



OPEN**Spitting: A Public Health Concern in India -- A Review of the Impact of Mass Media in Raising Health Awareness on the Ill-Effects of Spitting****Babitha. N S¹, Dr Sunitha Abhay Jain², Dr Sapna. S³**

Once a practice that was rampant in the 19th century in developed nations, spitting has reduced considerably or is negligible in most European countries today, due to the awareness created on the health hazards of spitting. Health awareness was created through public health awareness campaigns. These health awareness campaigns have the potential to bring about behaviour change. Health promotion programs aim to change health behaviour, and mass media facilitates to help achieve the same. Mass media campaigns can reach a wide audience with important health messages and therefore mass media is seen as a popular and effective tool to achieve health outcomes. In India, the Directorate General of Health Services, Ministry of Health and Family Welfare, in its Revised National Tuberculosis Control Programme, Titled; “NATIONAL STRATEGIC PLAN FOR TUBERCULOSIS ELIMINATION 2017–2025, has mentioned that ‘indiscriminate spitting’ among Indians is the leading cause of morbidity and mortality from infectious diseases. Therefore, as a review-based paper, the authors will review and assess; best practices adopted in various countries that have helped reduce the unhealthy and unpleasant practice of spitting, the implementation of policies that have aimed at health promotion, and also look into the culmination of both policy and practice which has brought about conducive positive behaviour change.

Keywords: India, Spitting, anti-spitting, Health awareness, mass media and Public Awareness Campaigns, Public awareness advertisements

The objective of the Paper

The objective of this research paper is to understand the efficacy of public health awareness advertisements in preventing spitting compared to the traditional approach of implementing anti-spitting laws and prescribing punishments. This study aims to analyse the impact of targeted health awareness campaigns on changing individual behaviour related to spitting, focusing on

understanding the psychological and sociocultural factors that influence this habit. By evaluating the effectiveness of public health messaging in deterring spitting behaviours, the research seeks to provide recommendations based on secondary sources for public health interventions that prioritise awareness over punitive measures.

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Research Methodology

This research will primarily rely on secondary data sources in the research findings. By employing a comprehensive approach to collect and analyse data from secondary sources, this research aims to contribute valuable insights into the effectiveness of public health awareness campaigns in preventing spitting habits, while acknowledging the inherent limitations associated with this methodological approach. The methods adopted for the research will include:

Literature Review

Conduct an extensive literature review to identify existing studies, reports, and academic articles related to spitting habits, associated health outcomes, and the effectiveness of public health awareness campaigns. This will form the foundation for understanding the current state of knowledge on the subject.

Data Collection from Health Organizations: Gather secondary data from health organisations, government health departments, and international agencies. This may include epidemiological reports, health surveys, and statistical data on diseases linked to spitting.

Media Analysis

Examine media archives, including newspapers, magazines, and online news platforms, to collect information on public health awareness campaigns targeting spitting habits. Analyse the content, reach, and impact of these campaigns.

Surveillance Data

Utilise disease surveillance data, if available, to identify patterns and trends in diseases associated with spitting. (For example, GATS)¹.

Public Health Campaign Evaluations:

Access evaluations and assessments of past and ongoing public health campaigns aimed at discouraging spitting. Evaluate the success, and reach, of these campaigns to gauge their effectiveness.

Ethical Considerations

Ensure adherence to ethical standards in utilising secondary data, respecting privacy regulations, and citing sources appropriately. Acknowledge any potential biases or limitations associated with the chosen data sources.

Introduction

Unity in diversity is the hallmark of India. Diversity in India includes heterogeneity in traditions, culture, language, religion, festivals, food Et cetera. Defying these diversities is one unique habit that Indians share. It is the habit of spitting that runs across the length and breadth of India. The unhygienic and indecorous act of spitting according to the Westerners is an Asian trait. Prof Ross Coomber, a British Sociologist after visiting six Asian countries conducted research in China and India on the spitting behaviour of people which he considers as having a historical and cultural influence². Apart from betel leaf and areca chewing which induces an urge to spit, there are many other reasons why people spit or use saliva. People have long been applying saliva on wounds which is a biological trait among mammals. One would find superstitious

¹ The Global Adult Tobacco Survey (GATS) serves as a worldwide benchmark for the systematic monitoring of adult tobacco usage, encompassing both smoking and smokeless forms, while also tracking essential tobacco control metrics. This survey, implemented nationally with a standardised protocol, is utilised globally. GATS contributes to enhancing countries' abilities to develop, execute, and assess tobacco control initiatives. Furthermore, it aids nations in meeting their obligations under the

World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) by producing comparable data at both national and international levels.

² Coomber, R., Moyle, L., & Pavlidis, A. (2018). Public Spitting in 'Developing Nations of the Global South: Harmless Embedded Practice or Disgusting, Harmful and Deviant?'. The Palgrave Handbook of Criminology and the Global South (pp. 493-520). Palgrave Macmillan, Cham.

practices in India, where mothers lightly spit not directly but to the side of the children to ward off hexes or what we commonly call an 'evil eye'. Moreover, spitting is associated with strong emotions of anger and disrespect often considered crass behaviour. In India, spitting is largely due to the use of smokeless tobacco. According to the World Health Organisation's, GATS 2016 - 2017 report³ 21.38% of Indians used smokeless tobacco. Chewing tobacco is one of the main causes of spitting. Not just tobacco, Indians are habituated to chew betel leaves, areca nuts, etc... While one reason for spitting is due to chewing various substances, other reasons for spitting include, an urge to clear the throat, 'Throw it out, rather than swallow it', spitting due to a sense of disgust, spitting due to burst of emotions, spitting while playing sports, are other reasons why people spit. Spitting due to chewing various substances remains on the top.

The anti-spitting laws and campaigns have focused on creating awareness among the general public on the ill effects of spitting that lead to the transmission of contagious diseases. The COVID period around 2020, has, in particular, generated fear among people of exposure to another person's saliva. Many developed countries have enacted and enforced laws on spitting and also imposed penalties and punishments for offenders. Laws coupled with awareness campaigns focusing on the ill effects of spitting and the laws enacted to ensure its prevention have acted as a deterrent to prevent the practice of spitting amongst people. Spitting in public places has been one of the factors for the spreading of communicable diseases

like tuberculosis, herpes, viral meningitis, hepatitis, Covid, to name a few.

A Concise History of Spitting

What is considered a disgusting practice today, was once upon a time, a curative practice. The Early Romans (AD 9–79) considered bodily secretions like saliva to be therapeutic⁴, with restorative and beneficial properties. There are many instances in the past where healing of bodily infirmity was possible through the act of spitting. Spitting and applying saliva was the remedy for people who suffered from blindness, epileptic attacks, orthopaedic disabilities, and many other ailments. Apart from its curative properties, the Romans also believed that saliva could potentially ward off bad omen. Spitting into the right shoe before leaving home was considered a practice that would ward off evil and bring good luck. The Roman Author, philosopher, and naturalist, Pliny the Elder, (AD 23/24 – AD 79)⁵, in his book, 'The Natural History'- BOOK XVIII⁶, writes about the uses of saliva to treat not only common ailments but to be used as a curative agent for a venomous bite of a snake too. Such was the belief of the ancient Romans in the beneficial uses of Saliva.

During the 19th and early 20th centuries in America, spitting was a common practice because of the mass consumption of tobacco use in American men. Chewing tobacco had become a problem around the same time. This was academically a time where the germ theory, (a public health theory) was propounded by people working in public health⁷. While the elite Americans took to smoking pipes and cigars, it was

³ 2016-2017 GATS Fact Sheet India: <https://www.who.int/publications/m/item/2016-2017-gats-fact-sheet-india>

⁴ 'The Bizarre Cultural History of Saliva', Frank Gonzalez-Crussi; <https://thereader.mitpress.mit.edu/the-bizarre-cultural-history-of-saliva-as-powerful-therapeutic/>

⁵ Stannard, Jerry. 'Pliny the Elder'. Encyclopedia Britannica, 10 Nov. 2023, <https://www.britannica.com/biography/Pliny-the-Elder>. Accessed 14 December 2023.

⁶ Britannica, T. Editors of Encyclopaedia (2019, January 24). Natural History. Encyclopedia Britannica.

<https://www.britannica.com/topic/Natural-History-encyclopedic-scientific-by-Pliny-the-Elder>

⁷ A Public Revolt against Spitting: Education and Politics in the Progressive Era - by Patrick J. O'Connor University of Montana - Missoula

largely the working class of American men who chose to chew tobacco,⁸ and therefore, expectoration⁹ in public, on sidewalks, and at building corners had become rampant. By the *Fin de siècle*¹⁰, the finding of the cause of tuberculosis, which was the bacterium called *Mycobacterium tuberculosis*, created a public health scare in the United States of America.

In the article, “Traditional Behavioural Practises, the Exchange of Saliva and HHV, a Transmission in sub-Saharan African Populations”¹¹ – The author referred to research that was conducted by Yale University in the year 1997 called the “Human Relations Area files (HRAF)”, the files contain over 3,50,000 pages of information about the social and cultural life of different people. One of the sub-topics of the research conducted by the Yale University which is recorded in the HRAF includes behavioural practices, such as using saliva and spitting among people. The study HRAF dealt with spitting and using saliva by people across Africa for various reasons like for medical purposes, for healing, for rituals, etc...

The Somalis used saliva for various reasons, primarily as first aid. They used saliva to treat sores and wounds. They also believed that mixing saliva with butter worked as an antidote to treat scorpion stings and snakebites. The Sudanese primarily used saliva as first aid. In Tanzania, healers chewed certain herbs, spat them out, and used them as a pack to treat boils and wounds. The Masais of East Africa believe that when

a healer chewed the leaves of *acacia abyssinica* and spat on the wound, it would act as an astringent. Traditional healers of Nigeria symbolically draw from the abdomen, head and arms of a newborn baby and symbolically spit out worms from the mouth, believing that it will rid the newborn of any diseases¹².

It is, therefore seen that in Africa, healers use spitting as a remedy to cure many patients of illnesses. Apart from being used for medicinal purposes, the particular article¹³ also mentions spitting practices in Africa, done mainly on newborns to rid them of spirits or help the child become an orator, to strengthen the child’s spirit, or an elderly person spits on the child as a form of blessing.

In Asia, the spitting saga is still prevalent in many countries. Countries like Singapore and Japan have long ago overcome the menace. India still grapples with humiliation as the population indulges in public spitting. Indian social living is largely based on the sense of purity and impurity¹⁴. There is a great sense of purity attached to the Indian home, be it in the Kitchen, while performing rituals, during weddings etc.. But this habit changes when once outside. Public spitting is a nuisance and is a matter of great shame. Spitting has always been normalised in India. Spitting to remove an evil eye that may be cast on a child or spitting due to chewing tobacco and habitual spitting for no apparent reason are very common in India¹⁵.

⁸ Great Reads, New York City History- “A Long Battle Against Public Spitting: New York City’s 1896 Anti-ExpectorationLaw”- <https://www.smithsonianmag.com/history/19th-century-public-health-campaign-made-it-illegal-spit-public-new-york-city-180974023/>

⁹ Word used synonymously for ‘spitting’

¹⁰ A French term meaning ‘end of the century,’ a phrase which typically encompasses both the meaning of the similar English idiom ‘turn of the century’ and also refers to the closing of one era and onset of another

¹¹ Wojcicki JM. Traditional behavioural practices, the exchange of saliva and HHV-8 transmission in sub-Saharan African populations. *Br J Cancer*. 2003 Nov 17;89(10):2016-7. doi: 10.1038/sj.bjc.6601390. PMID: 14612917; PMCID: PMC2394457.

¹² Human Relations Area Files (HRAF) (1997) eHRAF collection of ethnography: a world of cultures at your fingertips: <http://ets.umdl.umich.edu.e/hrafel>

Wojcicki JM. Traditional behavioural practices, the exchange of saliva and HHV-8 transmission in sub-Saharan African populations. *Br J Cancer*. 2003 Nov 17;89(10):2016-7. doi: 10.1038/sj.bjc.6601390. PMID: 14612917; PMCID: PMC2394457.

¹³ Ibid

¹⁴ Bhatia MS. Compulsive spitting- a culture-bound symptom. *Indian Journal of Medical Sciences*. 2000 Apr;54(4):145-148. PMID: 11227124.

¹⁵ Ibid

Spitting, a Threat to Public Health?

As early as the 1800s, a German hygienist and bacteriologist, Carl Georg Friedrich Flugge and his team, through their findings, conceptualised the “droplet transmission” theory. According to the study, pathogens responsible for spreading infectious diseases were present in Expiratory droplets. According to Flugge's research, it was the unhygienic practice of Spitting that was the cause of many respiratory infectious diseases, mainly Tuberculosis¹⁶. The authors of the article, “Exhaled droplets due to talking and coughing”¹⁷ present a study on the risks of inhaling aerosol droplets. Accordingly, the authors contend that Infections affecting the respiratory system can be transmitted through ‘contact’ with droplets released during expiratory actions such as talking, coughing, and sneezing, as well as through aerosols. When individuals engage in expiratory activities like talking, laughing, coughing, and sneezing, numerous droplets containing saliva and other secretions are expelled from the respiratory tract, encompassing the mouth and nose. Therefore, respiratory infections can be picked up through the droplets present in the air and their remnants following evaporation. Though the authors do not mention spitting, it can be inferred that, if talking, sneezing, and coughing can cause the spread of respiratory infection, then spitting too can be added to the list. Another recent study funded by the French Government aimed at finding the real cause of the transmission of SARS-CoV-2. The researchers found that respiratory viruses are mainly disseminated from infected individuals to others via coughing or sneezing. This occurs when individuals inhale tiny airborne droplets or aerosols released by the infected person.

While we deal with the question of whether spitting is a threat to public health, it becomes important to ascertain if spitting produces aerosol droplets. So, understanding various jargon like aerosols, droplets, their measurement etc... is important. To begin with: The Earth's atmosphere is predominantly composed of gases, with approximately 78% being nitrogen (N₂) and 21% oxygen (O₂), while the remaining portion consists of various other gases. Apart from these gases, the atmosphere also contains minuscule liquid droplets and solid particles referred to as particulate matter (PM). Although these particles play crucial roles in both human health and climate, they are typically so small that they are imperceptible to the naked eye when observing the surrounding air. When particulate matter is in a gaseous state, it is termed an aerosol. These aerosols, or tiny droplets, are specifically defined as droplets with diameters ranging from 1 to 8 micrometres, and they drift through the air. The spread of infectious agents can be attributed to the dissemination of droplet nuclei (aerosols) that retain their infectious properties even when suspended in the air for extended distances and durations.

In continuation to the same, aerosol production leading to disease is studied. In a study of US students with respiratory illness, the median cough frequency was 18 per 30 minutes. This means that a single spit volume is about one million times greater than the total daily volume of cough aerosol produced by someone coughing every 2 minutes for 18 hours. The volume of a spit is approximately one million times larger than the volume of a cough-generated aerosol.

In a recent study, in the book “Perianesthesia Nursing Care - A Bedside Guide for Safe Recovery”¹⁸, the authors write extensively on care to be taken and given

¹⁶ Supra

¹⁷ Xie X, Li Y, Sun H, and Liu L. Exhaled droplets due to talking and coughing. *J R Soc Interface*. 2009 Dec 6;6 Suppl 6(Suppl 6):S703-14. doi:10.1098/rsif.2009.0388.focus. Epub 2009 Oct 7. PMID: 19812073; PMCID: PMC2843952.

¹⁸ Stannard, D., & Krenzischek, D. A. (2016). *Perianesthesia Nursing Care: A Bedside Guide for Safe Recovery: A Bedside Guide for Safe Recovery*. Jones & Bartlett Learning.

by the nurses while providing care to patients undergoing and recovering from anesthesia. While discussing core concepts in the book, a specific chapter deals with infection prevention strategies to be adopted. The authors write on precautions to be taken by caregivers to ensure that patients infected with any kind of communicable diseases should be placed under isolation to ensure that they don't pose a risk to other patients or medical staff. While discussing elaborately the topic, the authors write about how diseases can be transmitted from one person to the other while coughing, sneezing, talking or spitting. The authors write those diseases like measles, pulmonary tuberculosis, chickenpox, pertussis, bacterial meningitis, influenza shingles, and many more, can be transmitted through the air. Airborne diseases get transmitted when droplets are released in the air through coughing, spitting, sneezing, or even while speaking. The droplets that are transmitted in the air, desiccate, become light, and are carried by air currents away from the infected patient. These droplets released from the mouth through cough, sneeze, or spit can travel only a few feet from the infected patient and then drop. The desiccated Droplet is then easily carried to a person who is within 3 feet of the infected patient¹⁹.

Laws against Spitting in various countries AND Laws and Punishment Against Spitting in India

United States of America

New York City, under the leadership of Dr. Hermann Biggs²⁰, played a pivotal role in the American campaign against tuberculosis (TB) during the late

19th and early 20th centuries. Dr. Biggs, a trained bacteriologist, and his team at the Department of Health gained international recognition for their efforts in fighting TB. New York City was the leading battleground in the American crusade against TB, led most visibly by its Department of Health director Hermann Biggs, who authored a circular titled "Contagious Consumption—Rules to Be Observed for the Prevention of the Spread of Consumption"²¹, "which according to one expert was the "first step in the educational campaign against TB in the United States"²²." Biggs's circular focused on managing sputum. Among the rules, Biggs recommended for reducing the danger of transmitting the disease. First on the list was the injunction: "Do not permit persons suspected to have consumption to spit on the floor."

In 1896, prompted by Biggs and Prudden, New York City approved an ordinance against public expectation, the first city in the United States to do so. The legislation was aimed at "control of promiscuous spitting in public places". The 1896 ordinance against expectoration prohibited spitting in public areas and transportation systems, with violations subject to a fine ranging from \$1 to \$5. The most prominent strategy of the period, however, was legislative prohibition. New York passed the nation's first spitting ban in 1896, and by 1910 nearly 150 American cities, countless smaller towns, and thirteen states had outlawed spitting in some form. One of the earliest known anti-spitting ordinances was enacted in San Francisco, California, in 1901. The ordinance specifically targeted the act of spitting in public places, aiming to reduce the transmission of diseases. This ordinance marked an early public health measure related to spitting, driven by concerns about the spread of infectious diseases²³.

¹⁹ 'Ibid'

²⁰ Dr. Hermann Biggs, trained as a pioneer bacteriologist, worked as a Director at the Department of Health, New York.

²¹ Consumption is another name for tuberculosis.

²² Hermann Biggs, Contagious Consumption: Rules to be Observed for the Prevention and Spread of Consumption (New York:

Department of Health, 1889); and Anon, 'Contagious Consumption,' Science, 1889, 14, 336.

²³ ABRAMS, J. E. (2013). "Spitting Is Dangerous, Indecent, and against the Law!" Legislating Health Behavior during the American Tuberculosis Crusade. *Journal of the History of Medicine and Allied Sciences*, 68(3), 416–450. <http://www.jstor.org/stable/24672117>

In Birmingham, Alabama, an anti-spitting ordinance was passed in 1899 which made spitting punishable and imposed fines ranging from \$1 to \$5. In supporting the Ordinance, a local merchant named Louis Saks placed spittoons outside his clothing store with signs that humorously declared, "We Provide for the Public"²⁴.

During the late 1800s and early 1900s, more cities and states took steps to discourage spitting in public places. Even before specific laws were put in place, as early as 1895, a communication from the Massachusetts State Board of Health hinted at a similar move in New York. In 1906, the Virginia National Assembly implemented a broad ban on spitting in various public settings, such as theatres, steamboats, trains, and streetcars. The law also mandated the installation of spittoons in train compartments. Similar rules were already in effect in Vermont and Delaware²⁵. In Missouri, by 1908, there was growing support for two important regulations, particularly one targeting indiscriminate spitting in cars, on sidewalks, and in public spaces. In the subsequent year, North Dakota legislators discussed a bill proposing fines of at least \$50 or imprisonment for up to thirty days for spitting on sidewalks and other public areas. These developments reflected a rising trend of regulating public behaviour for health and hygiene reasons. As a result, almost all states in America had instituted anti-spitting laws by the early 20th century²⁶.

Singapore

The origins of Singapore's Miscellaneous Offences Act can be traced back to 1906, which was initially known as the Minor Offences Act. In 1926, it

incorporated a specific provision, Section 12(g), targeting spitting in public places, imposing a fine of \$20 for offenders. This legislative progression reflects historical concerns for public hygiene, aiming to regulate behaviours impacting societal well-being. Despite pre-independence spitting laws, the current form of the Miscellaneous Offences Act was officially enacted in 1970 after Singapore gained independence. During the transitional period (1965-1970), the application of laws, including the Minor Offences Act, continued.

Section 17(1)(g) of the Environmental Public Health Act, passed in 1987, prohibits spitting in public places. This law was motivated by a spitting campaign in the early 1980s. The penalty for non-compliance was initially a fine not exceeding \$1,000 for a first offence, increased to \$2,000 for a second offence in 1989, and \$5,000 for subsequent offences. Although spitting laws were already in the Miscellaneous Offences Act, the Environmental Public Health Act provided a more specific focus on public health, demonstrating legislative adaptability to address contemporary issues²⁷.

Australia

Section 61 of the Crimes Act 1900 in Australia, specifically in New South Wales, addresses assault offences, encompassing instances where spitting on someone is considered an assault. In the scenario of spitting, individuals intentionally spitting may face charges under this section. The crucial factors in determining assault include the Presence of intent or recklessness. Penalties for violations of Section 61

²⁴ Supra

²⁵ E H. Slack, "Public Health Legislation—News and Notes," *Am. J. Pub. Hyg.*, 1907, 17, 227, 308

²⁶ "Spitting Is Dangerous, Indecent, and against the Law!" *Legislating Health Behavior during the American Tuberculosis Crusade* Get access Arrow - Jeanne E. Abrams. *Journal of the*

History of Medicine and Allied Sciences, Volume 68, Issue 3, July 2013, Pages 416–450

²⁷ https://inetapps.nus.edu.sg/osh/portal/general_safety/legal_pdf/EPH_Act.pdf

depend on the specific circumstances and the extent of harm inflicted²⁸.

India

In India, as early as 1948, regulation of spitting was emphasised through the legislature. The following are the laws that deal with the prohibition of spitting.

Factories Act, 1948: Section 20 mandates that every factory must have an adequate number of spittoons maintained in a clean condition. Violation of the law will attract a fine not exceeding five rupees.

Indian Railways (Penalties for Activities Affecting Cleanliness at Railway Premises) Rules, 2012: Rule 3(b) prohibits activities affecting cleanliness at railway premises, including spitting, punishing the act with a fine of up to Rs. 500 for violations.

Disaster Management Act, 2005: Originally not addressing spitting, Section 51(b) was added in April 2020 during the COVID-19 pandemic, making public spitting punishable. The objective is effective disaster management.

The Goa Prohibition of Smoking and Spitting Act, 1997: Among the Indian states, Goa was the foremost to enact anti-spitting legislation.

WHO's Framework Convention on Tobacco Control: Contributing to tobacco control measures, it has facilitated research, policy development, and advocacy globally.

Police Perspective on Spitting

²⁸ SS 61 COMMON ASSAULT PROSECUTED BY INDICTMENT: Whosoever assaults any person, although not occasioning actual bodily harm, shall be liable to imprisonment for two years.

²⁹ Stearns, Peter N. "Manners in Modern World History." World History Connected 19.2 (2022).

Deliberate spitting is considered assault by the police in most cases.

France

The French Hygiene Society introduced France's first anti-spitting laws in 1886, which was the foremost law to be enacted. This marked a trend that later extended to the United States. However, reminders remained essential until at least the 1950s, evident in widespread signs throughout the Paris subways. In the latter half of the 20th century, there was no longer a need to remind parents to instill the new etiquette. Notably, American manners adapted more swiftly than those in France, except for baseball players, who intriguingly continued to widely adhere to more traditional behaviour^{29 30}.

General Awareness of the health hazards of spitting.

The Supreme Court of India, through its order dated December 7, 2010, in Special Leave Petition No. 16308/2007 in the case of Ankur Gutkha Vs Indian Asthma Care Society & Others, instructed the Union Government to conduct a thorough examination and research into the constituents of gutkha, tobacco, pan masala, and analogous products produced in the nation, as well as the detrimental impact of consuming such items. The duty of compiling previous national and international studies on this subject fell to the National Institute of Health and Family Welfare (NIHFW). In 2011, an evaluation³¹ was carried out by the National Institute of Health and Family Welfare to determine the detrimental impacts of consuming gutkha, tobacco, pan masala, and other items made in

³⁰ J.R. Garrett, "Changing Attitudes on Salivary Secretion: a short history on spit," Proceedings of the Royal Society of Medicine 68 (1975): 553-60; Robert Arthur, You Will Die: the burden of modern taboos (Port Townsend, WA: Feral House, 2013).

³¹ Evidence assessment: Harmful effects of consumption of gutkha, tobacco, pan masala and similar articles manufactured in India

India. Another assessment was undertaken in April 2023³². In India, the total prevalence of tobacco use is 10.38% for smokers and 21.38% for non-smokers, according to the Global Adult Tobacco Survey (GATS), which was conducted from 2016 to 2017³³. As was indicated at the beginning of the paragraph, the

main reason chewing items, such as smokeless tobacco, is mentioned is because it causes the greatest impulse to spit.

The statistical data for the same is in the chart below, in Fig 1.1:

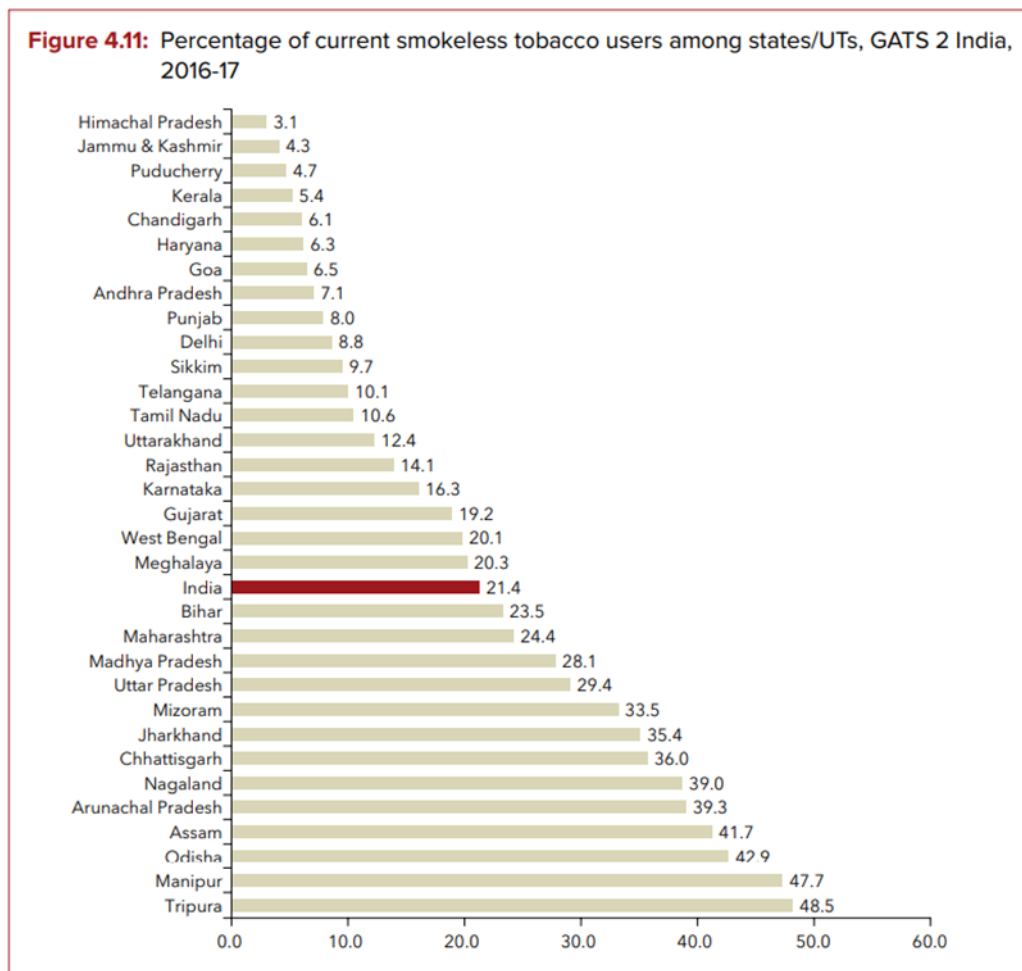


FIG 1.1:

Source: Global Adult Tobacco Survey (GATS) - India Report: 2017- 2018

The Second National Consultation on India's Control of Smokeless Tobacco (SLT) Report conducted in

2023, assessed the dangers of chewing tobacco and associated risks of the same and measures to curb the

³² Report of the 2nd National Consultation on Smokeless Tobacco (SLT) Control in India

³³ World Health Organization. Available at: <https://extranet.who.int/ncdsmicrodata/index.php/catalog/861>.

practice. According to the report, between 1990 and 2016, India's disease burden from smokeless tobacco increased. The percentage of diseases caused by smokeless tobacco use was 10% in 1990 and has increased to 13% in 2016³⁴. So this means that the general public has very little health awareness, not only of the ill effects of chewing various harmful substances but also of the ill effects of spitting the same out in public places which can cause the spread of infectious disease.

In 1924, Sun Yat-Sen³⁵ in China, called for a transformation in societal norms, criticising behaviours such as spitting and poor personal hygiene among the Chinese population which lacked restraint. The national government of China in the early 21st century was forced to ban public spitting due to the rise of new infectious diseases such as SARS and China was also hosting the 2008 Olympic Games. This shift was also influenced by the surge in Chinese tourism. While foreign travellers thought Chinese were occasionally impolite, particularly because of their propensity for spitting in public, the need to spot public spitting was the need of the hour. The forces of globalisation caused a change in social norms. Even if changes were slow and noticed by angry foreigners, younger Chinese generations had mostly adopted the new manners by the second decade of the twenty-first century, a shift that some understanding academics had initially deemed impractical.

The decline of spitting in the Western world was significantly influenced by the spread of tuberculosis and the growing understanding of germ theory in the late 19th to early 20th century, as highlighted by journalist Vidya Krishnan³⁶. The awareness of how germs spread prompted the adoption of new social

habits and customs, such as covering sneezes and coughs, avoiding handshakes, and discouraging the practice of kissing babies. This heightened domestic hygiene awareness extended to public spaces, resulting in a shift in behaviour, especially among men who were known for contributing to the spread of infectious diseases like TB through public spitting.

However, Krishnan notes that India faces challenges in overcoming this habit. Unlike in the West, Indian states have not made significant efforts to eradicate spitting, and the act remains socially acceptable. Whether it's the habit of chewing tobacco, sports figures spitting while playing on the field, or Bollywood depictions of men spitting during fights, spitting is still ingrained in the culture and lacks the social stigma needed for widespread change.

Health Awareness Campaigns/Advertisements on the Evils of Spitting and Its Efficacy in Curbing Spitting.

United States of America

The authors in the previous chapter, cite anti-spitting legislation enacted in many countries. In this chapter of the research, health awareness advertisements aired/ featured through mass media will be presented. Before delving into the topic, it is pertinent to understand whether the enactment of anti-spitting laws deters people. Did punishments and penalties deter people who spat?

Five blue-collar jobs accounted for about half of the local population's tuberculosis (TB) mortality in America, while white-collar professions like doctors

³⁴ Report of the 2nd National Consultation on Smokeless Tobacco (SLT) Control in India https://extranet.who.int/ftcapps/sites/default/files/inline-files/Final_Report_2nd%20National_Consultation_on_Smokeless_Tobacco_17April2023.pdf

³⁵ President of the Republic of China.

³⁶ Author of the book: Phantom Plague: How Tuberculosis Shaped History.

and lawyers accounted for less than 1%, according to a 1910–1911 report from the New York Board of Health. People with low incomes who got tuberculosis (TB) were more likely to become impoverished as a result of their sickness, which made them more vulnerable to the advanced phases of diseases. As a perceived threat to the health of wealthier Americans, TB victims from the industrial working class experienced growing social stigma in the late 19th century. According to Michael Gandy, middle-class hostility against the "lower classes" and worries about immigration and racial mixing were intensified by the TB epidemic.

In the United States, TB control efforts contributed to middle-class disdain for the working class. Dr. S. Adolphus Knopf³⁷, a prominent TB expert, highlighted the risk posed by a consumptive (person infected with TB) individual who carelessly or unknowingly expelled (spit) seven billion bacilli in a day³⁸ emphasising the urgency for public attitude and behaviour changes. By the early 1900s, health professionals and officials stressed that controlling tuberculosis necessitated shifts in public attitudes, with a primary focus on discouraging "promiscuous" spitting.

³⁷ Sigard Adolphus Knopf (November 27, 1857 – July 15, 1940) was a Kingdom of Prussia-born American physician. S. Adolphus Knopf was the author of over 400 books, brochures, and articles of tuberculosis, school hygiene, pneumonia, medical biography, birth control, alcoholism, and other medical and social subjects.

³⁸ S. A. Knopf, "Our Duties toward the Consumptive Poor," as quoted in David Rosner, *Hives of Sickness: Epidemics and Public Health in New York City* (New Brunswick, New Jersey: Rutgers University Press, 1995), 13

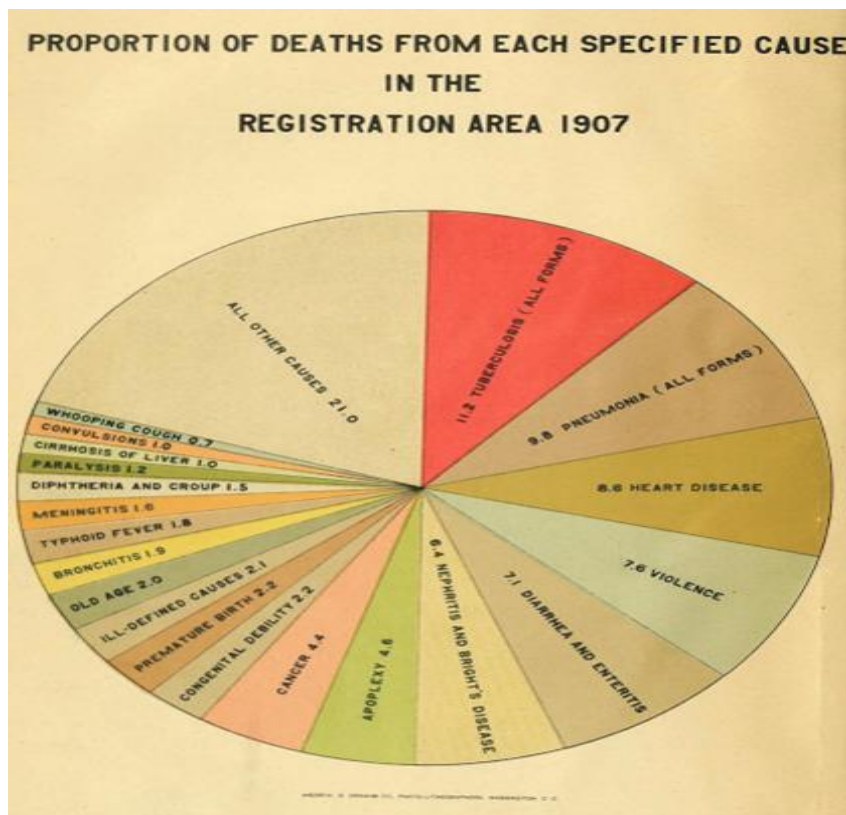


FIG: 1.2

SOURCE: Table of Tuberculosis deaths in the United States, Courtesy: Columbia University Libraries in Internet Archive

As discussed in the previous sub-sections, New York was America's first State to enact an anti-spitting law. The Legislative prohibition was in place in the year 1896. By the year 1910 almost 150 American Cities had passed anti-spitting laws. S. Adolphus Knopf highlighted 1889 as a crucial moment in the fight against tuberculosis in the United States. During this year, a group of influential New York doctors submitted a report to the city's health department, emphasising the contagious nature of tuberculosis and proposing preventive measures. In response, the health department circulated a leaflet, advising health-conscious practices in tenement houses and households where a consumption-related death had

occurred³⁹. The leaflet urged readers to adopt behaviours such as sleeping separately from individuals with tuberculosis, keeping their clothing separate, and removing rugs and furnishings from patients' sleeping areas. The most significant rule emphasised in the leaflet was the prohibition of spitting on the floor or clothes by individuals suspected of having tuberculosis unless the clothes were immediately burned. Knopf claims that this 1889 pamphlet was the first in which a public health department acknowledged the infectious nature of tuberculosis and made an effort to reduce transmission by advised behaviours⁴⁰. This was the initial phase of initiating awareness among the public on the ill effects

³⁹ Leonard G. Wilson, 'The Historical Decline of Tuberculosis in Europe and America,' J. Hist. Med. Allied Sci., 1990, 45, 366-96.

⁴⁰ 'Ibid'

of spitting in public. If the anti-spitting laws had to work, then awareness had to be created. British physician, epidemiologist and historian of medicine, Thomas McKeown advocated in favour of medical intervention. According to McKeown, changing the environment and attitude of people through awareness would help in the eradication of diseases is also supported in many recent studies. This has helped in reducing mortality rates⁴¹.

The TB movement, which began with the Pennsylvania Society for the Prevention of Tuberculosis in 1892 and gained momentum with the establishment of the National Association for the Study and Prevention of Tuberculosis (NASPT) in 1904, is responsible for the decrease in tuberculosis (TB) mortality in the United States. This movement invented many of the tactics used in contemporary public health campaigns. It was spearheaded by volunteer associations and funded by the selling of Christmas Seals⁴².

In the United States, a large number of state and local TB associations were formed between 1900 and 1917⁴³. By distributing educational materials, providing funding to sanatoriums and TB hospitals for patient isolation and recuperation, and supporting legislative actions to stop the spread of TB, these associations played a critical role. Among these were restrictions on public spitting and mandates that physicians notify the local public health authorities of any active TB cases. One key area of concentration

was the "sputum vector" of infection, which prompted anti-spitting initiatives across multiple cities⁴⁴.

The anti-spitting campaign focused on two main themes: the medical necessity of minimising the spread of active tuberculosis infections and the societal aim of doing away with the "despicable" practice of spitting. Early educational efforts included circulars, such as one authored by Dr. Biggs⁴⁵, focusing on managing sputum to prevent disease transmission⁴⁶. Anti-spitting surveys revealed that special laws had been enacted in many cities to regulate indiscriminate spitting. Enforcement efforts began, with a Pennsylvania physician noting the rapid education of public opinion. Recommendations for improving enforcement included strong and clear ordinances, along with extensive public campaigns to explain the reasons behind the prohibition of spitting.

The Journal of the Outdoor Life, the official journal of the National Association for the Study and Prevention of Tuberculosis (NASPT), was used extensively in the educational effort to spread awareness about TB treatment and prevention. In Cincinnati, the Anti-Tuberculosis League went beyond printed material, involving boys in a street campaign against spitting. People found guilty were fined heavily⁴⁷. By 1928, laws related to TB were present in virtually every state, reflecting the widespread acceptance of measures to combat the disease. Most campaigns also targeted children, emphasising the importance of early instruction in personal hygiene. However, as medical

⁴¹ Aleck S. Ostry and John Frank, "Was Thomas McKeown Right for the Wrong Reasons?" *Crit. Pub. Health*, 2010, 20, 233-43

⁴² Anderson, D. M., Charles, K. K., Olivares, C. L. H., & Rees, D. I. (2019). Was the first public health campaign successful?. *American Economic Journal: Applied Economics*, 11(2), 143-175.

⁴³ *Ibid*

⁴⁴ F. G. Crookshank, "Some Recent Theories of Tuberculosis and Their Possible Significance," *Proc. Roy. Soc. Med.*, 1913, 6, 68-84.

⁴⁵ Anon., "Medical News," *J. Am. Med. Assoc.*, 1903, 41, 320; Anon., "Medical News," *J. Am. Med. Assoc.*, 1904, 43, 987

⁴⁶ ABRAMS, J. E. (2013). "Spitting Is Dangerous, Indecent, and against the Law!" *Legislating Health Behavior during the American Tuberculosis Crusade*. *Journal of the History of Medicine and Allied Sciences*, 68(3), 416-450. <http://www.jstor.org/stable/24672117>

⁴⁷ O'Connor, Patrick J., "Spitting Positively Forbidden": The Anti-Spitting Campaign, 1896-1910" (2015). *Graduate Student Theses, Dissertations, & Professional Papers*. 4449. <https://scholarworks.umt.edu/etd/4449>

perspectives evolved and TB cases declined, the significance of the anti-spitting campaign diminished.

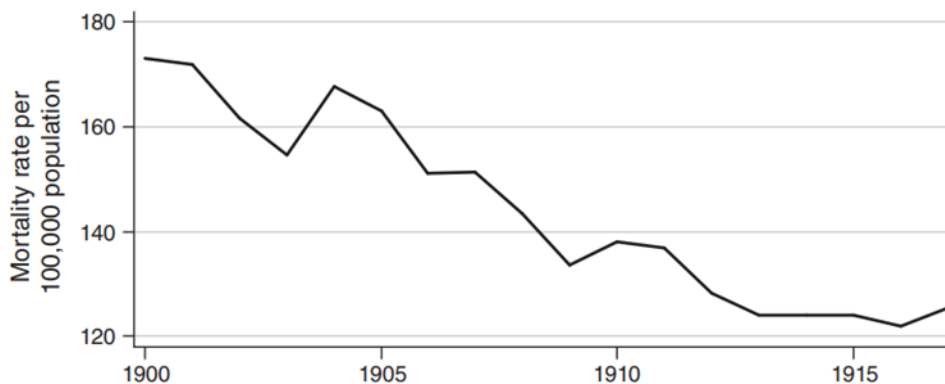


FIG: 1.3

SOURCE: Based on annual data from Mortality Statistics for the period 1900–1917, published by the US Census Bureau⁴⁸

Analysing newly transcribed mortality data at the municipal level from 1900 to 1917, the authors⁴⁹ investigate the effectiveness of public awareness campaigns in the United States. The US tuberculosis (TB) movement played a pioneering role in developing strategies that would later be adopted by modern public health campaigns. Between 1900 and 1917, numerous state and local TB associations emerged across the nation, as documented by NASPT in 1916 and Knopf in 1922. These associations played a vital role in distributing educational materials and providing financial support to sanatoriums and TB hospitals. In these facilities, individuals with active TB were isolated from the general population, and those fortunate enough had the opportunity to recover.

Using transcribed city mortality data from 1900 to 1917, the authors⁵⁰ examine the success of public

awareness programs in the US. The American public health fight against tuberculosis (TB) was a trailblazer in creating tactics that are now used in contemporary public health campaigns. As reported by NASPT in 1916 and Knopf in 1922, a large number of state and municipal tuberculosis groups arose across the country between 1900 and 1917. These organisations were essential in giving sanatoriums and TB hospitals financial support as well as educational materials. Those who were lucky enough to recover from active tuberculosis were kept apart from the general public in these facilities.

Most Americans at the beginning of the 20th century did not expect to die from what were then called "modern diseases." However, as Jones, Podolsky, and Greene (2012) pointed out, the threats to public health from influenza, pneumonia, tuberculosis, and gastrointestinal illnesses were far greater. The authors

⁴⁸ Anderson, D. M., Charles, K. K., Olivares, C. L. H., & Rees, D. I. (2019). Was the First Public Health Campaign Successful? *American Economic Journal: Applied Economics*, 11(2), 143–175. <https://www.jstor.org/stable/26727314>

⁴⁹ Ibid

⁵⁰ Anderson, D. M., Charles, K. K., Olivares, C. L. H., & Rees, D. I. (2019). Was the First Public Health Campaign Successful? *American Economic Journal: Applied Economics*, 11(2), 143–175. <https://www.jstor.org/stable/26727314>

evaluated the correlation between pulmonary tuberculosis mortality and the execution of public health initiatives and aimed at curbing the disease's transmission by employing city-level data from Mortality Statistics, which was released yearly by the US Census Bureau. TB was the second-leading cause of death in 1900, behind influenza and pneumonia, with 194 fatalities per 100,000 Americans. Over the next three decades, there was a notable decrease in the mortality rate from tuberculosis, even though there was no effective therapy available until after World War II. The rate fell further to 71 per 100,000 people by 1930 after it had dropped to 113 per 100,000 by 1920⁵¹.

As mentioned in the previous few paragraphs, Most Americans at the time did not anticipate dying from "modern diseases." The burden caused by gastrointestinal illnesses, pneumonia, influenza, and tuberculosis is emphasised by the authors⁵². The authors⁵³ credit fundamental public health initiatives including the construction of sewage systems, the supply of clean water, and awareness campaigns encouraging improved hygiene for the notable drop in infectious disease mortality. Persuasion was the tool used by the government to control the spitting menace. In the United States, striking the challenging balance required robust legislation supported by compelling methods like public discouragement, along with strategies such as grassroots campaigns, widespread awareness initiatives, and educational efforts. Effectively regulating individual habits necessitates

shifts in public attitudes and behaviour. Therefore, relying solely on a stringent, narrowly focused medical or legal approach, primarily centred on controlling expectoration, might have been politically favourable but without the intervention of public awareness advertisements carried out through mass media and print media, achieving success at the anti-spitting drive would not have been possible⁵⁴. In America, from 1990 to 1930, while the spread of TB was rampant, TB-related mortality dropped by 60% because the public awareness campaigns and advertisements had an impact on people, and spitting was reduced considerably⁵⁵.

Singapore

Interestingly, Singapore has always had a very robust health advertising attitude. In the article, "Public Health Education Campaigns in Singapore"⁵⁶. The authors begin by quoting a famous Chinese belief which is, "Saliva is good, Phlegm is not. When in doubt Spit it out! It is after this line that the Singapore government makes an addition, with a new version, which continues like this, "In Singapore however, you better watch out, cause a fine of 500 You'll have to shell out." This goes to point out the intensity with which the Government wanted to tackle the problem of spitting. The Miscellaneous Offences (Public Order and Nuisance) Act, was enacted in the year 1906. Section 11 of the Act⁵⁷, dealt with the broad topic of Nuisance. Section 11⁵⁸ of the Act, prohibits people from committing several acts which the law terms as offences. Under Section 11(f)⁵⁹, the legislation

⁵¹ Ibid'

⁵² Jones, Podolsky, and Greene (2012)

⁵³ Cutler, Deaton, and Lleras-Muney (2006)

⁵⁴ Dhoop, P. (2020) How the US managed to stop public spitting – and what India could learn from this, Scroll.in.

Available at:

<https://scroll.in/article/978424/how-the-us-managed-to-stop-public-spitting-and-what-india-could-learn-from-this> (Accessed: 27 January 2024).

⁵⁵ Was the First Public Health Campaign Successful? The Tuberculosis Movement and Its Effect on Mortality, RESEARCH

BRIEFS IN ECONOMIC POLICY NO. 76; By D. Mark Anderson, Kerwin Kofi Charles, Claudio Las Heras Olivares, & Daniel I. Rees

⁵⁶ Valbuena, V. T. (1987). Public health education campaigns in Singapore.

⁵⁷ MISCELLANEOUS OFFENCES (PUBLIC ORDER AND NUISANCE) ACT 1906

⁵⁸

https://www.nas.gov.sg/archivesonline/government_records/recor-d-details/306ac271-877d-11e7-843a-0050568939ad

⁵⁹ Section 11 (f) spits in any coffee shop, market, eating house, school house, theatre or public building, or in any omnibus, railway carriage or other public conveyance, or on any wharf or jetty, or in

prohibited public spitting. The present law being a colonial legislation, Singapore gained independence in 1965, and post-independence the government undertook several initiatives to prevent public spitting as it was one of the major causes for the spread of diseases. In Singapore, spittoons were commonly used, and in his memoirs, former Prime Minister Lee Kuan Yew recounted the government's challenging efforts to curb this practice after gaining independence.

Chinese immigrants landing on Singapore's soil traditionally believed that retaining phlegm in the throat was detrimental to health, and spitting was considered a means of warding off bad luck or ill will. In 1984, the Singaporean government launched a significant initiative to discourage spitting. Following warnings about the enforcement of anti-spitting laws, 128 individuals were fined for spitting in the first year, and an additional 139 in 1985, a substantial increase from the mere 1 fine issued in 1983.

While there was already The Miscellaneous Offences (Public Order and Nuisance) Act of 1906, the Parliament of Singapore enacted The Environmental Public Health Act of 1987, and specifically, Section 17(1)(g), was introduced to prohibit individuals from spitting or expelling mucus onto streets or public places. The motivation behind this legislative change seems to be linked to the anti-spitting campaign initiated in the early 1980s. Initially, the penalty for non-compliance involved a fine not exceeding \$1,000 for a first offence. Subsequently, an amendment in 1989 increased the fine to a maximum of \$2,000 for a second offence, and for the third and subsequent offences, the maximum fine was set at \$5,000.

any public road, or on any five-foot way or sidewalk of any public road, or in any other place to which the public has or may have access;

⁶⁰ <https://www.roots.gov.sg/collection-landing/listing/1342623>

In 1958, as a component of an initiative against spitting, approximately 100 volunteers from the health and water departments of the Singapore City Council engaged in a door-to-door effort. They distributed pamphlets, like the one provided, along with anti-spitting emblems. During these house visits, the volunteers adorned themselves with blue and red badges to caution residents about the hazards associated with public spitting. This effort was part of what was then referred to as a "Mass Health Movement," comprising three campaigns focused on "Anti-Spitting," "Anti-Litter," and "Anti-Pests," all organised by the Singapore City Council in 1958⁶⁰.



FIG: 1.4

Source: National Museum of Singapore⁶¹.

In a span of 24 years, from 1958 to 1982, Singapore initiated a total of sixty-six national campaigns. The inaugural national campaign, predating the country's independence in August 1958, was the Anti-Spitting Campaign. This campaign aimed to address the prevalent habit of spitting, which was deemed socially irresponsible and a potential contributor to the spread

⁶¹ <https://www.roots.gov.sg/filter/collectionresearch?collection=National%20Museum%20of%20Singapore>

of pneumonia. The Anti-Spitting Campaign employed comprehensive measures, including displaying a sizable poster on the City Council (City Hall) building and adorning bridges, telegraph poles, and trees with posters and signs. Approximately 100 workers from the Singapore City Council's health and water departments undertook door-to-door activities to distribute pamphlets and educate the public about the hazards associated with spitting in public. These campaigns played a crucial role in Singapore's nation-building efforts.

The Singapore government in its press release dated 1 June 1984 talks about various campaigns that have been successful in keeping Singapore clean. The government in the same press release also noted that the problem of spitting in public continues. This is in the year 1984. The press release also states that there is legislation in place which is the environmental public health (public lensing) regulations, 1970 against spitting in public places which finds offenders also. Even though there was legislation in place, the practice of spitting continued so therefore in the year 1984 Through the above-mentioned press release, the government stated that it was time to launch the 'stop spitting' campaign. The reason mentioned for the campaign to begin was that many people were not aware of the law and therefore strict enforcement had to be in place. Awareness had to be created. The press release by the government also mentioned that there was adequate medical evidence to show that spitting was a habit that was unhealthy and that the sputum that was produced while spitting contained Germs that went dried, could survive, and could also carry diseases. Diseases like simple, cold and cough, influenza, measles, mumps, chickenpox, tuberculosis, and various kinds of fever could be transmitted through spitting in public and therefore to curb the habit of public spitting, the campaign was launched.

⁶² A small motion picture.
A small motion picture.

the press release mentions that the campaign launched by the Ministry of Health along with the Ministry of Environment has also tied up with the Ministry of Education to support the cause. The Stop Spitting campaign was primarily organised to educate people on the evils of spitting.

The press release states the objective of the anticipating campaign is to remind the public that spitting is an antisocial habit that spreads disease and now because there were laws in place. It would also punish people who spit in public. The campaign slogan was, "Stop that spitting habit. It's dirty, It spreads disease". Apart from distributing pamphlets, setting up exhibitions, putting out messages on mass media on the radio, and airing filmlets⁶² against spitting will appear on television.

The effectiveness and success of the anti-spitting campaigns and advertisements led the Ministry of Health in Singapore to launch a countrywide National Health Campaign, focusing on the association between smoking and the elevated risks of lung cancer and coronary heart disease⁶³. This approach was chosen based on the success of prior campaigns in Singapore over the past three decades, such as those addressing issues like littering and spitting. Additionally, international experiences have indicated that campaigns serve as a crucial and effective strategy for shaping positive behaviours and attitudes.

Mass Media In India

India, boasting an estimated population of 1.4 billion, faced a serious threat from the Covid-19 pandemic. The outbreak served as a wake-up call for the country to fortify its healthcare infrastructure and disseminate effective health messages that would not only benefit the public but also foster positive behaviours to prevent the spread of diseases. India has garnered

., & Chen, A. J. (1988). The impact of the anti-smoking campaign in Singapore. *Singapore Med J*, 29(3), 233-9.

significant insights from a public health communication perspective through its successful national polio and AIDS control programs.

The 'Corona Gaya Nahin' campaign exemplified a comprehensive 360-degree approach, utilising digital media, bulk SMS, mid-media channels like displays and loudspeakers on auto-rickshaws, and cable TV to combat the pandemic. India's media landscape is highly diverse, (Below is the statistical data on mass media reach in India. Refer to FIGURE: 1.5) with numerous outlets operating in multiple languages. India stands out as a robust mobile-focused market, with 73% accessing news through smartphones and 37% via computers, according to global surveys. The country boasts over 600 million active internet users, a substantial portion of whom rely solely on mobile phones for internet access, facilitated by affordable

data charges and inexpensive devices. Many media platforms are controlled by large, for-profit corporations, often privately held and primarily funded through advertising. However, the impact of COVID-19 was such that the government started advertising in public interest. From mobile ringtones to messages and TV advisories, the government created awareness campaigns very successfully⁶⁴.

Managing disease outbreaks requires effective public risk communication that is timely, accurate, easily understandable, sourced from credible authorities, and includes actionable suggestions for individuals. Behavioural and social interventions are crucial in mitigating the impact of outbreaks, as they often rely on community engagement, participation, and coordinated efforts across sectors.

Sources of news

2021

India



FIG: 1.5

SOURCE: India Internet Penetration, Reuters Institute⁶⁵

Conclusion and Suggestions

Mass media initiatives can bring about positive shifts or prevent negative changes in health-related behaviours across large populations. In conclusion, we suggest areas for improvement, emphasising the need

for increased investment in longer and better-funded campaigns to achieve optimal population exposure to

media messages. Medical reformers have long argued that several unhealthy practices should be deterred by law or should be changed by awareness created through public health advertisements as people enjoy

⁶⁴ Mirchandani, S., Chitrapu, S. (2023). Unmasking Realities: Public Health Communication in India During the COVID-19 Pandemic. In: Pachauri, S., Pachauri, A. (eds) Global Perspectives of COVID-19

Pandemic on Health, Education, and Role of Media. Springer, Singapore. https://doi.org/10.1007/978-981-99-1106-6_12

⁶⁵ <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2021/india>

a fundamental right to bodily integrity and the well-being of the community supersedes the right of any individual to indiscriminately spit.

Having comprehensively gone through legislation and anti-spitting advertisements and campaigns in the previous few sub-topics, we can conclude through secondary evidence, 'that creating health awareness through mass media or print media is an effective form of controlling or regulating indiscriminate spitting among the population'. Some suggestions concerning the present study after analysis of secondary data would be:

- Spitting which is a menace and a potential threat to the spread of the diseases has to be tackled. This is possible through the dissemination of information to the public through public awareness advertisements and public health campaigns.
- It is important to regularly evaluate the results of population-level awareness efforts, such as those that use mass messaging services (m-health, social media, and other popular media).
- As nicotine promotes chronic addiction, we need to implement The Cigarettes and Other Tobacco Products Act, 2003, (COTPA) with an effective prohibition on SLT products in the nation for prevention. Smokeless tobacco creates a great deal of annoyance and the impulse to spit.
- While numerous countries have enacted anti-spitting laws, the global reduction in the habit of spitting can be attributed significantly to heightened awareness campaigns about the health risks associated with spitting, rather than merely relying on laws that stipulate

penalties and punishments to deter individuals.

- People not only lack awareness of diseases; they also lack awareness of laws. Therefore, mass media in the 21st century has become an important means of communication for dissemination of information.
- A spitting visual with an anti-spitting message according to a study⁶⁶ had increased a state-based disgust among US adults and indirectly decreased spit intentions. Technology-driven Mass media has a wide reach in today's time. Therefore, the marketing technique of disgust appeal⁶⁷ through advertising should be made use of by public authorities to disseminate information and create health awareness so that the despicable habit of spitting can be reduced.
- A nodal agency that is tasked to carry out public awareness advertising regularly has to be established in India to put out health advisories.
- Dissemination of Health awareness and disease prevention precautions will also require to be backed by legislation. Though there are legislations passed prohibiting spitting, there is very little awareness of the law. Therefore, awareness not only of the ill effects of spitting but awareness of the law that imposes a fine has to be spread.
- There is a need for increased investment in longer and better-funded campaigns to achieve optimal population exposure to media messages. Considering the history of spitting, which has been for long associated with India's culture, breaking the habit would

⁶⁶ Daniel Chavez-Yenter, Helen M. Lille, Sebastiaan Gorissen, Kevin K. John, Alexis S. Vega & Jakob D. Jensen (2023): Spit, Disgust, and Parasite Stress Theory: A Message Experiment, *Journal of Health Communication*, DOI: 10.1080/10810730.2023.2229772

⁶⁷ Marketers often employ disgusting images or short movies to break through the advertising clutter or to scare consumers into doing something or not to do something.

involve sustained and repeated campaigns run over a long period.

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