information channels, benefits from more sophisticated media strategies like social media campaigns, televised briefings, and mobile app notifications.

As suggested by experts like Joshi (2024), health communication campaigns in India need to embrace real-time feedback systems, behavioral insights, and data-driven approaches. These methods will allow policymakers and public health officials to

understand not only the reach of their campaigns but also their effectiveness in influencing behavior. Such approaches would enable the evaluation of campaigns based on real-time data, identifying challenges faced by different groups and addressing them promptly. Moreover, the media plays a central role in shaping public perceptions, and with social media's vast influence, it is crucial to tackle misinformation and ensure that health messages are credible, clear, and consistent. In the case of COVID-19, misleading information often led to confusion, especially in low-literacy communities, where rumors spread faster than facts.

Ultimately, health communicators must work at the intersection of media, society, and health to ensure that communication strategies are inclusive, contextually relevant, and effective. By using both traditional and modern media platforms, engaging local opinion leaders, and adapting to the media consumption habits of different communities, we can bridge the information gap and work towards creating a healthier, more informed society. As Kumar (2024) emphasizes, health communication is not just about transmitting information; it's about fostering understanding, trust, and behavior change that is essential to improving public health outcomes across diverse populations.

Health literacy is a need, not a luxury, in India. Because health without effective communication is like a medicine bottle without a label—useless and even dangerous—health communicators play an essential role. They make sure that health is not just provided but also understood, accepted, and embraced in a place where trust may be just as potent as medicine. Even the best medical interventions would be ineffective without health communicators. As we move forward, it is essential to create a society that understands health and how to apply that knowledge (Kumar, 2024).

5.10. Recommendations

5.10.1 For Health Campaign

Localized Messaging: Health communication campaigns must develop tailored strategies for different segments of society, especially marginalized communities. Recognizing the unique challenges faced by groups such as informal settlement groups and rural populations is essential in crafting relevant messages that resonate with their specific concerns and needs. Tailored messaging ensures that health guidelines are understood and adhered to by diverse audiences, bridging gaps caused by social, economic, and educational disparities.

Use of Visuals: In areas with lower literacy levels, incorporating more visual elements like posters, infographics, and videos can significantly enhance understanding and retention of health information. This approach will help individuals who might struggle with written communication better grasp important health messages, ensuring that essential information reaches all sections of society, regardless of their literacy levels.

Community Engagement: In slum areas and underserved communities, it is crucial to involve trusted local figures such as community leaders, health workers, and social influencers to disseminate health information. These figures can bridge the gap between formal health messaging and community understanding, fostering trust and ensuring that health advice is accepted and acted upon by the local population. Engaging the community fosters an environment where health messages are more likely to be embraced and acted upon.

Combat Misinformation: A key challenge in both Urban formal and informal areas is misinformation, particularly in the digital sphere. As the formal settlement population often relies on digital platforms for health information, it is critical to focus on combating digital misinformation through fact-checking, partnerships with credible influencers, and the use of reliable sources. Clear, transparent communication through digital platforms can mitigate confusion and build trust, especially in urban settings where digital literacy is higher.

Address Economic Barriers: To support vulnerable populations, health communication campaigns must also address the economic barriers that prevent people from adhering to health guidelines. For instance, providing financial assistance, food supplies, or access to affordable healthcare can empower individuals to take necessary health precautions. Ensuring economic support for marginalized groups will lead to better adherence to health advice, as individuals in these communities are often economically constrained.

Integrate Technology: Continuing to leverage digital platforms such as social media, mobile apps, and telehealth services is essential to expanding access to health information and services. These platforms can ensure that even in remote or underserved areas, individuals can access up-to-date health advice, book appointments, or ask questions to healthcare professionals, thereby promoting health literacy and behavioral change.

Enhance Community Engagement: Future campaigns should foster partnerships between healthcare providers, local communities, and the media. By collaborating, these stakeholders can amplify the impact of health communication efforts, ensure consistent messaging, and build a collective responsibility for public health. This approach will enhance the capacity of communities to participate in and contribute to health initiatives, fostering greater ownership of health outcomes.

Address Cultural Sensitivity: Health messages should be culturally sensitive and tailored to resonate with the diverse cultural contexts across India. Taking into account the regional, linguistic, and cultural diversity will make health messages more relatable and impactful, increasing their chances of being accepted and acted upon by various social groups.

5.10.2 Enhancing the Role of Health Communicators

Training from Grassroots Level: Given the linguistic and cultural diversity in India, it is crucial for health communicators to receive training at the grassroots level. This includes understanding local dialects, social dynamics, and the specific needs of different communities. Empowering communicators with the skills to navigate these

complexities ensures that health messages are effectively delivered and understood at the community level.

Enhancing Collaboration: Health communicators should work in close collaboration with government agencies, NGOs, local leaders, and community organizations to amplify the impact of health campaigns. By combining resources, knowledge, and networks, these stakeholders can reach a broader audience and ensure that health messages are not only received but also acted upon.

Leveraging Technology: The integration of technology in health communication campaigns offers a way to bridge gaps in access to information. Utilizing social media, mobile apps, and telehealth services allows real-time communication, making it easier for individuals from various socioeconomic backgrounds to access health information quickly and efficiently. This can be particularly helpful in urban areas with high digital literacy and in rural areas where mobile phones are often the most accessible means of communication.

Getting the Community Involved: Involving the community in creating and disseminating health messages enhances trust and ensures that the messages are culturally appropriate. When community members participate in the process, they feel a sense of ownership over the health information being shared, making them more likely to adopt the recommended behaviors and spread the information within their networks.

Receiving Feedback: Continuous feedback from the community is vital for improving health communication efforts. Health communicators must actively listen to the community, understand their challenges, and adapt their messages accordingly. Feedback mechanisms can include surveys, community meetings, or digital engagement tools. This ensures that campaigns evolve with the changing needs of the population and that health communication remains relevant and impactful.

5.11. Future Scope of the Study

The disparity in media access, usage, and the flow of communication between formal and informal settlement groups during the COVID-19 health campaigns offers

valuable insight into the interaction between socio-economic status and media engagement. To build on this, future studies could explore how different groups with varying levels of media accessibility—such as mobile phones, television, and digital platforms—adopt health behaviors. This research would be crucial in identifying effective media strategies that cater to communities with limited resources. Another avenue for future research involves evaluating the effectiveness of localized communication approaches, especially those driven by community leaders and health workers, in disseminating health information in resource-poor settings. Given that different socio-economic groups respond differently to public health messages, further exploration is needed on how tailored messaging resonates with these communities to bridge the gap in health literacy.

In addition, it would be beneficial to understand the long-term sustainability of behavioral changes induced by health campaigns. While certain behaviors, such as mask-wearing and social distancing, were widely adopted during the pandemic, future studies should assess the extent to which these changes endure over time and what factors contribute to their persistence. The role of misinformation, particularly in marginalized communities, also remains an area requiring deeper investigation. Future studies could explore how misinformation spreads within these communities and its influence on health behaviors, as well as how trust in health systems affects the effectiveness of health campaigns.

Moreover, examining digital literacy and its impact on media consumption patterns can shed light on the challenges that marginalized communities face in accessing health information. A focus on digital literacy will help understand how media consumption affects people's ability to critically engage with health messages, enabling the development of better-tailored strategies. Additionally, it would be worthwhile to investigate how celebrity endorsements and mainstream media impact behavior change across different social groups, assessing whether these campaigns inspire collective responsibility or perpetuate existing social divisions.

Future research could also examine the broader role of community engagement in shaping social norms related to health. By studying how local health influencers and

community leaders can alter health practices, researchers could identify strategies for fostering greater community-based involvement in health campaigns. Furthermore, integrating traditional media forms with digital platforms in health communication could help address the communication barriers faced by marginalized groups. Traditional forms of media, such as loudspeakers or face-to-face interactions, could play an important role in disseminating health information in underserved areas, and understanding how both traditional and modern media can complement each other will be essential for future campaigns.

Finally, exploring regional and cultural differences in how health messages are received would provide a more nuanced understanding of health communication strategies in India's diverse population. By recognizing the varying regional contexts and local cultural values, future studies can design more effective campaigns that resonate with specific audiences. Additionally, investigating the emotional and psychological impacts of health campaigns on different socio-economic groups will provide insight into how fear-based messages or positive appeals influence behavior. Such research will ultimately refine health communication strategies, ensuring they not only foster behavior change but also contribute to the emotional resilience of individuals during public health crises.

In conclusion, future research should prioritize a deeper understanding of the interactions between media, society, and individual behavior in relation to health campaigns. By addressing issues of accessibility, media literacy, community involvement, and the influence of cultural and emotional factors, these studies will help improve public health communication strategies and ensure that all societal segments, regardless of their socio-economic status, have equitable access to health information.

5.12..Limitations:

The limitations of this study include several factors that could affect the accuracy and generalizability of the findings. One key limitation is the reliance on self-reported data, where participants may have exaggerated or misremembered their behaviors and actions, particularly regarding adherence to health guidelines. This could lead to

biases in the results. Additionally, the study was conducted in only two specific socio-economic groups, those living in slums and affluent areas, limiting its ability to account for the experiences and challenges faced by other groups, such as rural populations or middle-income groups, which may have different needs and access to health communication.

Another limitation is that the study was localized to Lucknow, which means the findings may not be applicable to other cities or regions in India, where socio-economic, media access, and health service factors could vary significantly. The study did not explore in-depth how different types of media (such as digital vs. traditional media) are used or understood by different communities, which could have provided deeper insights into the role of various communication channels. Moreover, the focus on the short-term impact of health communication during the COVID-19 pandemic meant that long-term effects were not considered, limiting the understanding of how these changes in behavior might be.

The study also didn't address how misinformation was spread and how it affected people's understanding and behavior in relation to health messages. Given the prevalence of digital misinformation, especially in digital spaces like social media, this could be an important factor influencing people's adherence to health guidelines. Additionally, the emotional responses triggered by health communication, such as fear, stress, or confusion, were not explored. These emotions can significantly influence whether people follow health instructions or not, and further research in this area would be beneficial.

Lastly, the study did not explore the effectiveness of community-based health communication and how local influencers like community leaders, health workers, and local media could be better integrated into health campaigns. Future studies could expand on these areas, particularly looking at how community dynamics and local figures influence health behavior. These limitations point to the need for more comprehensive and long-term research into health communication strategies that consider different groups, media channels, and the socio-cultural context in which messages are received.

APPENDIX- I

QUESTIONNAIRE

DEMOGRAPHY

1. What gender do you identify as?

Male
Female
Others

2. Age group

16-20
21-30
31-35
35 above

3. Education

Intermediate
Graduate
Post-Graduate
Doctorate

4. Working

Studying
Employed
Housewife
Househusband

5. Native

Uttar Pradesh
Madhya Pradesh
Bihar
Rajasthan
Delhi

6. Duration

Less than 10 years
From 20 Years
Above 20 Years

COVID-19 and Media Campaigns

1. What were the major source you come across for COVID-19 related information.

Police Announcement
Television
Mobile Phones
Interpersonal Communication
Workplace
Outdoor
Government Health Workers

2. During the Corona time, you had access to mainstream media.

Television
Newspaper
Smart Mobile Phones
Radio

3. During the Corona time, mainstream media you prefer for COVID-19-related information.

Television
Newspaper
Smart Mobile Phones
Radio

4. During the Corona time, digital media you prefer for COVID-19 related information.

News Websites
Social Media
You Tube
Others

5. During the Corona time, social media you prefer for COVID-19 related information.

Former Twitter 'X'
Facebook
Instagram
LinkedIn
WhatsApp

6. During the Corona, major slogans you heard related to COVID-19 information.

Jab tak dawai nahi, Tab tak dhiayi nahi

Corona harega, India Jeetega

Do gaj duri, mask hai jaruri

7. During the Corona, major campaigns you heard/watched related to COVID-19 information.

Outdoor Billboard (Narendra Modi & Yogi)

Public Service Advert (Akshay Kumar)

Arogya Setu Application (Ajay Devgan)

Caller tune (Amitabh Bachan)

BEHAVIORAL CHANGE

1. Behavior you have seen in COVID-19 Campaign

	Never	Rarely	Sometimes	Often	Always
Restricted Travel					
Healthy Food Intake					
Sanitation in Public Places					
Online Education					
Digital Transaction					

2. After the two years of Coronavirus, do you still find positive behavioral changes in yourself.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. To whom you think has influence more for the behavioral changes

- Community Behavior
- Media Campaign
- Interpersonal Communication
- Personal and Emotional Facts

4. How often you prefer to wear mask

	During COVID-19	After COVID-19
Never		
Occasionally		
Sometimes		
Often		
Always		

5. How often do you used to cover your mouth while coughing/ sneezing

	During COVID-19	After COVID-19
Never		
Occasionally		
Sometimes		
Often		
Always		

6. How often do you use sanitizer?

	During COVID-19	After COVID-19
Never		
Occasionally		
Sometimes		
Often		

Always		

7. How often you wash your hand properly with after coming home from outside

	During COVID-19	After COVID-19
Never		
Occasionally		
Sometimes		
Often		
Always		

SOCIAL CHANGE

1. Social Change you have seen in COVID-19 Campaign

	Never	Rarely	Sometimes	Often	Always
Restricted Travel					
Healthy Food Intake					
Sanitation in Public Places					
Online Education					
Digital Transaction					

2. After the two years of Coronavirus, do you still find positive social changes in yourself.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. To whom you think has influence more for the social changes.

- Community Behavior
- Media Campaign
- Interpersonal Communication
- Personal and Emotional Facts

4. How often you prefer to Digital Transaction

	During COVID-19	After COVID-19
Never		
Occasionally		
Sometimes		
Often		
Always		

5. How often you restricted your travel

	During COVID-19	After COVID-19
Never		
Occasionally		
Sometimes		
Often		
Always		

6. How often you prefer Online Education

	During COVID-19	After COVID-19
Never		
Occasionally		

Sometimes		
Often		
Always		

7. How often you prefer using sanitation facility available at public places

	During COVID-19	After COVID-19
Never		
Occasionally		
Sometimes		
Often		
Always		

APPENDIX- II

PHOTOGRAPHS



AVAILABILTY OF TELEVISION



Urban Informal Settlement areas



Urban Informal Settlement Area: Govind Vihar Chinhat



Husariya & Janeshwar Park Opp. Gate No. 42.



Malin Basti Sec. 23 {Near Indraprastha Apt.}; Sarvoday Nagar {Nishatganj}; Vineet Khand Gomtinagar; Alambagh Bus Stand; Durgapuri Metro Station

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PUBLICATION DETAILS



Journal of Public Relations and Advertising
Volume-1, Issue-2, July-Dec 2022



Public Service Advertising in India: A Multimodal Discourse Analysis of Health-based Adverts

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Abstract:

Background: The media plays an influential role in disseminating information to the masses. There are different kinds of media, like Radio, Television, Print, Advertising, etc and each has its own set of audiences and importance. To get acquainted with varied fields like Sports, Entertainment, Wildlife or even Health, media is the best way out as reliable, cheapest source. During the pandemic phase, the importance of media surged a bit more. Every individual relied solely on the media for Corona updates.

Aim: This study is to explore the role of government's video advertising in disseminating awareness related to health safety measures and to examine how the government uses advertising mode of communication to influence the public for major social change. It also tries to look at the propaganda strategies and commercial appeals used in PSAs to educate viewers.

Method: The study is based on a Multimodal Discourse Analysis of public service video ads, i.e., those broadcast on the YouTube channel of the Ministry of Health and Family Welfare within the span of six months. The study will be focusing on how semiotic tools such as colour, framing, and positioning elements in PSA advertisements contribute to the making of impactful meaning and how these strategies are employed to make the masses aware. The advertising concept, propaganda technique, and advertising appeal employed will also be investigated.

Keywords: Multimodal Discourse Analysis, Health Communication, Public Service Advertisement, COVID-19, YouTube Ads

Introduction

Advertising is the easiest form of communication and profoundly works on the reach and retention power of the consumer. It links an identified sponsor with consumers (a target audience), conveys information about products (goods, services, and ideas), and interprets the features of the items in terms of the customer's requirements and desire. It highly relies on mass and interactive media to reach broad audiences.

According to the Advertising Association UK, advertisements are messages that are paid for those who send them and are meant to inform or persuade people who receive them. Thus, advertising has been defined as any paid form of communication that intends to inform or influence one or a larger group (Association, 1975). Apart from generating profit, a type of advertising is also profit less. This advertising

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**ANALYZING THE COMMUNICATION PATTERN OF LUCKNOW
SLUM DWELLERS: MAPPING THE EFFICACY OF COVID-19
CAMPAIGNS**

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ABSTRACT

Slum dwellers, being the most vulnerable demographic, are susceptible to the impacts of various disasters and calamities. Due to limited educational attainment and inconsistent access to information, they exhibit a higher predisposition to risks, thus posing a challenge for developing nations. This specific demographic is often overlooked in the context of advancing development initiatives. The sole aim of the present research is to investigate how slum communities navigate unforeseen challenges and equip themselves to effectively respond. A case study approach was employed, with the recent COVID-19 pandemic serving as a focal point to analyze their coping strategies. The objective of the current study is to assess the knowledge, attitudes, and risk perceptions of individuals residing in slums towards COVID-19. Additionally, it aims to identify their primary sources of information and media channels, while also evaluating the effectiveness of health communication campaigns' reach and recall through the lens of the COM-B model, which assesses the components of capability, opportunity, and motivation for behavioral change.

KEYWORDS: Slum, Health Communication, Campaign, COM-B Model, COVID-19, Health and Hygiene, New Media, Equity-based approach

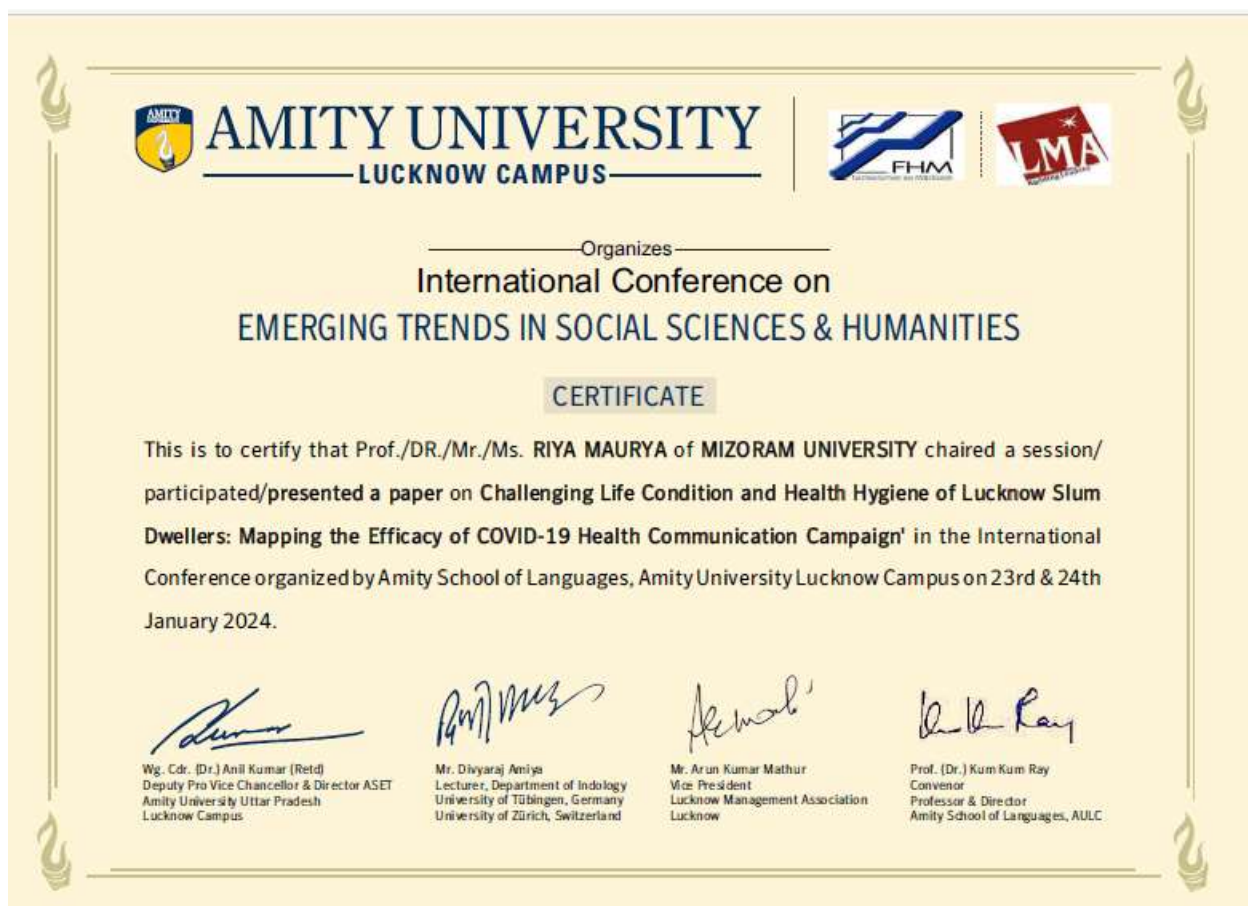
INTRODUCTION

Every nation strives for progress across various sectors such as infrastructure, education, urban development, and community planning. Nevertheless, within these countries, there exists a significant population that has relocated from rural areas with aspirations of attaining and sustaining their families. Their temporary settlements, often located near canals, railroad crossings, and landfills, can be deemed as unsanitary and hazardous for both the inhabitants and their children. The existence of slums within this context acts as a barrier to national advancement. However, this particular demographic is frequently neglected, even in the most developed countries, struggling with the consequences of slums that are disproportionately affected by different crises, whether they be natural disasters or disease outbreaks. This marginalized community not only faces immense hardships but also hinders the overall progress of nations.

The existing studies had already warned about the global increase in the number of slum dwellers facing a multitude of challenges such as poverty, crime, insecurity, illness, joblessness, and lack of education, all of which obstruct the development of slum areas and the country. The slum figure will keep rising and reach 3 billion by 2050 if no appropriate action is taken and presently, around 500 million children and over 1 billion adults worldwide reside in urban slums. By 2050, there will likely be 1.5 billion children living in slums, a

PAPER PRESENTATION DETAILS

Challenging Life Condition and Health Hygiene of Lucknow Slum Dwellers: Mapping the Efficacy of COVID-19 Health Communication Campaign in the International Conference by Amity School of Languages, Amity University Lucknow Campus on 23rd and 24th Jan 2024.



Role of Science Journalism in post-COVID-World: A study on news creator and spectator perception at 2nd International Science Congress, 22nd Indian Science Communication Congress (ISCC-2022) on “ Science Writing for Journalism and Communication on 20th -21st December 2022 jointly organized by International Science Writers Association, Indian Science Writer’s Association, Indian Science Communication Society



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DATE OF ADMISSION	:30th AUGUST, 2021
APPROVAL OF RESEARCH PROPOSAL	
DRC	:17.03.2022
BOS	:27.05.2022
SCHOOL BOARD	:06.06.2022
MZU REGISTRATION NO	:2200202
Ph.D. REGISTRATION NO. & DATE	: MZU/Ph.D./1875 of 30.08.2021
EXTENSION (IF ANY)	:NA

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ABSTRACT

THE ROLE OF HEALTH COMMUNICATION IN SOCIAL AND BEHAVIORAL CHANGE: A CRITICAL ANALYSIS OF COVID 19 CAMPAIGNS WITH SPECIAL REFERENCE TO LUCKNOW DISTRICT OF UTTAR PRADESH

**AN ABSTRACT SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF
PHILOSOPHY**

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Ph.D. REGISTRATION NO.: MZU/Ph.D./1874 of 30.08.2021



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MARCH, 2026**

**THE ROLE OF HEALTH COMMUNICATION IN SOCIAL AND
BEHAVIORAL CHANGE: A CRITICAL ANALYSIS OF COVID 19
CAMPAIGNS WITH SPECIAL REFERENCE TO LUCKNOW DISTRICT
OF UTTAR PRADESH**

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**In partial fulfillment of the requirement of the Degree of Doctor of Philosophy
in Mass Communication of Mizoram University, Aizawl**

Abstract

1. Introduction

1.1 Health Communication

Health communication techniques intended to inform and sway decisions made by individuals and communities to improve health outcomes. It uses written and spoken techniques to empower individuals, encourage healthy lifestyle choices, and enhance public health procedures. One effective strategy for addressing the more complicated and expanding health issues is communication. It can empower people to make decisions that safeguard and enhance their health and well-being by influencing their knowledge, attitudes, and behaviors.

The goal of Communication for Health (C4H) is to use communication's full potential to enhance social, community, and individual health outcomes. It combines a number of guidelines and best practices to guarantee that communication initiatives are well-thought-out and supported by data (WHO, 2023).

According to Kreps (1988, p. 238), health communication is "the central social process in the provision of health-care delivery and the promotion of public health." The most crucial tool for health promotion is pertinent health information that can inspire people to adopt healthy habits and direct their health decisions. Furthermore, communication is the only way to obtain pertinent health information. People can actively participate in the health care system, at home, and in the community when they have access to timely, accurate, persuasive, and pertinent health information. A vast range of media and communication platforms, including social media, radio, television, newspapers, leaflets, brochures, websites, films, public service announcements, community events, and digital tools, are available as resources for health communication. Considering variables like media accessibility, cultural background, and health literacy, these resources assist in delivering customized health messages to certain audiences.

Therefore, to develop knowledgeable, focused, and quantifiable communication interventions meant to enhance health outcomes at the individual, community, and

societal levels, health communication also incorporates concepts from the social, behavioral, and communication sciences.

1.2 Social and Behavioral Change in Health Communication

The social and behavioral change communication (SBCC) is a strategic, research-based communication method, to encourage constructive changes in people's and communities' knowledge, attitudes, norms, beliefs, and behaviors. By employing tailored messaging that is based on audience insights and data and is disseminated through a variety of communication channels, including digital platforms, interpersonal communication, mass media, and community mobilization, SBCC promotes both behaviors change, and the social changes required to maintain those behaviors.

According to Kaur (2022), SBCC is a consultative, research-based strategy that employs communication to encourage behavior modification and support the necessary societal change for better health outcomes. The strategy emphasizes customized messaging and data-driven interventions and operates at the person, group, and environmental levels. The critical role of SBCC in public health emergency responses (Ebola, COVID-19, monkeypox, and cholera) is highlighted in a systematic review by Gonah et al. (2024), which also highlights lessons learned, such as the importance of multisectoral collaboration, the growing role of technology and behavioral data to improve SBCC effectiveness, and challenges like funding and coordination.

SBC Guidance's 2025 report states that SBCC strategically uses advocacy, mass media, social mobilization, and marketing to promote constructive social and individual transformation. Clear goal setting, customized messaging, two-way communication, and behavioral outcome monitoring are all essential components of an effective SBCC. For long-lasting effects, it emphasizes integrating with other behavioral and societal change tactics.

In their evaluation of customized SBCC interventions included into mass drug administration campaigns, Abdissa et al. (2024) discovered that they successfully enhanced community awareness, attitudes, and healthy practices about neglected

tropical diseases. The study evaluated impact, faithfulness, and reach using the RE-AIM methodology.

An expansion beyond individual behavior change to incorporate social and structural impacts, SBCC promotes community-level and societal changes using evidence-based, participatory communication interventions based on epidemiological research, according to a 2014 public health review.

In Jimma, Ethiopia, a 2024 study assessed the efficacy of mass medicine delivery programs combined with customized SBCC. The findings showed that the community's awareness, attitudes, and preventative measures had significantly improved, particularly with relation to onchocerciasis. Awareness of disease transmission and personal hygiene practices significantly improved after being exposed to SBCC. The RE-AIM framework served as the intervention's guide, highlighting locally created messaging and the use of tried-and-true resources like flipcharts and posters to maximize community involvement. The authors came to the conclusion that sustained, carefully planned SBCC initiatives are essential for managing and getting rid of neglected tropical diseases in comparable rural settings (Abdissa et al., 2024).

The Information-Motivation-Behavioral Skills (IMB) model was used in a 2025 study to investigate how SBCC methods affected the documentation habits of healthcare personnel. Through training, feedback, and supervision, the intervention addressed behavioral skills, motivation, and knowledge gaps, leading to notable increases in the quality of the documentation. This study demonstrates how strong SBCC can affect professional practices that are crucial to the provision of healthcare as well as individual behaviors (Eze et al., 2025).

Numerous behavior-change-focused mobile apps use different SBCC strategies, according to a 2025 research report. To optimize their influence on health behaviors, digital SBCC tools should undergo more thorough examination and evidence-driven design, as the majority lacked a strong evidence base or integrated safety elements (Pavlicek & Cradock, 2025).

1.3. COVID-19 : An Overview

On March 11, 2020, the World Health Organization (WHO) classified the SARS-CoV-2 virus epidemic, also known as COVID-19, as a serious worldwide threat and a pandemic. Since then, there were various reports of an increase in COVID-19-related infections and fatalities (WHO, 2020). Social media and the media widely distribute this COVID-19 information, particularly during the early stages of pandemics around the world. Additionally, they concentrate on infection and its dissemination, which elicit different attitudes and levels of awareness in people (Intan Siti Nugraha; & Haq, 2021). The huge Covid-19 immunization effort, which received international recognition, is the most recent example of how health communication has enhanced public health. The volume of false and misleading material increased along with the Covid-19 wave. However, when put in the limelight, health communicators stepped up to the challenge (Kumar, 2024).

Initially, India was expected to be at high risk because of the COVID-19 pandemic, despite the low number of COVID cases. Dense populations made SARS-CoV-2 more likely to spread, particularly in metropolitan areas. Diabetes and uncontrolled hypertension are prevalent in the Indian population, and both were thought to be risk factors further risking the lives of individuals in the country. With high rates of stunting, it was unknown how the disease might impact children in India, even though it was shown that children in China (Dong et al., 2020) and other nations were less likely to be afflicted. On the bright side, it was predicted that a disease that primarily affects the elderly would not cause large mortality rates among India's comparatively youthful population, with 65% of the country's population under 35 and only 6% over 65. By contrast, 10% of the Chinese and 22% of the Italian populations are over 65 years old.

In response to COVID-19, the Indian government screened incoming passengers on planes from East Asia. The Indian government had also imposed strict shutdown, as a consequence, the abrupt lockdown severely impacted the urban poor and migrants; they were left without jobs and were unable to travel back to their villages. However, it had been challenging to implement social distancing and masking universally. In

many low-income neighborhoods, where people are crammed into homes and into public areas, physical distance is impractical. Schools, colleges, movie theaters, houses of worship, and most other public meeting spots were also closed considering the situation occurred because of the mass spread of the virus.

The shutdown was necessary to purchase time for the eventual surge of cases. Approximately 1.9 million hospital beds, 95,000 intensive care unit (ICU) beds, and 48,000 ventilators were available in India at that time. In an optimistic scenario of COVID-19 burden, 270,000 ICU beds were required (Kapoor et al., 2020).

Uttar Pradesh government had come up with the core team termed 'Team-9', a team of senior officials and ministers constituted for Covid-19 management, directed them to reactivate the Integrated Covid Command and Control Room (ICCC) and also activate the public address system. It was constituted in the wake of the sudden rise in cases in China and other countries in the initial period of corona. The situation remains under control in Uttar Pradesh and the COVID-19 positive rate in December has been 0.01 per cent. The government did extensive monitoring of the novel COVID-19 strain, along with the genomes of any newly discovered cases that should be sequenced. Elderly people and those with severe, terminal illnesses were given extra care (PTI, 2022). Large-scale hospital infrastructure development work was completed during COVID-19. In each district, specialized physicians, ventilators, and intensive care units were set up. In every hospital, the paramedical staff, doctors, and medical equipment were all in good working order. Every hospital, whether in an urban or rural setting, had sufficient resources, and were monitored from time to time.

1.4. Communication, COVID and Campaign

The COVID-19 pandemic tested the public health system's ability to manage a new and complex virus, requiring measures like staying home, prolonged masking, and multiple vaccinations (Albarracin et al., 2024).

In December 2019, a new pathogen emerged, quickly triggering one of the most significant global health crises in history. The virus, named SARS-CoV-2, causes the

disease COVID-19, as designated by the World Health Organization (WHO). Its rapid worldwide spread raised public concerns, and the many uncertainties surrounding the virus led to widespread panic. The mass media became the primary source of information about the novel coronavirus, much like it did during previous pandemics such as SARS (2003), H1N1 (2009), and MERS (2012). Media played a crucial role in tracking the pandemic by providing real-time updates and risking their own safety to report news. In today's world, mass media serves as a vital platform for public health communication, healthcare education, and social distancing measures while maintaining social connections.

1.5. Statement of Problem

The novel Coronavirus brought major changes in the normal lifestyle of people. COVID-19 awareness and healthy changes in people's daily habits have played a very positive role in declining COVID-19 patients. But the Health news coverage of mainstream media is not up to mark. The Centers for Disease Control and Prevention (CDC) of the United States has issued a warning about the social upheaval caused by COVID-19. It recommends people take a break from the mainstream media as it is causing more mental problems. The mainstream media through their news stories is arousing anxiety and panic among readers rather than providing contextual information related to health. In India, the poor continue to have limited access to basic health determinants as well as government-funded curative services during illness (Banerjee et al., 2012).

Health campaigns with more widespread use have proved highly effective in raising COVID-19 knowledge among the rich population. However, this mode of communication lacks effectiveness in populations, resulting in these residents having little access to vital COVID-19 information. So, this study will explore how the COVID-19 Health Campaign has been effective for people residing in slums and the health campaign could serve as a tool for disseminating awareness and bringing Social and Behavioral change among people. The goal of the study is to understand the impact related to the COVID-19 health campaign at the grassroots level of

Lucknow City, Uttar Pradesh. The researcher will use Qualitative and Quantitative approaches for the study.

1.6. Theoretical Framework

Semiotics: The Study of Visual Language and Signs : According to De Saussure, language is a "profusion of signs." This theory says communication and behavior are all assemblies of signs that are controlled by codes or sets of laws. Through careful observation and analysis, these signs can be used to discern meaning. De Saussure defined Valeur as the interaction between signals, or the relationship between them, as the factor that determines meaning

Rhetoric: The Art of Persuasive Writing and Public Speaking : Price (2005) refers to as the "craft of communicating through one or more media with a particular set of audiences for specific purposes," entails "informing, entertaining, attacking, or reassuring – far more than just persuading" ("Chunking Content"). To put it even more broadly, rhetoric is the art of "human symbol use" in communication (Foss, "Rhetorical theory").

Health-Based Models/Theories: It is one of the most significant social-psychological theories that has been developed to explain how healthy people want to avoid illness. The model demonstrates the significance of border modes of communication, such as the influence of mass media, on health behaviours. The health belief model also concentrates on client perceptions and beliefs that can be changed to improve health behaviours (Abraham & Sheeran, 2014).

Ecological Models of Health Behaviour : The basic idea of this model is that behaviour is influenced at several levels, including intrapersonal (biological, psychological), interpersonal (social, cultural), organisational, community, physical environment, and policy.

Social Cognitive Theory : This mainly emphasis on Reciprocal Determinism making an interaction between people and environment. This also posits dynamic interplay of personal, behavioral and environmental influences of human behavior. It

also examines the people potential abilities to alter and construct the environment they devise for themselves.

1.6. Research Gap

Scholars have increasingly examined the role of health communication during the COVID-19 pandemic, yet there remains a significant void when it comes to understanding the specific contribution of health journalism, particularly in urban centers such as Lucknow, the capital of Uttar Pradesh. Much of the existing research tends to concentrate on assessing awareness levels among communities. While this is important, it often overlooks the broader question of how health campaigns can act as agents of social and behavioral transformation, especially across contrasting socio-economic groups such as residents of informal settlements and more privileged urban populations.

Although health campaigns have long been acknowledged as essential tools in public health promotion, their deeper influence on shaping long-term health behaviors has not been sufficiently explored. Current studies largely emphasize knowledge dissemination but rarely consider how individuals interpret these messages, adapt them to their social realities, and ultimately incorporate them into their daily routines. As a result, the transformative capacity of health campaigns beyond simply raising awareness remains under-investigated.

This study attempts to fill that gap by focusing on how campaigns rooted in health journalism and communication can generate sustainable behavioral change. It aims to investigate the ways in which these campaigns encourage healthier choices, improve preventive health practices, and reduce misinformation, while also being sensitive to the psychological well-being of the public. Importantly, the study will move away from traditional media-centered perspectives and highlight the importance of inclusive, culturally relevant, and community-driven strategies.

By doing so, this research emphasizes that effective health campaigns should not merely inform, but also empower communities, foster resilience, and contribute to long-term improvements in public health. In turn, this underscores the role of health

journalism as more than just a vehicle of information it is a powerful medium capable of inspiring collective action and meaningful social change.

1.7. Research Design

The study adopts a mixed-methods approach, combining both quantitative and qualitative research designs to effectively address the objective. In order to address complicated public health challenges and provide a more comprehensive understanding of health behaviors and outcomes, mixed-method research is a crucial approach because of its capacity to integrate quantitative data with firsthand accounts, which eventually results in more successful interventions and policies in order to create complete strategies that enhance health outcomes for a variety of populations (Kaur, 2016).

The study aims to explore the social and behavioral changes resulting from the COVID-19 health campaign in the Lucknow district. To achieve a comprehensive understanding, the research is conducted in two stages. First, the study segments society into distinct strata—Informal and Formal settlements—and examines factors such as media availability, access, and awareness. It also investigates the extent to which these campaigns are bringing about significant social and behavioral changes, analyzing the stages of communication in reaching different audiences, and exploring the role of mediators in the flow of information. This approach provides a detailed and nuanced analysis of how the campaign has impacted various segments of the population and highlights areas where health communication may be lacking or ineffective.

Second, the study critically evaluates the overall impact of the health campaign on these groups, employing semiotic analysis to uncover gaps in communication. It assesses the campaign's effectiveness in fostering meaningful changes and determines which group benefited the most from these efforts. This multi-faceted methodology ensures a comprehensive evaluation of the campaign's reach,

effectiveness, and impact on diverse communities, providing valuable insights for future public health initiatives.

1.8. Research Methods

A survey method was employed for the first stage of the study, utilizing both observation and scheduled interviews for informal settlement, who were predominantly illiterate. For the formal settlements, a Google-form survey and focus group discussions were used.

For the formal settlements, both the Google survey and the schedule method were employed. Focus group discussions were conducted with six to twelve individuals simultaneously, with a moderator guiding the participants through a largely unstructured conversation on the study's topic (Wimmer & Dominick, 2010). This approach helped gather in-depth responses and foster a dynamic exchange of ideas.

Additionally, semiotic analysis will be utilized to evaluate the effectiveness of the COVID-19 health campaigns, particularly those based in the Lucknow district. By applying semiotic analysis, the study will assess how the health messages are constructed, interpreted, and whether they effectively influence public behavior.

1.9. Sampling

The study employs Simple Randomized Multipurpose Cluster Sampling and Purposive sampling to select two distinct groups: informal and formal settlements society in the Lucknow district. For informal residents, the sample includes individuals with limited literacy, chosen through a structured schedule method. The formal group is sampled through Google-form surveys and focus group discussions. This targeted sampling approach ensures representation from both ends of the socio-economic spectrum, facilitating a comprehensive analysis of the health campaign's impact.

1.9.1. Sample Study

1.9.2. Urban Informal Settlements

The first step will be dealing with the Survey- Schedule- observation method to study the Informal Settlements of Lucknow with a population of 7,72,807 distributed in six Zones. A densely populated, urban residential neighborhood with poor housing that is frequently connected to poverty and has inadequate infrastructure is called a slum (Olotuah, 2011). The sample of 22 informal settlement areas is collected using the sampling technique of Randomized Multistage Cluster Sampling and incorporating 180 respondents. The Randomized multistage cluster sampling (Fig.2. Randomized Multistage Cluster Sampling (Scribbr, 2021)) is appropriate for large, geographically distributed populations because it divides the population into clusters, chooses a subset of those clusters at random, and then chooses smaller units at random from those clusters for the final sample. The other probability sampling involves having a list of the whole population, in some cases, there is no way to obtain such a list. This problem could be rectified by dividing a sample into groups or categories i.e., performing Cluster Sampling Technique (Wimmer & Dominick, 2010).

1.9.3. Urban Formal Settlements

Under this method majorly online survey and focus-group studies on few were performed by targeting all rich localities of Lucknow: Indira Nagar, Hazratganj, Gomti Nagar Extension, Mahanagar and Aliganj by Purposive Non- Probability sampling method. Purposive sampling, sometimes referred to as judgmental or selective sampling, is a non-probability sampling technique in which researchers deliberately choose participants not at random but rather according to particular traits, expertise, or experiences pertinent to their study issue (Wimmer & Dominick, 2010). For this study 210 respondents were purposively chosen and were fulfilling the urban formal settlement criteria. The "elite" are a small group of individuals who, within a society or particular field, possess an excessive amount of wealth, privilege, power, or talent; they are frequently distinguished by their high status and influence

(Mahr, 2018). Here are the six rich localities of Lucknow (Khurana, Jasmine 2022) and the list of selected areas with their total population (Close & Zinkhan, 2009).

1.9.4. Campaign Analysis

To study the effectiveness of COVID-19 health-based campaigns, the top five campaigns: such as Do Gaj Duri, mask hai Zaurui, Stay Home, stay Safe; I support janta curfew; Aarogya Setu 'Download the app now' and Har Ghar Dastak were selected based on those most remembered by people during the pilot study. For each campaign, three ads were chosen for analysis, totalling 18 ads. These were selected based on their high ratings according to SEO metrics on Google search engine. Using the semiotic analytical tool the analysis were performed. Semiotic Analysis is the study of signs and sign processes, including warning signs, branding, emojis, and cultural representations, is known as semiotics. More so than seeing signals and their meanings, knowing semiotics is a useful skill to supplement other consumer insights techniques. It can be useful for improving exclusivity and inclusion as well as for spotting new trends and opportunities (Dunstone, 2019).

1.10. Area of Study

Lucknow is the capital city of state of Uttar Pradesh, India and is the largest city in terms of the geographical area. The district lies on 26.8467⁰N – 80.9462⁰E and geographical area of 2528sq km. It experiences a stark socio-economic divide, with informal and formal groups representing two vastly different living conditions. Many cities' dwellers labour in low-paying, informal employment in slums, which are defined by overcrowding, poor infrastructure, poor sanitation, and restricted access to healthcare and education. The privileged groups, on the other hand, lead luxurious lives with access to first-rate healthcare, education, and facilities, and they frequently live in well-planned communities with dependable infrastructure. Because the wealthy maintain their standing through resources, social networks, and wealth, while slum dwellers confront substantial obstacles to upward mobility, this socioeconomic gap feeds poverty cycles. In order to guarantee more inclusive growth

and opportunity for the underprivileged, addressing these disparities calls for concentrated efforts in the areas of affordable housing, education, healthcare access, and urban planning.

Urban informal settlements areas covered for study were: Ghantaghar, Pakka Pul (Near Imambada), Phool Mandi (Near Bada Imambada); Shram Vihar, Aishbagh; Balu Mandi {Thedi Pulia}; Daliganj Crossing; Engineering Chauraha; Hasanganj {Daliganj}; Malin Basti Sec. 12 {Near Engineering College}; Balmikinagar Metro city {Near Nishatganj Bridge}; Gomtinagar Railway station {Vijay Khand}; Govind Vihar Chinhat; Husariya; Janeshwar Park Opp. Gate No. 4; Malin Basti Sec. 23 {Near Indraprastha Apt.}; Sarvodaya Nagar {Nishatganj}; Vineet Khand Gomtinagar; Alambagh Bus Stand; Durgapuri Metro Station; Taalkatora Rajajipuram; Polytechnic; Near Indraprasth hotel; Near Matiyari.

Urban formal settlements areas covered for study were: Indira Nagar, Hazratganj, Gomti Nagar

Extension, Mahanagar and Aliganj

1.11. Key Findings

1.11.1. Media engagement during the COVID-19

During the COVID-19 pandemic, diverse mediums and media instruments were heavily utilized to keep people connected, informed, entertained, and educated despite physical distances. Here are some key mediums and instruments that were engaged during the pandemic:

a) **Mainstream Media:** During the lockdown period of COVID-19, mainstream media such as Television, Newspaper and Radio has come up with unique shows and programs which tends to update the audiences. The availability of mainstream was high in formal settlement section of society, while in urban informal settlement residents only 22 % of sampled population has television, but among that only 8 % of them uses it for watching shows and very few nearly 2-3% uses it for watching news channel during pandemic. 8 % of respondents avail for newspaper or get to

read at their workplace (Nagar Nigam and Household), and only 1% of sampled respondents were using it during pandemic. Mobile phones were highly available and used convergent media, accounts 70 % of respondents but very the radio feature of mobile phone were used by 6% of them.

b) **Digital Media:** It has played crucial role in disseminating the information to the audiences, accompanying social media and news website under it. Through this people were able to grasp every second's information. You Tube was highly used platform in both the region formal and informal settlement accounts (92.9 %) and (65.6 %), followed by in both region Social Media accounts (84.4 %) and (64.4 %) and lastly New Websites (78.6 %) and (28.9 %). While usage of social media shoes WhatsApp were highly used social media among formal settlement class accounting (100 %), followed by Facebook (76.2 %), Instagram (47.6 %) and 'X' formerly Twitter (42.9 %). The role of LinkedIn was minimal, on the other hand, in slum region 35.6 %informal settlement groups did not use any social media and WhatsApp was also highly used among them accounting 40%, while Facebook 13.3 % and Instagram 4.4% among slum region of Lucknow. Moreover, among the digital media the Aarogya Setu app has been used by the formal settlement people, while not much in the informal settlement group.

c) **Outdoor Media:** This accompanies the hoarding, banner, murals, health workers awareness campaign which benefited all the informal settlement groups of Lucknow by providing vaccine, mask and sanitizers like facility. The outdoor media contains more visual than text, hence catches more attention and found to very helpful because of low literacy rates in slum regions (88.9 %). Outdoor media helps around (47.04 %) of informal settlement groups, while (31.73 %) of respondents were benefited from Police announcement and (31.42 %) from Government health workers.

While for formal settlement group, around (9.5 %) of respondents believed they have gained valuable insight from outdoor media, while around (14.3 %) of were benefited from police announcement and (9.5 %) had also acquired information from health workers in their colonies. On contrast formal settlement group also

believed outdoor media was just political vote game, rather any source of information, major tends to neglect the information in it.

d) Podcasts and audio Media: These are highly booming media platforms, during covid pandemic podcasts and audio media were very effective in disseminating awareness. Podcasts such as Spotify, Audible and Wynk Music, were coming with short ads and policy awareness voice notes in between of their songs which were highly noticed by the formal settlement groups, but least by slum regions. Also, the telephonic call audio of Amitabh Bachan has high recognition among formal settlement group, they can recall the safety measures delivered in caller tune but cannot recall the full helpline number delivered, while asking for reason they stated that they tend to get impatient for getting answer of their call, also found it monotonous throughout and too long to heard it patiently. Whereas on the other hand, informal settlement regions did not get benefitted from the podcast and hardly remembers the Amitabh Bachan telephonic call audio.

e) Extensive coverage of Campaign and Advertisements: During the pandemic many organizations including government came forward with their extensive campaign such as Janta Curfew, Har Ghar Dhastak 2.0 covering whole nation while for Uttar Pradesh there were several campaigns running on ground such as No Mask, No entry, Meri Gali Meri Zimedari. This has really benefited both the class of society in making citizen more informed and awarded in terms of safety measures and reviving the protocols. It is also believed that pandemic has brought the new creativity in the world of ads; many organizations have come up with interesting slogans and catchy lines to hold the eye of viewers. The prominent slogans which audience easily recall were by formal settlement Class were Do gaj duri Mask hai jaruri (100 %), Jab tak Dawai nahi Tab Tak Dhilayi Nahi (86.2 %) and Corona Harega India Jeetega (78.6 %), while for informal settlement they have listened but cannot recall. The government has also come up with public service adverts, informing about the hand washing techniques, vaccination, wearing mask mandate and others, this includes the percentage of viewers for formal settlement class were 91.4 % Outdoor Billboard (Narendra Modi &Yogi), 20.5 % Public Service (Akshay

Kumar), 81.9 % Aarogya Setu (Ajay Devgan) and 85.7 % Caller tune (Amitabh Bachan).

1.11.2 Social and Behavioral modifications induced by the COVID-19-based health communication campaign in Urban informal settlement region

The COVID-19 health communication campaigns in Lucknow district, like in many other parts of India, played a crucial role in shaping the social and behavioral responses to the pandemic. These campaigns were designed to educate, inform, and influence public attitudes and behaviors to reduce the spread of the virus. The social and behavioral modifications induced by these campaigns were widespread, and they focused on both public health practices and socio-cultural changes. To get comprehensive insight Urban informal and formal settlement were discussed here with:

Urban informal settlement group pertaining for Social Change

During the pandemic, social change was also a widely discussed topic. The campaign and health workers targeting informal settlement residents persuading them for social change for maintaining healthy lifestyle and were witnessed by them such as- Restricted travel (19.4 %), Healthy good Intake (28.9 %), Sanitation in Public Places (23.3 %), Online Education (12.8 %) and digital transaction (15.6 %). Although despite extensive coverage by national and regional media towards corona social change only 8.3 % of respondents strongly agree, that they have found the positive social changes in themselves even after the pandemic, while 14.4 % of individual were agree, 25.6% were found to neutral with statement, 17.2% were found to be disagree and 34.4% were found to be strongly disagree. The major influencing factor of social changes among informal settlement groups were – (31%) Community Behavior, (13%) Media Campaign, (7%) Interpersonal Communication (8%) Personal & Emotional facts and (41%) of dwellers did not find any change among them.

A) Shift to Online Platforms and Digital Behavior

- **Digital Transactions:** The pandemic has brought huge shifts towards digital world, a shift from cash-based society to digital transactions. During the period it was widely advised about being in less contact with others, do minimal cash exchange, to resist the flow of corona virus. Hence, leading to increased adoption of mobile wallets, UPI-based transactions, and online shopping among informal settlement groups, even though most of them run small scale shops like pan-masala, vegetables etc., they started putting QR scanners for digital transactions. In Fig. Digital Transaction: During and After COVID-19 (slums), the data shows that, during COVID-19 (29.4 %) sampled population is likely to perform digital transaction always, (25.6 %) of sampled population used to do it often, while there is slight hike in digital transaction among informal settlement groups after COVID-19, 32.2% of sampled population perform always, 25.6% do digital transaction often. While still there is some group of respondents who are not interested in digital transaction even during and after the COVID-19 pandemic- such as 12.8 % of respondent never did digital transaction during corona and 10.6 % tends to do never after pandemic.
- **Online Education:** Education among informal settlement groups were quite uncommon, most of their children are involved in activities with them such as rag picker and doing household chores. While in the huge hike in digital world, few families have smart phone but not efficiently used for education purposes. In fig. Online Education: During and After COVID-19, the data of during corona shows that 3.9% of respondents perform always, 6.7 % of respondents perform often, 11.7 % used to do sometimes, while 46.7 % of informal settlement groups never go for online education but on contrast the graph after COVID-19 shows no change in online education pattern. In this phase 2.8 % of respondents used to go for online education always, 7.8 % perform online education often, 19.4 % tends to perform online education sometimes, while 38.9% of sampled population never led their students open for online education, this group also consists of people having no children in age of education especially schooling.

B) Awareness in Social Norms and Hygiene

- **Restricted Travel:** During pandemic it was advised to restrict your travel and tries to be at home. The period when travel was restricted from governments, informal settlement groups did not step out of house, while many of them migrated to their hometown and villages. On the other hand, after pandemic, they cannot restrict their travel as in search of daily wages and income. In the fig. Restricted travel: During & After COVID-19, the data shows that during pandemic 26.1 % of informal settlement groups had restricted their travel always, 23.3 % of sampled population used to do often. On the other hand, there was a decline in restricted travel among the urban informal settlements in post COVID period, only 8.9 % of informal settlement groups have been restricted their travel always, while 14.4 % had restricted their travel often. While during corona 6.7 % of sampled population had never restricted their travel, where as 19.4 %.
- **Using sanitation facility at Public Places:** During the pandemic it was highly recommended to follow cleanliness, maintaining hygiene and usage of sanitation facility especially at public places. In fig. using sanitation facility at Public Places: During & After COVID-19 the data of during corona shows that 14.4% of respondent was likely to use sanitation facility always and often availbale at public place, 19.4 % of respondents were likely to use sometimes, while there was slight decline in sanitation usage pattern after corona 15 % of informal settlement groups used to it always, 13.3 % of respondents uses it often, 28.3 % of respondents tends to use it sometimes. While 28.9 % tends to use it never during pandemic and 23.9% after pandemic.

Key Findings:

- Prominent Social Change message in COVID-19 Campaign witnessed by informal settlement groups were: Restricted Travel (85.0%), Sanitation in Public Places (83.9%).
- Least seen Social Change message in COVID-19 Campaign witnessed by informal settlement groups was Online Education (76.7 %).

- 41 % of sample Urban informal settlement respondents were influenced by nothing for Social Change
- The major factor that influenced informal settlement groups for social change was Community behaviour (31%), Media Campaign (13%), Personal and Emotional Factor (8%) and Interpersonal Communication (7%).
- 53.9 % of informal settlement groups found significant social change after the two years of global pandemic.
- During & After figures of Social Change were: Digital Transactions (87.2%) & (89.4 %), Online Education: 53.3 % 61.1 %, Restricted Travel: 93.3 & 80.6, Using sanitation facility at Public Places: 71.1 & 76.1
- Hence, Digital Transaction, Online Education and Using sanitation facility at Public Places is increased after COVID-19 pandemic, while restricted travel is decreased in after corona

1.11.3 Behavioral Change: Enhanced Awareness and Acceptance of Government Guidelines among Urban informal settlement

Public Health Campaigns: During pandemic there were campaign designed while considering the marginalized section of society such as informal settlement groups. These groups were mostly illiterate, so campaigns consisting of more visual elements so that it can be easily recognized by them. While the safety measures covered by public health campaign were as shown in fig. Behavior you have seen in COVID-19 Campaign (Urban Informal settlement) consisting of elements like wearing mask, Social Distancing, Washing Hand with soap, Avoiding Handshakes, covering mouth while coughing/sneezing and vaccination usage. Where as wearing mask was widely covered campaigns and seen by informal settlement groups 52.8 %, always, 25.6 % of them seen it often and 21.7 % had seen it sometimes. Secondly, vaccination drive was noticed by informal settlement groups 47. 8 % always, 20 % of informal settlement groups had seen it often, 17.8 % of them had witnessed it sometimes. Then it was followed by social distancing 30.6 % had seen it always while 43.3% of

them had witnessed them always. While other important safety measures seen always during pandemic were washing hand frequently 36.1%, followed by avoiding 18.9 %, covering mouth while coughing/ sneezing 19.4 % and lastly using sanitizer 9.4 %.

Increased Vaccination awareness: For health information about vaccination awareness was majorly covered by campaigns. In fig. Behavior you have seen in COVID-19 Campaign (Urban informal settlement) were 47. 8% of informal settlement groups had seen the vaccine related information always, 20 % of them had come across quite often, 17.8 % had witnessed it sometimes, 6.7 % had seen it rarely, lastly only 7.8% had seen never.

Health Workers: Workers such as Agankari, ASHA's used to visit the slum region with the kit of covid vaccination. There they provide vaccination services and update the informal settlement groups with the safety measures and healthy habit to be followed, instructing them with hand washing habit, wearing mask and maintaining distances among individuals. The fig.1 major Sources of Information in Urban Informal Settlement (%) that, the data accounts for health information for government health workers was 31.42 %.

1.11.4 Mapping Behavioral Change among informal settlement groups: During and After COVID Analysis

Mask Wearing Habit: During and After COVID-19

Mask Wearing was highly recommended during pandemic, while it was difficult for informal settlement groups, to bring that behavioral change due to their lack of knowledge and resources. While the crucial steps taken by the government and health workers, as asking them to wear mask before collecting the free rasans provided by the government during the period. In fig Mask Wearing Habit: During and post- COVID-19 (Urban Informal Settlement), the data shows that, during corona 30.6% of informal settlement groups were used to wear mask, where 8.9 % of respondents wears it often, 27.2% of informal settlement residents wear it sometimes, 8.3% of respondents wear it occasionally and 25.0 % wear never. There was stark decline observed in mask wearing habits after COVID-19 period. Only

10.6 % of informal settlement groups used to wear always, 12.8 % wear it often, 21.7 % informal settlement groups wear it sometimes, 18.9 % informal settlement groups wear it occasionally, while majority of the informal settlement groups 36.1% wear never in post covid period.

Mouth Covering while Coughing & Sneezing: During & After COVID 19

Mouth covering while coughing and sneezing were healthy and hygiene habit that was highly followed among educated class of society. While persisting such change for uneducated slum workers was bit challenging task. The visit health workers door-to-door campaign had motivated the informal settlement groups of Lucknow for such healthy change. In Fig. Covering mouth while coughing/ sneezing: During and post-COVID-19, the data of during pandemic shows that 11.7 % of respondents always use to cover their mouth, 21.7 % of informal settlement groups used to do often, 19.4 % of informal settlement groups were used to do sometimes, while 23.9 % of respondents do it occasionally while 23.3% of informal settlement groups used to do never. There was no major difference in during and after covid-19 period. 13.9 % of informal settlement groups used to cover their mouth always, 11.1% of respondents used to do often, 21.7% of informal settlement groups sometimes, 25 % used to do occasionally, whereas 28.3% of respondents do it never. This shows the positive effect of door-to- door campaign run by government.

Washing Hand with Soap: During & After COVID-19 (Urban Informal settlement)

Slum dwellers being the uneducated class, comprising with lack of resources had the habit of using mud for washing hands, but during corona with the government initiative of providing safety kit and rasans they adhere the habit of using soap for washing hands, that too frequently during corona. In Fig. Washing Hand with Soap: During & After COVID-19 (Slum), the data shows that 23.3 % of slum dweller always uses soap for handwashing, 21.7 % of respondents uses it often, 30.6 % of informal settlement groups do it sometimes, 15.6 % of informal settlement groups do it occasionally where as 8.9% of individuals tends to do it never. While in the

after pandemic period, there was minor difference were seen in after COVID-19 period. 25.0 % of respondents were seen doing it always, 13.9 % of informal settlement groups were seen doing it often, 30 % of informal settlement groups using it sometimes, 21.1% of informal settlement groups used to do it occasionally while 10.0% of informal settlement groups did it never.

Social Distancing Habit: During & After COVID-19

Slum dwellers mainly resides on the encroachment area, hence with family members of seven and eight resides in compact region, exhibiting the rare chance of following social distancing at home, while in the discussion it was found they tries to maintain social distancing at their workplace. Social Distancing Habit: During & After COVID-19 (Slum) the data shows that 6.7 % of informal settlement groups follows social distancing habit always, 14.4 % of informal settlement groups were used to do often, 28.9 % of informal settlement groups used to do sometimes, 22.8 % of respondents follows it occasionally, while 27.2 % of informal settlement groups used to do never. While there was a slight difference in post pandemic, 5.6 % of informal settlement groups were used to follow social distancing habit always after pandemic, 8.3 % of individuals tends to it often, 21.7 % of respondents to it sometimes, 30 % of respondents follows it occasionally, while majority 34.4 % of informal settlement groups follows never.

Key Findings:

- Prominent Behavioral Change message in COVID-19 Campaign witnessed by informal settlement groups were : Wearing Mask (100 %), Social Distancing (100 %), Washing Hand Frequently (92.8 %) and Avoiding Crowded Place (91.7 %)
- Least seen Behavioral Change message in COVID-19 Campaign witnessed by informal settlement groups was Using Sanitizer (73.3 %).
- The major factor that influenced informal settlement groups for Behavioral Change was Reward System (53 %), Health Worker (23%), Media Campaign (17 %) and Self Thought (7%).

- 73.8 % of informal settlement groups had found significant change after the two years of global pandemic.
- **Safety Health Measures:** Wearing Mask 75.0 % & 63.9 % | Social Distancing: 72.8 % & 65.6 %
- **Maintaining Hygiene:** Cover mouth while coughing/sneezing : 76.7 % & 71.7 % | Washing Hand with Soap : 91.1 % & 90.0 %
- Hence, Wearing Mask, Social Distancing had decreased after COVID-19 while Covering mouth while coughing/sneezing and Washing Hand with Soap remain unaffected there is minimal change.

1.11.5. Individuals pertaining for Social Change (Formal Settlement group)

During the pandemic, internet was full of COVID-19 campaigns disseminating awareness about the healthy lifestyle to boost our immunity pertaining people for social changes through the campaign, which have been witnessed by people highlighting aspects- such as restricted travel (34.3 %), Healthy good Intake (10.5%), Sanitation in Public Places (26.7%), Online Education (15.2 %) and digital transaction (27.6 %). Even 36.2% of respondents strongly agree, that they have found the positive social changes in themselves even after the pandemic, 26.7% of individual were agree, 21.4% were found to neutral with statement, while 11% were found to be disagree and 4.8% were found to be strongly disagree.

The major influencing factor of social changes were – (30 %) Community Behavior, (12 %) Media Campaign, (30 %) Interpersonal Communication and (28 %) Personal & Emotional facts that people account for behavioral changes.

Shift to Online Platforms and Digital Behavior

- **Digital Transactions:** The pandemic promoted a shift from cash-based to digital transactions for safety and convenience. Health campaigns highlighted the reduced risk of virus transmission through digital payments, leading to increased adoption of mobile wallets, UPI-based transactions, and online shopping. In Fig.

Digital Transaction: During and After COVID-19, the data shows that, during COVID-19 43.3 % sampled population is likely to perform digital transaction always, 19.5 % of sampled population used to do it often, **while there is hike in digital transaction among individual after COVID-19**, 46.2 % of sampled population perform always, 21 % do digital transaction often. While, still there is some group of respondents who are not interested in digital transaction even during and after the COVID-19 pandemic- such as 12.4 % of respondent never did digital transaction during corona and 6.7 % tends to do never after pandemic.

- **Online Education:** Schools, colleges, and coaching centers in Lucknow transitioned to online learning platforms. The campaign emphasized the importance of adapting to digital education. Families with access to smartphones and the internet began to prioritize digital literacy to ensure their children could continue their education. In fig. Online Education: During and After COVID-19, the data of during corona shows that majority of individual has shifted in online education pertaining 36.7 % of respondents perform always, 26.7 % of respondents perform often, 20 % used to do sometimes, **but on contrast the graph of post COVID-19 shows decline in online education.** In this phase only 33.3 % of respondents used to perform always, 32.4 % perform online education often, 15.2 % tends to perform online education sometimes, and also there exist some group who never do online education during- covid 4.3 % and post- covid 11%.

Awareness in Social Norms and Hygiene

- **Avoidance of Social Gatherings and Restricted Travel:** Social gatherings and travel were significantly reduced in the city due to the COVID-19 communication campaigns awareness. Religious leaders and local influencers promoted smaller, safer gatherings, and people modified traditional social practices, such as large weddings or religious processions, to align with public health guidelines. In the fig. Restricted travel: During & After COVID-19, the data shows that during pandemic the respondents have majorly restricted their travel 38.6 % of sampled population and has limited their travel always and 21.9 % of sampled population used to do often. **There was a decline restricted travel amongst the**

sampled population in post COVID period, only 11.9 % of population have been restricted their travel, while 24.8 % have restricted their travel often. While there was a group who has shown no restriction even during corona such as 11% did it occasionally and 7.1% have never restricted whereas after corona 18.1 % used to do occasionally, where as 13.8 % have never restricted in after COVID-19 period.

- **Using sanitation facility at Public Places** During the pandemic it was highly recommended to follow cleanliness, maintaining hygiene and usage of sanitation facility especially at public places. In fig. using sanitation facility at Public Places: During & After COVID-19 the data of during corona shows that 37.6% of respondent was likely to use sanitation facility always available at public place, 29.5 % of respondents used it often, 19.5 % of respondents were likely to use sometimes, **while there was slight decline in sanitation usage pattern after corona 30.5 %** of respondents uses it always, 29.5 % of respondents uses it often, 28.6 % of respondents tends to use it sometimes. While 4.3 % tends to use it never during pandemic and 5.2% after pandemic.

1.11.7 Behavioral Change: Enhanced Awareness and Acceptance of Government Guidelines among Formal Settlement group

- **Public Health Campaigns:** The government's health communication campaigns through community radio, local news channels, and even loudspeakers in public spaces successfully raised awareness of government guidelines and COVID-19 protocols, such as restrictions on large gatherings, quarantine requirements, and testing. While the health campaign encompasses safety measures like in Fig. *Behaviour you have seen in COVID-19 Campaign (%)* Wearing Mask, Social Distancing, Using Sanitizer, Washing Hand frequently, Avoiding Handshakes, Avoiding Crowded place, covering mouth while coughing/sneezing. The formal settlement class highly seen hand washing habit (64.8%), covering mouth while coughing/ sneezing (31.4 %), social distancing is (22.9 %), avoiding crowded place was 18.1%, avoiding handshakes 13.8 %, while using sanitizer was minimal 5.7 %.

- **Increased Vaccination Awareness:** Campaigns specifically targeting the importance of COVID-19 vaccination led to higher awareness levels among the population about the benefits of vaccination. Despite initial hesitancy, by conducting door-to-door campaigns, using religious leaders and local influencers, and promoting success stories, the government managed to gradually increase vaccination rates in Lucknow. The majority of formal settlement group has witnessed in *Fig 1: Major Sources of COVID-19 Information (%)* that vaccination drive through outdoor advertisement, where 9.5% has sampled population has gone through it.
- **Health workers:** This includes government health workers 9.5% and Police announcements 14.3 % which helps in disseminating health related information among the sampled formal settlement groups.

1.11.8 Adoption of Preventive Health Measures: Analyzing during and Post COVID-19 among formal settlement group

- **Wearing Masks:** Wearing masks became a social norm in Lucknow. The health communication campaigns heavily stressed the importance of mask-wearing, both in personal interactions and public spaces. Visual media, such as posters and video ads, played a role in reinforcing this behavior. While in the figure *Mask Wearing Habit During and post- COVID-19* data shows during COVID-19 (15.2 %) sampled population is likely to wear mask always, 28.6 % of sampled population wears often, 43.8 % used to wear sometimes, while 7.6 % wears it occasionally and lastly, 4.8 % never wears. While after COVID-19 there was a major hike in never mask wearing habit which is 26.7 % of sampled population, 21.9 % wears it occasionally, 39 % wears mask sometimes after covid-19. While there is least number of sampled populations who wears often 5.7 % and always 6.7%. Hence, showing decline in mask wearing habit among the sampled formal settlement group.
- **Covering mouth while coughing/ sneezing:** This is very common healthy habit and many people already used to follow before COVID-19, but during the pandemic it was heightened to make follow without any failure so that avoiding the corona particles in air. In the Fig. *Covering mouth while coughing/ sneezing*, the data

shows that, 54.8 % sampled population is likely to cover mouth while coughing/sneezing, 23.8 % of sampled population covers often, 21.4 % used to cover sometimes, while population doing it occasionally and never wear 0 %. While after COVID-19 there was no such difference in covering mouth while coughing/sneezing from the data shown during the COVID-19, 56.7% of sampled populations do it always, 18.1% follow it often while 25.2 % of population do it sometimes and like in during COVID-19 case there is 0% of respondent who do it never or occasionally.

- **Using Hand Sanitizer:** During the pandemic using an alcohol-based sanitizer hand was very common safety measures. Many organization also come up with this in their campaign. In the fig. Using Hand Sanitizer: During and Post COVID-19. The data shows that, 39.0 % sampled population is likely to use sanitizer always while 20 % of sampled population covers often and sometimes, 15.2 % used to do occasionally and 5.7 % never used to do it. On contrast there was a huge difference in data from the during COVID-19 period. It shows that only 15.2 % of sampled population uses sanitizer always, 21.4 % do it often, 28.1% of populations used to do it sometimes while 19.5 % do it occasionally and 15.7 % never uses sanitizer in the after COVID-19 period.

- **Hand Washing Habit:** The "wash your hands regularly" message was widely communicated through radio, TV, and community outreach programs. There was a noticeable increase in people using hand sanitizers and washing hands frequently, especially before meals and after touching public surfaces. In the fig Using Hand Washing Habit: During and post-COVID-19. The data shows that, 45.7 % of sampled population was likely to handwash always while 23.8 % of sampled population do it often and 20% sometimes, while 10.5% used to do occasionally and 0 % do it never. While there was no such huge difference in study from the during COVID-19 period, 41.4 % of sampled population do hand wash always, 16.7 % do it often, 21.0 % of populations used to do it sometimes while 15.2 % do it occasionally and 5.7 % do it never.

Key findings

- Prominent Social Change message in COVID-19 Campaign witnessed by formal settlement groups were: Wearing Mask (100 %), Washing Hand Frequently (100 %) and Social Distancing (100 %).
- Least seen Social Change message in COVID-19 Campaign witnessed by Formal settlement groups were: Using Sanitizer
- The major factor that influenced Formal settlement groups for Behavioral change was Community behavior and Interpersonal Communication (34%), Media Campaign (23%), Personal and Emotional Factor (9 %).
- 75.2 % of Formal settlement groups had found significant behavioral change after the two years of global pandemic.
- **Safety Health Measures:** Wearing Mask 95.2 % & 73.3 % | Using Sanitizer: 94.3 % & 84.3 %
- **Maintaining Hygiene:** Cover mouth while coughing/sneezing: 100 % & 100 % | Washing Hand with Soap: 100.0 % & 94.3 %
- Hence, maintaining hygiene which includes Cover mouth while coughing/sneezing and Washing Hand with Soap were significantly followed even during and after COVID, whereas Wearing Mask and sanitizer using habit were decreased after corona

1.11.10 Analysis of COVID-19 based campaign using Individual Difference Theory

The COVID-19 campaigns in India were designed to be persuasive in nature, primarily aiming to influence the public's behavior and ensure widespread adherence to health protocols. The effectiveness of these campaigns can be analyzed in terms of their messaging, emotional appeal, and the behavior they sought to change. To

analyze COVID-19 campaigns using Selective Exposure, Perception and Retention Theory, while interpreting the messages in these campaigns.

A) Selective Exposure

Selective Exposure explains that people tend to seek out, focus on, and retain information that aligns with their preexisting beliefs, values, and attitudes. In the context of COVID-19, this theory can help us understand how different segments of the population might have responded differently to the public health campaigns.

- **Individuals' pre-existing attitudes towards health:** People who already believed in the importance of wearing masks or social distancing were more likely to selectively expose themselves to information that reinforced those beliefs. There were some groups in Urban informal settlement region, i.e slum people who believes that corona had no effect on them or their family. Among them there was a one cremator person affirms *“During pandemic and after pandemic, I am doing the same work of cremation, even during pandemic, dead bodies family did not come closer, but I use to perform all activities. Hence, corona is for upper class people, its nothing to do with poor class people.”* Therefore, group of people who did not aligned with the thoughts tends to engage less with government campaigns or media content promoting safety measures and vice-versa.
- **Social Influences:** Selective exposure could also be influenced by ideological biases or some ideal social influencer. In some cases, individuals who ideally believed there social influencer and tends to follow. The Covid campaign in their starting phases only has massively launched known faces like Ajay Devgan, Amitabh Bachan, Shah Ruk Khan and Virat Kohli and others became the face of several health campaigns promoting hand hygiene and safety measures. and others, who directly connects with audiences. While those who were skeptical about the government's management of the pandemic might have avoided or dismissed official messages about COVID-19, preferring alternative sources that reflected their views.
- **Media and Information Access:** The COVID-19 campaign had a diverse medium approach, taking account Digital media, Social media, Television,

Telephonic call, Outdoor media such as- Posters, hoarding, transit media; Door-to-door campaign etc. This had connected citizen all over the platform for one motto. Along, given the different levels of media access, those with greater access to credible sources of information (e.g., news channels, social media, etc.) might have been more exposed to official guidelines, while others in rural or less connected areas might have been exposed to distorted or less authoritative messages.

- **Targeting all strata of Society**

The analyzed COVID-19 based campaign shows that its content targets all strata of society like Urban and Rural; Poor and Formal settlement , Literate and Illiterate, Adult and Children. The campaign graphical elements composed of content in manner showing the daily life for person, such as going for vegetable buying, waiting for buses at bus stand, connecting with the majority of the audiences and also alarming about awareness and safety behavioural, whichs is crucial to be safe from corona. There was content more with graphical elements rather just focusing on writing, proving beneficial for illiterate section of society. There were also caricatures and cartoon-based content targeting the children and making them aware.

B) Perception Theory

Perception theory focuses on how individuals interpret and make sense of information based on their own subjective experiences, beliefs, and context. In the case of India's COVID-19 campaigns, how people perceived the information could significantly influence their behavior.

Cognitive Biases and Interpretation:

- **Framing:** The way COVID-19 information was **framed** could influence how people interpreted it. For instance, the message “Do Gaj Ki Doori” (Two Yards Distance) might be perceived differently based on one’s understanding of risk. Some might have seen it as a reasonable precaution, while others, especially those who doubted the severity of the pandemic, could have viewed it as an unnecessary restriction on their daily life. The **frame** in which the message was presented

(emphasizing protection versus restriction) affected how it was perceived and whether it was accepted. In fig.1 #IndiafightsCorona, *Do Gaj Duri Mask Hai jaruri*, shows how even the cross sign on bus chair, where a person cannot sit even though if seats are free and in fig 2. Showing vegetable markets might be full of corona, one should avoid visiting it, hence this is how information could be negatively perceived. While at the same time positive believer of corona found it useful information of disseminating awareness of maintaining distance among two people. So the message of corona could had been perceived in two ways.

- **Fear and Urgency Appeal:** Some campaigns used fear appeals (e.g., "We are all at risk" or "Together, we will fight this battle"), which may have caused fear-based perceptions. The tagline in red color 'Janta Curfew' 'support the nation' and 'Vaccination ensured, Life secured' signifies danger, alarming and urgency whereas "Mask Hai Zaroori" (Mask is Necessary) signifies urgency. While the written text denotes vaccination could secure your life, so without delay one should come forward and have their vaccination. Similarly, 'Janta curfew' and 'support the nation' highlights the fear appeal and strong should be taken against. This led to individual perceived it as the virus as a serious threat and one should adhere to the pandemic safety guidelines. During the survey of informal and formal settlement group it was found the depiction of red corona in posters lead them the feel of danger and threat.
- **Social Influence:** The social norms around the virus—such as whether wearing a mask was seen as a common practice in someone's community—greatly affected people's perception of the campaign. If masks were worn by everyone in a community, individuals would be more likely to adopt the behavior themselves, as they would perceive it as socially acceptable or even expected. Therefore, campaign designed in such way showing mask is most common safety practice and adhere by everyone. Along tagline of campaign like *I support Janta curfew and Har Ghar Dastak*, emphasize the societal and community perspective rather than individualistic perspective. Along, in figure Indiafightscorona shows the setting of people around the societal group and atmosphere such as- bus stand, vegetable shop.

Cultural Perception:

- **Informal vs. Formal settlement region's Perception:** Perception theory also explains how campaigns might be interpreted differently depending on one's context. People in rural areas, where healthcare infrastructure and access to information were more limited, might have **perceived** the virus and the associated risks differently than those in urban areas with better access to medical information. This might have led to varying levels of trust and compliance with the government's health messaging.

C) Selective Retention:

- **Reinforcing pre-existing beliefs:** Once exposed to information, people are likely to retain information that is consistent with their existing attitudes. For example, people who have already been practicing habits such as wearing masks, covering mouth while coughing and sneezing, tend to follow these habits more than others. Such as majority of formal settlement groups were aligned with this information, whereas informal groups were having hard to follow and retain these habits. Hence, informal settlement group who doubted the severity of the virus might have forgotten or rejected key messages from the campaign, declining the concept of pre-existing beliefs.
- **Appeal to National Pride:** The COVID-19 campaign had majorly appealed to national pride, tagline such as- *Corona Harega, India Jeetega and Support Janta Curfew, Support Nation*; making individual feel that together we can defeat, and we all have to come together as a country, irrespective of culture, caste and gender. Whereas logo of Arogya Setu was designed with using tricolor of Indian flag: Orange, white and green, denoting application is meant for the nation citizen and it is there as a shield.
- **Catchy Phrases and Jargons :** This is one of crucial factor for retention, making even children to remember and follow the steps such as: *Do gaj duri, mask hai jaruri, Corona harega India Jeetega; I support Janta Curfew, and Har Ghar*

Dhastak. The catchy jargons were on people mouth and helps them to acquire for significant behavioral change of wearing mask, maintaining social distancing.

- **Pro-longed period** : This was also one of the important reason for retention among the population, something which last more than usual period, tends to automatically make people remembered even when such things was hampering the citizens.
- **Misinformation**: Another key aspect of selective retention was the **retention of misinformation**. Those who were exposed to myths about COVID-19 or false information (e.g., COVID-19 is a hoax) might have retained these beliefs, undermining the official campaigns. Where as whatsapp and other social media were floated with information having zero credibility about the source of message.
- **Cognitive Dissonance**: People who experienced **cognitive dissonance** (e.g., believing that COVID-19 was not a major threat but also knowing they should follow the guidelines) might have experienced discomfort with the official health messaging. To reduce this discomfort, they might have **reinterpreted** the information in a way that justified not following the guidelines, such as denying the severity of the virus or downplaying the necessity of strict measures.

Key Findings:

Using Selective Exposure/Retention Theory and Perception Theory, we can see that the COVID-19 campaigns and slogans in India had mixed levels of effectiveness based on how people were exposed to, interpreted, and retained the messages.

- Selective Exposure and Retention played a role in determining which messages individuals were more likely to engage with and retain, depending on their pre-existing beliefs, media habits, and political orientation. Those already inclined to follow health guidelines were more likely to adopt the messaging, while those skeptical about the pandemic's severity might have dismissed or ignored it.
- Perception Theory explains that individuals' interpretation of the campaigns was highly subjective, influenced by factors such as cognitive biases, fear, social

norms, and personal experiences. People's perceptions of risk, the credibility of information, and their community's actions shaped how they received and acted upon the slogans.

1.11.11 Flow of Communication pattern among the respondents

a) Availability of Major Source of Information

During pandemic mass media had played major role, where the availability of sources of information was prevalent and abundant, providing all the relevant information to the audience. Stating the major sources of information such as - Government Agencies, Press Briefing, Digital Mass Media and Public Health Campaign. In case of formal settlement, they provide information directly to formal settlement society members whereas in case of informal settlement groups, it goes across in two steps, from sources to the mediators such as Government officials/ Community leader and Nagar Nigam etc. then from here the information reaches to informal settlement group.

b) Feedback system

The flow of information during pandemic, comes with the feedback system for both group of society Formal and informal settlement. In the chart of Urban formal settlement, the flow of information shows they try to directly put their queries to the source such as Digital media, media and other agencies. On the contrast informal settlement groups used to put their queries to the man in between of sender and receiver, mostly they used to be health workers/ police men, and other government officials. Who provides information in more detailing and face to face, but there are also chances of being these messages got distorted and opinionated.

C) Opinion Leaders

In case of informal settlement groups there were a middle man in between who inform news and crucial updates about the corona to the informal settlement groups. As they have least access to all the crucial sources of media. Mediators such as health workers/ police men, and other government officials update them with the

fact and sometimes news with their opinion. This align with the theory that suggests that there is a two-step process in which information and influence are transmitted from mass media to mass audiences. The two-step flow of theory suggests that people are more influenced by communications from opinion leaders rather than mass media. Therefore, the final arrival of information to the audience is more distorted than the real fact.

1.11.12 Repercussions of COVID-19 based campaign

Awareness and Information Access:

- The COVID-19 had affected the residents in slum areas in terms of information gain. They had limited access to formal media channels like television or newspapers. Their communication largely depended on word of mouth, community leaders, local health workers, loudspeakers, and posters in public spaces, where as the formal settlement people had better access to digital media, television, and newspapers. As a result, they were more likely to receive the health messages from the campaign.
- **Impact of Personal Communication:** Health workers or community leaders in slums played a pivotal role in disseminating information. Their knowledge and trust within the community often made them key players in conveying messages, though their reach may have been limited compared to digital or mass media.
- **Digital Literacy:** Higher digital literacy and access to smartphones and the internet meant that formal settlement residents could engage with social media, online platforms, and government apps to stay informed, which may have improved the effectiveness of the campaign in among Urban formal group.

Behavioral Change and Adoption of Health Practices:

The Urban formal group likely had a better understanding of the importance of COVID-19 precautions and were able to incorporate health guidelines into their daily lives more effectively resulting in health centered Lifestyle, while slum residents

with overcrowded living conditions and lack of access to adequate sanitation or healthcare facilities, following safety guidelines was difficult. This could have led to lower levels of compliance with preventive measures and adoption behaviour changes- such as mask-wearing, social distancing, and hand hygiene. Many residents might have had to continue working in crowded conditions or could not afford to stay home due to financial constraints, making strict adherence to safety protocols challenging. On the other hand formal settlement residents due to better economic conditions and greater access to resources, they likely adhered to COVID-19 safety guidelines, such as wearing masks, social distancing, and staying home when necessary. Work-from-home policies and higher job security helped many people follow these protocols.

Health Outcomes and Impact on COVID-19 Cases:

Health communication campaigns in these areas may have been less effective in encouraging people to seek timely medical attention, leading to delays in testing and treatment in informal settlement areas. The formal settlement areas likely saw higher vaccination uptake due to better access to vaccination centers and greater trust in health communication. This group was also more likely to be aware of the benefits of vaccination through media and peer influence. With access to better healthcare, higher vaccination rates, and the ability to maintain safer living conditions (e.g., larger living spaces, ability to isolate when necessary), the Urban formal settlement population may have experienced fewer severe cases of COVID-19. Where as due to limited access to healthcare, poor living conditions, and overcrowding, the slum population likely experienced higher vulnerability to COVID-19. Despite the efforts, case rates may have remained higher, and the capacity of local healthcare services may have been stretched.

Barriers to Effective Communication:

A significant proportion of the slum population may have had low literacy rates, making it harder for them to understand written communication. This highlights the need for more tailored approaches, such as visual aids or community-based

messaging. Also, rumors and misinformation were likely prevalent in slum areas. With limited access to reliable sources of information, it is possible that myths and fears about COVID-19 spread more easily. While formal settlement areas had better access to information, they also had higher exposure to misinformation, especially through social media. This could have led to conflicting views about the virus, vaccines, and safety measures, leading to confusion or a lack of trust in the official narrative. Moreover, a potential issue in formal settlement areas could have been complacency. The access to information may have led to overconfidence in the community, with some residents possibly disregarding safety measures under the belief that they were less likely to be impacted by the virus.

1.12 Discussion

The access, availability, and usage of media in the formal and informal settlement areas of society highlight the dynamic relationship between media and social contexts, which is central to media theory. In both segments, mobile phones serve as a key source of information, reflecting the ubiquity of convergent media in contemporary society. From a media and society perspective, the widespread availability of mobile phones across socio-economic strata underscores how media technology bridges certain gaps but also highlights persistent inequalities in access. Digital platforms like YouTube, social media, and news websites are more extensively used in affluent areas, where higher digital literacy and internet access align with the media dependency theory, which suggests that individuals with more access to media resources are more likely to be influenced by them. In contrast, informal settlement groups engage with these platforms to a lesser degree, revealing the limitations imposed by lower access to technology, which reflects the concept of the "digital divide." WhatsApp, being a more accessible and universal platform, plays an essential role in communication for both groups, demonstrating the relevance of new media in enabling social change, especially in resource-poor settings.

Campaign slogans such as "Corona Harega India Jeetega" and "Do Gaj Duri, Mask Hai Jaruri," alongside outdoor billboards promoting vaccination drives, illustrate the

effectiveness of visual, mass-mediated messages. These strategies resonate across both segments, underscoring the role of mass media in disseminating health information and shaping public behavior, as discussed in the public sphere theory, which emphasizes how media plays a role in public dialogue. However, for informal settlement groups, the influence of outdoor media, police announcements, and government health workers, more attuned to interpersonal communication, is more significant. This highlights the media dependency theory's assertion that people in lower socio-economic groups may rely more on interpersonal and community-based media due to their limited access to mass media. For the formal settlement group, mainstream media and digital health campaigns like "Aarogya Setu" are more effective, aligning with the concept of active media consumption in more affluent, digitally connected populations. The least effective media for both groups, such as podcasts and telephonic calls from Amitabh Bachchan, emphasize the limitations of certain media channels, as neither group could recall helpline numbers, reinforcing the importance of context and media accessibility in shaping communication strategies. This analysis reflects how media and society interact, and how media theories help explain the differential impact of media based on socio-economic contexts and access to technology.

Social and Behavioral Change Among informal settlement groups: The COVID-19 campaign brought about noticeable social and behavioral changes among informal settlement groups, with key messages such as restricted travel and sanitation in public places resonating most strongly. However, messages related to online education had a lesser impact. From a media and society perspective, this reflects how certain social change messages can become more deeply ingrained based on their immediate relevance to daily life, particularly in marginalized communities where practical health measures like sanitation are prioritized over more abstract concepts like digital learning. Media campaigns played a critical role in spreading these messages, but factors such as community behavior and personal experiences had an even greater influence on the informal settlement groups' adaptation to these changes. Interestingly, some individuals reported not being influenced by any

external factors, indicating that social change is not solely driven by media but also by deeper, intrinsic community and societal dynamics.

On a behavioral level, the campaign led to widespread changes in practices such as wearing masks, social distancing, and handwashing, which were actively promoted through various media channels. The media's role in disseminating these health behaviors was significant, as it used both mass media and localized outreach efforts to guide communities through the pandemic. However, the effectiveness of these messages varied, with some behaviors, such as using hand sanitizers, seeing less adherence. This discrepancy highlights the importance of tailoring media campaigns to the specific needs and realities of the target community.

From a societal perspective, the role of health workers and the reward system significantly influenced behavioral change, illustrating how community-based and interpersonal communication can often be more persuasive than media alone. This reflects the theory of media and society, which suggests that media is one of many factors influencing behavior; other social and contextual factors such as community norms, interpersonal relationships, and local leadership play vital roles in reinforcing media messages. Over time, while some behaviors like mask-wearing and social distancing decreased post-pandemic, other habits like handwashing remained unaffected, demonstrating that long-term societal change is not solely dependent on media exposure but also on the broader social environment and individual actions within that environment.

The shifts in social and behavioral norms among informal settlement groups underscore the complex interaction between media, society, and individual action, where media campaigns play a crucial role in spreading health messages, but social context and community influence determine the sustainability of these changes.

Social and Behavioral Change Among Formal settlement Groups: The COVID-19 health campaign had a significant impact on the social and behavioral practices of the formal settlement group, with key messages such as sanitation in public places, restricted travel, and healthy food intake being especially prominent. However,

campaigns on digital transactions and online education had a lesser influence. From a media and health communication perspective, this demonstrates how media campaigns tailored to public health and safety can be highly effective when they align with the priorities and lifestyles of affluent groups. Health communication strategies successfully addressed concerns about hygiene and public health, areas in which these communities were more likely to engage. In contrast, messages around digital transactions and online education faced challenges, as these were not as urgent or as directly tied to immediate health risks in the minds of the audience. Effective health communication often depends on the perceived relevance of the message, which is evident in how certain topics like hygiene were readily adopted, while others did not have the same level of impact.

From a societal perspective, the major influence on social change came from community behavior and interpersonal communication. Health communication, particularly in affluent groups, is not just about media messages; it also involves how those messages are received, discussed, and enacted within social circles. Interpersonal communication—whether from family members, peers, or community leaders—played a significant role in reinforcing public health messaging and encouraging compliance with new norms. Personal and emotional factors also contributed, as the health crisis led individuals to reconsider their lifestyles and safety practices. The societal contribution of these factors highlights the importance of the context in which health messages are delivered; even in well-off communities, behavior change often requires more than just media exposure—it requires ongoing dialogue and reinforcement within trusted social networks.

Behavioral changes, such as increased hygiene practices like handwashing and covering mouths while coughing or sneezing, were widely adopted during and after the pandemic. However, behaviors like wearing masks and using hand sanitizers saw a decline once the immediate threat of the virus decreased, reflecting a temporary nature of some behavioral changes. From a health communication perspective, this suggests that while campaigns can drive initial behavior change, the sustainability of these changes often depends on how integrated the new practices are into daily life.

and their perceived relevance in the long term. Health communication needs to shift from crisis-oriented messages to long-term health behavior promotion to maintain the positive changes sparked by the pandemic.

In terms of social change, the formal settlement group experienced a shift towards increased digital transactions, reflecting a broader trend toward digitalization. However, practices like online education, restricted travel, and the use of sanitation facilities in public spaces declined after the pandemic, highlighting the shifting nature of behaviors when the crisis phase ends. From a health communication viewpoint, this suggests that while health campaigns can catalyze widespread change, sustaining those changes requires consistent and relevant messaging that adapts to evolving societal contexts. The post-pandemic decline in certain behaviors indicates the need for continued health communication efforts that reinforce positive behaviors, especially in affluent communities where media access and literacy are high. This underscores the crucial role of health communication in shaping and maintaining societal norms, particularly as the context of public health risks shifts over time.

Selective Exposure, Perception, and Retention in COVID-19 Health Campaigns:

Selective exposure is central to understanding how individuals engage with health campaigns, shaped by their pre-existing attitudes, beliefs, and media access. From a societal perspective, people often choose to engage with media that aligns with their existing worldviews and social status. In the case of the COVID-19 health campaign, messages targeted diverse groups, yet the media accessibility and appeal varied across societal segments. The formal settlement group, with greater access to digital platforms and mainstream media, was more exposed to campaigns featuring high-profile celebrities, such as Amitabh Bachan and Shah Rukh Khan, which enhanced the effectiveness of the messages. Meanwhile, informal settlement groups, who often had limited media exposure due to lower literacy and restricted access to digital devices, found it harder to engage with or remember the campaign's messages. In health communication, it's crucial to recognize selective exposure, as campaigns must be tailored to reach different societal groups through appropriate channels,

addressing the varying levels of media access and literacy. To overcome selective exposure, the campaign strategically utilized community-driven approaches, such as door-to-door communication and local health workers, ensuring messages reached even the most marginalized groups.

Selective perception refers to how individuals interpret health messages based on their social contexts and prior beliefs. From a media perspective, the health campaign used fear-based appeals, such as "Together, we will fight this battle" and "Mask Hai Zaroori," to create a sense of urgency and collective responsibility. These messages, though similar across all groups, were perceived differently by the formal settlement group and informal settlement groups. The formal settlement group, with easier access to reliable media sources and higher education levels, more readily understood and accepted the severity of the crisis. In contrast, informal settlement groups were often influenced by their immediate social environment, such as local health workers, and may have interpreted the message based on practical realities—such as the inability to afford masks or practice social distancing in crowded living conditions. Health communication theory emphasizes the need for tailoring messages based on the audience's context, including their access to media, literacy levels, and socio-economic factors. The COVID-19 campaign needed to account for these differences in selective perception to ensure its messages resonated effectively with all societal segments.

The retention of health messages over time is a key factor in ensuring sustained behavior change, and this process was influenced by both media and societal factors. From a societal perspective, individuals are more likely to retain messages when they are reinforced by social norms and local community influences. The campaign used social influence in various ways: formal settlement groups were influenced by celebrity endorsements and mainstream media, while informal settlement groups were more influenced by local health workers and peers. In media theory, this represents the role of media as a tool for reinforcing societal norms and behaviors, with media campaigns acting as catalysts for widespread behavior change. The use of health communication strategies, such as catchy slogans like "Do Gaj Duri" and "I

Support Janta Curfew," helped embed these messages in daily conversations, facilitating retention among both groups. However, the informal settlement groups faced challenges in retaining these behaviors, as economic and infrastructural barriers often made it difficult for them to practice the recommended measures. From a health communication viewpoint, campaigns must consider the socio-economic and cultural context to enhance message retention and ensure that messages resonate and stick with diverse communities. While formal settlement groups were more aligned with these health behaviors, informal settlement groups needed further support and reinforcement through continuous communication channels to ensure sustained adoption of health practices.

In conclusion, the effectiveness of the COVID-19 health campaign in shaping behavior and social change can be understood through the lens of selective exposure, perception, and retention, all while considering the societal context, media dynamics, and health communication strategies. Tailoring the campaign to different societal segments—by recognizing the varying media access, literacy levels, and socio-cultural contexts—was key in ensuring that the health messages were not only received but also understood and retained across diverse communities. Health communication must be adapted to cater to these differences, ensuring that every group, regardless of their socio-economic status, has the opportunity to engage with and act upon public health messages.

Flow of Communication Pattern Among Respondents: The availability of sources of information reveals a significant disparity in how the formal and informal settlement access and receive information. For the formal settlement group, communication flows directly from trusted sources such as government agencies, press briefings, and digital mass media, ensuring that they have direct access to reliable and timely information. The informal settlement groups, however, face a two-step communication process. They often rely on intermediaries—such as health workers, police officers, or local government officials—who relay the information, potentially filtered through their own perspectives. This difference in access highlights a media and societal divide, where the more privileged group has

immediate access to direct, unmediated sources of information, while marginalized groups rely on secondary, sometimes filtered information.

From a health communication perspective, this disparity in the flow of communication leads to unequal levels of awareness and understanding of health messages. In the case of formal settlement groups, they can directly engage with communication sources, seek clarifications, and provide immediate feedback. This enables a more efficient feedback loop and helps reduce the spread of misinformation. Moreover, digital literacy and availability of resources enable the formal settlement group to critically evaluate the information they receive, ensuring they are less susceptible to misinformation and mental stress related to the crisis. However, even in this group, misinformation and mental stress can arise, especially when overwhelming amounts of conflicting information are available, despite their access to reliable media sources.

In contrast, informal settlement groups lack direct access to crucial sources of information, which affects the quality and accuracy of the information they receive. They are more likely to depend on opinion leaders—such as health workers, police, and other local officials—for updates on the pandemic. This intermediary role of the opinion leaders is critical, as it forms the bridge between the sender (government agencies) and the receiver (informal settlement). However, this also means that the information is often mediated through the opinion leader's own interpretation of the facts, which may introduce bias or distortion. Additionally, the lack of digital literacy and the digital divide further hinder their ability to access timely and accurate information, leading to a reliance on second-hand information that may not be entirely accurate.

From a media perspective, the communication gap between these two groups also highlights a need for tailored media strategies. Informal settlement groups, being more vulnerable, require a more robust and accessible communication system, which includes overcoming barriers such as illiteracy and the digital divide. Health communication strategies must focus on using more accessible channels, such as community-based approaches and interpersonal communication, to bridge this gap.

This could involve leveraging local opinion leaders and health workers more effectively to disseminate public health information in ways that resonate with the community's daily reality. Additionally, a proper feedback system should be implemented to ensure that informal settlement groups have avenues to voice their concerns and queries about the information they receive, ensuring that the flow of communication is not one-way.

The differences in the communication flow, media access, and information dissemination between the formal and informal settlement groups underscore significant challenges in ensuring equitable health communication during a public health crisis. Society, media, and health communication perspectives must come together to create a more inclusive communication strategy that addresses these disparities, ensuring that all societal segments, regardless of their economic or educational status, have equal access to vital health information and the ability to engage in meaningful dialogue with the sources of that information.

In the context of COVID-19 health communication, the disparity in information access between Urban informal and formal settlement groups was stark. Informal settlement residents faced numerous barriers to receiving clear and reliable health information. With limited access to formal media such as television, newspapers, or digital platforms, their primary source of information came from community leaders, local health workers, loudspeakers, and posters in public spaces. This informal and often fragmented communication system meant that informal settlement groups were more likely to experience delays in seeking medical attention, and their ability to follow health guidelines was hindered by the lack of comprehensive messaging. In many cases, they also faced greater difficulty in understanding the full scope of safety measures, which impacted their overall adherence to the health protocols outlined during the pandemic.

In contrast, the Urban formal sectors had significantly better access to formal communication channels. They were able to access health information from a wide array of media sources, including digital platforms, television, and newspapers. This easy access to diverse and reliable information helped the formal settlement group

stay informed about health guidelines, vaccination drives, and other essential updates. Their higher digital literacy and better access to health resources meant they were more likely to adopt health practices such as vaccination and social distancing. Furthermore, the formal settlement groups were more proactive in seeking out health advice from trusted sources, resulting in more timely medical interventions and better compliance with health regulations.

However, despite the advantages in information access, both Urban informal and formal settlement people faced challenges in terms of misinformation. In informal settlement areas, misinformation was often spread through social networks and sometimes amplified by the lack of trust in the healthcare system. The formal settlement group, though more informed, was not immune to misinformation, especially on social media platforms, where unverified content could lead to confusion or skepticism. These challenges underscore the importance of designing health communication campaigns that are inclusive, clear, and tailored to the needs of different socio-economic groups. For more effective outreach, health communication should consider literacy levels, media access, and the socio-cultural context of the target audience, ensuring that accurate information is disseminated in ways that resonate with everyone, regardless of their social standing.

1.13 Conclusion

In conclusion, health literacy in India is not just a luxury but a necessity, and the role of health communicators becomes indispensable in ensuring that health messages are not only delivered but understood and embraced. Health communication plays a pivotal role in ensuring that medical interventions do not remain just technical solutions but are incorporated into people's everyday lives and behaviors. Without effective communication, even the most scientifically sound health measures risk being misunderstood or ignored, much like a medicine bottle with no label—ineffective and potentially harmful. In the context of the health communication campaign in Lucknow, it became evident that the effectiveness of such campaigns varied significantly across different socioeconomic groups. While the formal settlement residents, with better access to information through digital platforms,

television, and print media, adhered to safety measures and saw improved health outcomes, the slum areas faced significant barriers such as overcrowded living conditions, lack of digital literacy, and limited access to reliable information, all of which undermined the effectiveness of the campaign.

From a health communication and media perspective, these disparities highlight the need for more inclusive, multi-channel communication strategies that target all segments of society, especially the underserved. Health campaigns need to go beyond merely disseminating information; they must actively engage communities, understand their unique needs, and deliver tailored messages through trusted media channels. For instance, in slum areas, where access to digital media is limited, community-based communication through health workers, local leaders, and loudspeakers, as well as outdoor media like posters, can have a greater impact. In contrast, the formal settlement population, with higher digital literacy and access to multiple information channels, benefits from more sophisticated media strategies like social media campaigns, televised briefings, and mobile app notifications.

As suggested by experts like Joshi (2024), health communication campaigns in India need to embrace real-time feedback systems, behavioral insights, and data-driven approaches. These methods will allow policymakers and public health officials to understand not only the reach of their campaigns but also their effectiveness in influencing behavior. Such approaches would enable the evaluation of campaigns based on real-time data, identifying challenges faced by different groups and addressing them promptly. Moreover, the media plays a central role in shaping public perceptions, and with social media's vast influence, it is crucial to tackle misinformation and ensure that health messages are credible, clear, and consistent. In the case of COVID-19, misleading information often led to confusion, especially in low-literacy communities, where rumors spread faster than facts.

Ultimately, health communicators must work at the intersection of media, society, and health to ensure that communication strategies are inclusive, contextually relevant, and effective. By using both traditional and modern media platforms, engaging local opinion leaders, and adapting to the media consumption habits of

different communities, we can bridge the information gap and work towards creating a healthier, more informed society. As Kumar (2024) emphasizes, health communication is not just about transmitting information; it's about fostering understanding, trust, and behavior change that is essential to improving public health outcomes across diverse populations.

Health literacy is a need, not a luxury, in India. Because health without effective communication is like a medicine bottle without a label—useless and even dangerous—health communicators play an essential role. They make sure that health is not just provided but also understood, accepted, and embraced in a place where trust may be just as potent as medicine. Even the best medical interventions would be ineffective without health communicators. As we move forward, it is essential to create a society that understands health and how to apply that knowledge (Kumar, 2024).

1.14. Recommendations

1.14.1 For Health Campaign

Localized Messaging: Health communication campaigns must develop tailored strategies for different segments of society, especially marginalized communities. Recognizing the unique challenges faced by groups such as informal settlement groups and rural populations is essential in crafting relevant messages that resonate with their specific concerns and needs. Tailored messaging ensures that health guidelines are understood and adhered to by diverse audiences, bridging gaps caused by social, economic, and educational disparities.

Use of Visuals: In areas with lower literacy levels, incorporating more visual elements like posters, infographics, and videos can significantly enhance understanding and retention of health information. This approach will help individuals who might struggle with written communication better grasp important health messages, ensuring that essential information reaches all sections of society, regardless of their literacy levels.

Community Engagement: In slum areas and underserved communities, it is crucial to involve trusted local figures such as community leaders, health workers, and social influences to disseminate health information. These figures can bridge the gap between formal health messaging and community understanding, fostering trust and ensuring that health advice is accepted and acted upon by the local population. Engaging the community fosters an environment where health messages are more likely to be embraced and acted upon.

Combat Misinformation: A key challenge in both Urban formal and informal areas is misinformation, particularly in the digital sphere. As the formal settlement population often relies on digital platforms for health information, it is critical to focus on combating digital misinformation through fact-checking, partnerships with credible influencers, and the use of reliable sources. Clear, transparent communication through digital platforms can mitigate confusion and build trust, especially in urban settings where digital literacy is higher.

Address Economic Barriers: To support vulnerable populations, health communication campaigns must also address the economic barriers that prevent people from adhering to health guidelines. For instance, providing financial assistance, food supplies, or access to affordable healthcare can empower individuals to take necessary health precautions. Ensuring economic support for marginalized groups will lead to better adherence to health advice, as individuals in these communities are often economically constrained.

Integrate Technology: Continuing to leverage digital platforms such as social media, mobile apps, and telehealth services is essential to expanding access to health information and services. These platforms can ensure that even in remote or underserved areas, individuals can access up-to-date health advice, book appointments, or ask questions to healthcare professionals, thereby promoting health literacy and behavioral change.

Enhance Community Engagement: Future campaigns should foster partnerships between healthcare providers, local communities, and the media. By collaborating,

these stakeholders can amplify the impact of health communication efforts, ensure consistent messaging, and build a collective responsibility for public health. This approach will enhance the capacity of communities to participate in and contribute to health initiatives, fostering greater ownership of health outcomes.

Address Cultural Sensitivity: Health messages should be culturally sensitive and tailored to resonate with the diverse cultural contexts across India. Taking into account the regional, linguistic, and cultural diversity will make health messages more relatable and impactful, increasing their chances of being accepted and acted upon by various social groups.

1.14.2. Enhancing the Role of Health Communicators

Training from Grassroots Level: Given the linguistic and cultural diversity in India, it is crucial for health communicators to receive training at the grassroots level. This includes understanding local dialects, social dynamics, and the specific needs of different communities. Empowering communicators with the skills to navigate these complexities ensures that health messages are effectively delivered and understood at the community level.

Enhancing Collaboration: Health communicators should work in close collaboration with government agencies, NGOs, local leaders, and community organizations to amplify the impact of health campaigns. By combining resources, knowledge, and networks, these stakeholders can reach a broader audience and ensure that health messages are not only received but also acted upon.

Leveraging Technology: The integration of technology in health communication campaigns offers a way to bridge gaps in access to information. Utilizing social media, mobile apps, and telehealth services allows real-time communication, making it easier for individuals from various socioeconomic backgrounds to access health information quickly and efficiently. This can be particularly helpful in urban areas with high digital literacy and in rural areas where mobile phones are often the most accessible means of communication.

Getting the Community Involved: Involving the community in creating and disseminating health messages enhances trust and ensures that the messages are culturally appropriate. When community members participate in the process, they feel a sense of ownership over the health information being shared, making them more likely to adopt the recommended behaviors and spread the information within their networks.

Receiving Feedback: Continuous feedback from the community is vital for improving health communication efforts. Health communicators must actively listen to the community, understand their challenges, and adapt their messages accordingly. Feedback mechanisms can include surveys, community meetings, or digital engagement tools. This ensures that campaigns evolve with the changing needs of the population and that health communication remains relevant and impactful.

1.15. Future Scope of the Study

The disparity in media access, usage, and the flow of communication between affluent and marginalized groups during the COVID-19 health campaigns offers valuable insight into the interaction between socio-economic status and media engagement. To build on this, future studies could explore how different groups with varying levels of media accessibility—such as mobile phones, television, and digital platforms—adopt health behaviors. This research would be crucial in identifying effective media strategies that cater to communities with limited resources. Another avenue for future research involves evaluating the effectiveness of localized communication approaches, especially those driven by community leaders and health workers, in disseminating health information in resource-poor settings. Given that different socio-economic groups respond differently to public health messages, further exploration is needed on how tailored messaging resonates with these communities to bridge the gap in health literacy.

In addition, it would be beneficial to understand the long-term sustainability of behavioral changes induced by health campaigns. While certain behaviors, such as mask-wearing and social distancing, were widely adopted during the pandemic,

future studies should assess the extent to which these changes endure over time and what factors contribute to their persistence. The role of misinformation, particularly in marginalized communities, also remains an area requiring deeper investigation. Future studies could explore how misinformation spreads within these communities and its influence on health behaviors, as well as how trust in health systems affects the effectiveness of health campaigns.

Moreover, examining digital literacy and its impact on media consumption patterns can shed light on the challenges that marginalized communities face in accessing health information. A focus on digital literacy will help understand how media consumption affects people's ability to critically engage with health messages, enabling the development of better-tailored strategies. Additionally, it would be worthwhile to investigate how celebrity endorsements and mainstream media impact behavior change across different social groups, assessing whether these campaigns inspire collective responsibility or perpetuate existing social divisions.

Future research could also examine the broader role of community engagement in shaping social norms related to health. By studying how local health influencers and community leaders can alter health practices, researchers could identify strategies for fostering greater community-based involvement in health campaigns. Furthermore, integrating traditional media forms with digital platforms in health communication could help address the communication barriers faced by marginalized groups. Traditional forms of media, such as loudspeakers or face-to-face interactions, could play an important role in disseminating health information in underserved areas, and understanding how both traditional and modern media can complement each other will be essential for future campaigns.

Finally, exploring regional and cultural differences in how health messages are received would provide a more nuanced understanding of health communication strategies in India's diverse population. By recognizing the varying regional contexts and local cultural values, future studies can design more effective campaigns that resonate with specific audiences. Additionally, investigating the emotional and psychological impacts of health campaigns on different socio-economic groups will

provide insight into how fear-based messages or positive appeals influence behavior. Such research will ultimately refine health communication strategies, ensuring they not only foster behavior change but also contribute to the emotional resilience of individuals during public health crises.

In conclusion, future research should prioritize a deeper understanding of the interactions between media, society, and individual behavior in relation to health campaigns. By addressing issues of accessibility, media literacy, community involvement, and the influence of cultural and emotional factors, these studies will help improve public health communication strategies and ensure that all societal segments, regardless of their socio-economic status, have equitable access to health information.

1.16. Limitations:

The limitations of this study include several factors that could affect the accuracy and generalizability of the findings. One key limitation is the reliance on self-reported data, where participants may have exaggerated or misremembered their behaviors and actions, particularly regarding adherence to health guidelines. This could lead to biases in the results. Additionally, the study was conducted in only two specific socio-economic groups, those living in slums and affluent areas, limiting its ability to account for the experiences and challenges faced by other groups, such as rural populations or middle-income groups, which may have different needs and access to health communication.

Another limitation is that the study was localized to Lucknow, which means the findings may not be applicable to other cities or regions in India, where socio-economic, media access, and health service factors could vary significantly. The study did not explore in-depth how different types of media (such as digital vs. traditional media) are used or understood by different communities, which could have provided deeper insights into the role of various communication channels. Moreover, the focus on the short-term impact of health communication during the

COVID-19 pandemic meant that long-term effects were not considered, limiting the understanding of how these changes in behavior might be.

The study also didn't address how misinformation was spread and how it affected people's understanding and behavior in relation to health messages. Given the prevalence of digital misinformation, especially in digital spaces like social media, this could be an important factor influencing people's adherence to health guidelines. Additionally, the emotional responses triggered by health communication, such as fear, stress, or confusion, were not explored. These emotions can significantly influence whether people follow health instructions or not, and further research in this area would be beneficial.

Lastly, the study did not explore the effectiveness of community-based health communication and how local influencers like community leaders, health workers, and local media could be better integrated into health campaigns. Future studies could expand on these areas, particularly looking at how community dynamics and local figures influence health behavior. These limitations point to the need for more comprehensive and long-term research into health communication strategies that consider different groups, media channels, and the socio-cultural context in which messages are received.

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