

A study on various pandemics during the 21st Century

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Abstract- The study aims to understand the awareness of the various pandemics that occurred during the 21st century including the perceptions of people of various age groups about the origin, trust on sources of information, impact on industries. A cross sectional study was conducted among people from various countries like India, United States of America, Kuwait, Canada, Luxembourg, etc. The data were collected through an online survey questionnaire and results were analysed using Microsoft Excel. A total of 350 people from various countries participated in this study. Most people are aware of the pandemics COVID-19, Swine Flu, SARS (Severe Acute Respiratory Syndrome) & Spanish Flu. The most trusted source of information is official government press releases by 175 and consultation with health workers by 125 respondents. The common symptoms were identified as fever by 328, dry cough by 285 and tiredness by 188 people. The most negatively affected industries during COVID-19 are Tourism & Hospitality, Automobiles, Railways and Aviation. Most respondents fall under the age group of 21-30 residing in India and most of them are aware about the various pandemics. Pharmaceutical industry is making profits during these pandemics while tourism and airlines both suffering losses due to people avoiding travel in these pandemics. The move of GDP and stock prices is moving down in all the quarters in these pandemics as they are being affected by the losses of these pandemics

Index Terms- Severe Acute Respiratory Syndrome, Swine Flu, Middle East Respiratory Syndrome, COVID-19, Pandemics.

I. INTRODUCTION

Pandemics always led a threat to civilization from ancient past. The most devastating pandemic that led to major catastrophe was The Spanish Flu. Today the world is facing another devastating pandemic's ferocity known as COVID-19 or Corona Virus. The wrath unleashed by the COVID-19 has not only resulted in global lockdown but made surpassing losses to

almost every economy worldwide. From the past 50 years, the world saw many pandemics that created havoc to some countries at large or to the world. The beginning of 21st century saw a pandemic named SARS (Severe Acute Respiratory Syndrome) that came into control in July 2003 affecting almost 26 countries. In 2009, the world crumbled into a disease called Swine flu which lasted for 19 months affecting almost 13 countries. Down the line the world saw another outbreak of MERS (Middle East Respiratory Syndrome) that was first traced in Saudi Arabia in 2012 affecting almost 27 countries. As the world is developing with a rapid pace, WHO declared a COVID-19 a global pandemic that restrained this swift growth. Some of the common features of these pandemic are they all made huge losses to many industries leaving no stone untouched but many companies find ways to develop despite their widespread ferocity. Few common symptoms of these pandemics are fever, diarrhoea, and shortness of breath and body ache. The vaccine for three pandemics namely SARS, Swine Flu, and MERS has been developed successfully and many clinical trials are under progress for COVID-19.

II. METHODOLOGY AND DATA COLLECTION

This was cross-sectional study carried out among different countries. An online questionnaire was developed by using google forms. The questionnaire includes variety of items associated with illness perception, risk perception, socio-demographic characteristics and political attitudes. The link of a questionnaire was sent through different social media platforms such as WhatsApp, emails, Instagram, Twitter, LinkedIn.

Surveys method is used for the collection of data in the form of a questionnaire. It was spread through various aspects of sources via. Mail, social media, telephonic, and word to mouth to analyse the different levels of the data for the pandemics.

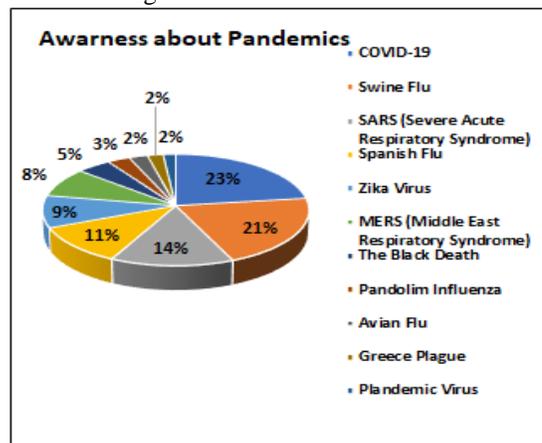
The population of the data among the selected countries through the WHO data helps to ascertain the actual number of cases and deaths for the pandemics SARS, MERS, and SWINE FLU.

Table I: Total number of Cases and deaths

Pandemics		Total confirmed Cases	Total Deaths confirmed	(%)
SARS(Severe Respiratory Syndrome)	Acute	8,422	916	11%
MERS(Middle Respiratory Syndrome)	East	2,253	840	37%
Swine Flu		271,515	8,040	3%
COVID-19		4,290,065	292,195	7%

III. DATA FINDINGS

Figure 1: Awareness about Pandemics

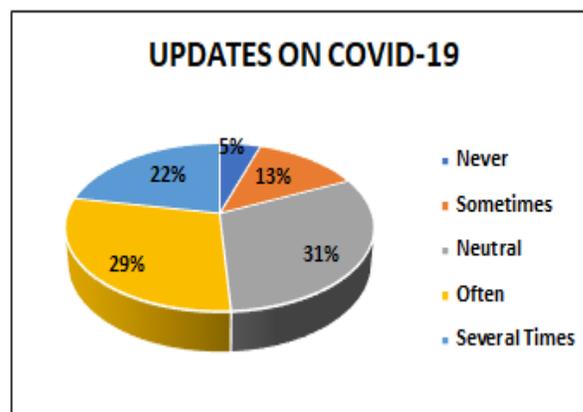


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The figure depicts that most people are aware of COVID-19 as it's the ongoing pandemic followed by Swine-flu, SARS and Zika Virus. Respondents of age-group of 21-30 are most aware of pandemics among all the age categories. Even the viruses that unleashed their ferocity more than 50 years ago like the Spanish Flu, The Black Death people especially age-group of

21-30 are aware about it. In people of age group of 51 - 60 and above awareness level is less even though they were present during few pandemics. People who identified pandemics like Pandolim Influenza, Greece Plague and Pandemic Virus have no awareness at all as these pandemics never occurred

Figure 2: How often do you check updates on COVID-19

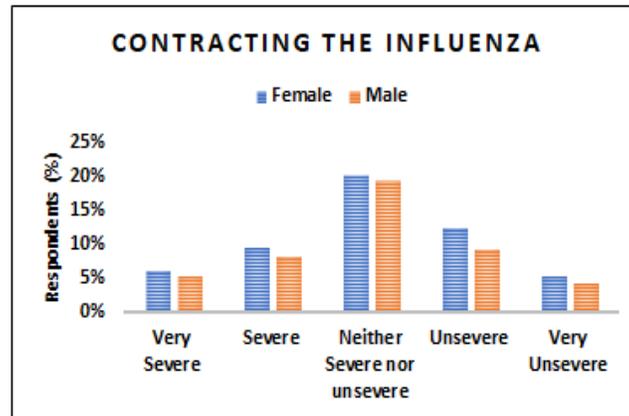


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From the graph we can infer that 31% are neutral at keeping track of COVID-19. 29% of the respondents are keeping regular updates from various sources such as newspapers, online mediums, friends, and others. Another group of respondents

comprising around 5% are not keeping any updates or tracks. This means that mostly people are keeping track about the updates frequently.

Figure 3: What is the probability of contracting the influenza?

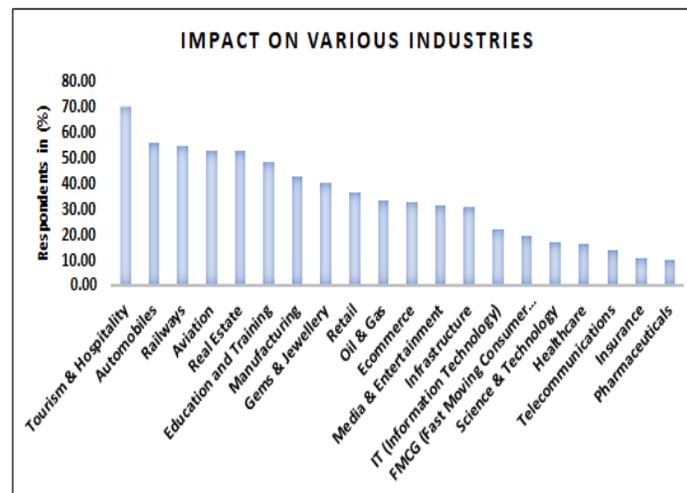


Source: <https://docs.google.com/forms/d/e/1FAIpQLSfhM8TBgDik28CijLWyoLT9ibM7Q0de9PO9BwTuOwi2ceWuXw/viewform>

Almost similar percentage of respondents in both male and female i.e. around 15% of the respondents not severe of influenza. Almost 10% of male respondents are not severe to

influenza while corresponding female respondents occupies over 8%. On the other hand, 8% male respondents are slightly prone to influenza.

Figure 4: Negative Impact on Industries during COVID-19

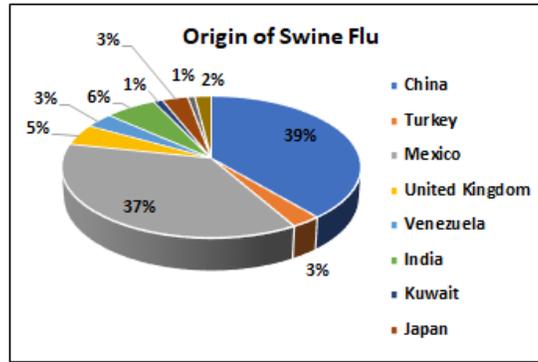


Source: <https://docs.google.com/forms/d/e/1FAIpQLSfhM8TBgDik28CijLWyoLT9ibM7Q0de9PO9BwTuOwi2ceWuXw/viewform>

According to industry chamber CII, COVID-19 is one of the worst crises which has impacted the tourism sector in all of its segments like inbound, outbound and domestic, various tourism verticals like adventure, leisure, business, and cruise, heritage, corporates and niche segments. The revenue loss in this industry can be of 60 to 70 percent in the year 2020. The

respondents during the survey have correctly identified Tourism and Hospitality sector to be most negatively impacted followed by industries like Automobiles, Railways and Aviation which are interlinked with the Tourism sector. This implies that people are well aware and informed about the various industries in an economy.

Figure 5: Origin of Swine Flu in which country

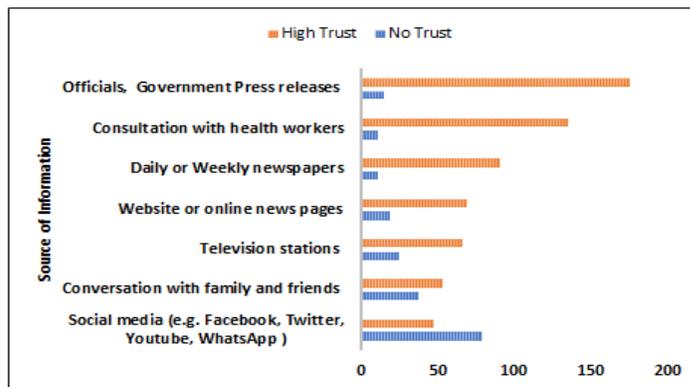


Source: <https://docs.google.com/forms/d/e/1FAIpQLSfhM8TBgDik28CijLWyoLT9ibM7Q0de9PO9BwTuOwi2ceWuXw/viewform>

As per official sources Swine Flu was first found in Mexico, but as per the respondents particularly of age groups above 31 years, China is the place of origin for Swine Flu. This

perspective can be due to the fact that the ongoing COVID-19 originated in China so similar kind of pandemics are linked to the same country for origination.

Figure 6: Sources of Information

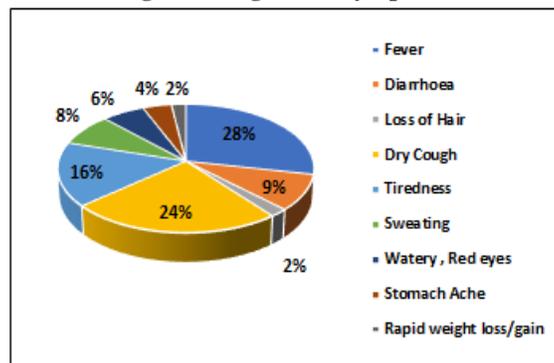


Source: <https://docs.google.com/forms/d/e/1FAIpQLSfhM8TBgDik28CijLWyoLT9ibM7Q0de9PO9BwTuOwi2ceWuXw/viewform>

To understand the level of trust on the various sources of information through the survey, we find that respondents have high trust on information which is available from official press releases, the Government authorities and health workers. Least

amount of trust on information available from social media platforms and conversation with friends and families as the information may not be authentic and wide spread of misinformation and rumours takes place through these sources.

Figure 7: Signs and symptoms



Source: <https://docs.google.com/forms/d/e/1FAIpQLSfhM8TBgDik28CijLWyoLT9ibM7Q0de9PO9BwTuOwi2ceWuXw/viewform>

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As per WHO and CDC, the common sign and symptoms are Fever, Dry Cough, Diarrhoea, Tiredness and Watery, Red eyes. Around 83% of total respondents correctly identified the symptoms. Rest of the 14% of respondents have no knowledge about the common symptoms as they incorrectly identified loss of hair, sweating, stomach ache and rapid weight loss/gain.

IV. CONCLUSION

According to the primary research, most respondents fall under the age group of 21-30 residing in India and most of them are well aware about various pandemics like COVID-19, Swine Flu, SARS and Zika Virus. The respondents highly trust official sources like the government press releases, consultation with the

health workers and has low trust on information sources like social media platforms. Most of the respondents especially of the age above 31, have the perspective that swine flu originated in China just like COVID-19 but the country of origin is Mexico. The common signs and symptoms were correctly identified by 83% of respondents i.e. fever, dry cough, diarrhoea, and tiredness as announced by WHO and CDC.

According to the secondary research, pharmaceutical industry is making profits during these pandemics while tourism and hospitality sector are suffering losses as people avoid travel during the pandemics. The movement of GDP and stock prices are generally moving downward in most of the quarters in these pandemics as they are being affected by negative impact on the economy

V. APPENDIX

Questionnaire

Location/ Area of residence of the participant: _____

Gender of the participant: Male Female Prefer not to say

Age Group of the participant:

- 1) 0-20 Years
- 2) 21-30 Years
- 3) 31-40 Years
- 4) 41-50 Years
- 5) 51-60 Years
- 6) Above 60 Years

1. Which of the following pandemics have you heard about?

- 1) Zika Virus
- 2) Avian Flu
- 3) The Black Death
- 4) SARS (Severe Acute Respiratory Syndrome)
- 5) Spanish Flu
- 6) Swine Flu
- 7) MERS (Middle East Respiratory Syndrome)
- 8) Pandolim Influenza
- 9) COVID-19
- 10) Greece Plague
- 11) Plandemic Virus

2. What do you think are the common symptoms of SARS, MERS, Swine Flu & COVID-19?

- 1) Fever
- 2) Diarrhoea
- 3) Loss of Hair
- 4) Dry Cough
- 5) Tiredness
- 6) Sweating
- 7) Watery, Red eyes
- 8) Stomach Ache
- 9) Rapid weight loss/ gain

3. What do you consider to be your own probability of getting infected with the influenza?

(Extremely Likely) 1 2 3 4 5 (Extremely Unlikely)

4. How severe would contracting the (influenza) be for you? (1-5 scale, 1= Very Severe 5= Not Severe)

(Very Severe) 1 2 3 4 5 (Not Severe)

5. How much do you trust the following sources of information in their reporting about the pandemics? (1- High Trust, 5- No Trust)

Sources	(1)	(2)	(3)	(4)	(5)
Official, government press releases					
Consultation with health workers					
Television stations					
Daily or weekly newspapers					
Websites or online news pages					
Social media (e.g. Facebook, Twitter, YouTube, WhatsApp)					
Conversations with family and friends					

6. Please consider your experiences during any of the pandemics: (1- Strongly Agree, 5- Strongly Disagree)

Statements	(1)	(2)	(3)	(4)	(5)
I have a hard time making it through stressful events					
It does not take me long to recover from a stressful event					
It is hard for me to snap back when something bad happens					

7. How often do you check for updates on COVID-19?

(Never) 1 2 3 4 5 (Several times a day)

8. What are the chances of getting high return on investments in the stock market during pandemics?

(Extremely Unlikely) 1 2 3 4 5 (Extremely Likely)

9. Do you think eating meat can lead to spread of virus?

Yes No Maybe

10. Which are the industries that are most negatively affected because of COVID-19?

- 1) Education and Training
- 2) Healthcare
- 3) Real Estate
- 4) Automobiles

- 5) Insurance
- 6) Telecommunications
- 7) Aviation
- 8) Ecommerce
- 9) Media & Entertainment
- 10) Infrastructure
- 11) Oil & Gas
- 12) Tourism & Hospitality
- 13) FMCG (Fast Moving Consumer Goods)
- 14) IT (Information Technology)
- 15) Manufacturing
- 16) Railways
- 17) Science & Technology
- 18) Gems & Jewellery
- 19) Pharmaceuticals
- 20) Retail

11. In which country did swine flu originate?

- 1) China
- 2) Turkey
- 3) Mexico
- 4) United Kingdom
- 5) Venezuela
- 6) India
- 7) Kuwait
- 8) Japan
- 9) Italy
- 10) Australia

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