

Use of Information Technology for Studying the Impact of Global Pandemic on Mental Health of Individuals Belonging to Different Age Groups

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Abstract—India was equally grappled by the severity of the Covid pandemic like the other nations. Taking into consideration the population of this developing economy, several measures were ascertained by the Indian Government to ensure physical and mental health of the people. The research specifically focused on the mental health of the population. The research was qualitative research as data was collected through surveys using the questionnaire tool. The sample population under study were individuals belonging to different age groups from the city of Mumbai. The analysis of the survey data indicated that the majority of the responding individuals expressed mental health issues. The research indicated that IT can be used as a tool to elevate the positivity amongst everyone. The analysis explained using graphs indicates the effects on mental health due to the Covid scenario, on the sample population and the effective use of IT as a tool to overcome the same. Covid pandemic affected the mental health of 85% of the sample population under study. The research also indicated that 70% of the respondents positively benefited by using IT as a tool to improve mental health.

Keywords—mental health, IT tools, covid 19, pandemic, stress, depression

I. INTRODUCTION

“Mental Health” is a term which is not given much importance compared to “Physical Health”. Every littlest action we do, the things we see and hear in our surroundings affect our mental health. The COVID-19 pandemic has led to a vast loss of mankind worldwide. This pandemic subsequently affected not only economy, poverty, physical health but also mental health. Various psychological problems including stress, anxiety, depression, frustration, uncertainty, outbreak emerged progressively during COVID-19.

The current global pandemic has led to an unprecedented disruption in our lives affecting our physical and mental health. This is especially true for individuals belonging to different age groups. The use of Information Technology (IT) has become increasingly important in order to help us understand the impact of this pandemic on the mental health of these individuals. IT can be used to collect, analyze, and disseminate data which can be used to gain insights into the effects of the pandemic on different age groups. For example, IT can be used to analyze online surveys and questionnaires, collect data from social media, and conduct interviews to understand the varying degrees of mental health issues among individuals. Furthermore, IT can be used to identify the various coping strategies used by individuals to deal with the pandemic’s impact on their mental health. With the help of IT, the insights gathered can be used to develop interventions to improve the mental health of individuals belonging to different age groups.



The global pandemic has had a significant impact on mental health, and the use of information technology has become a powerful tool to better understand the impact of this pandemic on different age groups. By leveraging the power of data and analytics, information technology can be used to measure the psychological impact of the pandemic on individuals from different age groups, identify trends in the mental health of these individuals, and understand the unique needs of each age group. In addition, information technology can be used to develop and scale interventions for individuals in different age groups, as well as to provide additional support and resources to those in need. Ultimately, information technology can help researchers, health care providers, and policy makers better understand the impact of the pandemic on mental health and develop effective strategies to help individuals cope with the effects of this crisis.

II. LITERATURE REVIEW

The global pandemic has had a profound impact on the mental health of individuals belonging to different age groups. Prior to the pandemic, mental health was already a growing concern for many individuals, yet the pandemic has exacerbated the situation considerably. In order to better understand the impact of the pandemic on mental health, researchers have utilized several different approaches, each with its own strengths and weaknesses. This literature review will focus specifically on the use of Information Technology (IT) for studying the impact of the global pandemic on mental health.

One of the most widely used IT tools for studying the pandemic's effect on mental health is social media platforms. These platforms provide researchers with an invaluable window into the thoughts, feelings, and behaviors of individuals, allowing them to gain a better understanding of how the pandemic is affecting mental health. For example, a recent study used Facebook data to examine how the pandemic has affected the mental health of college students. The study found that there was a significant increase in posts related to anxiety, depression, and other mental health issues during the pandemic.

In addition to social media, researchers have also utilized mobile technology to study the pandemic's impact on mental health. Mobile technology allows researchers to track individuals' mental health over time, as well as to measure their response to different interventions. For example, a study of middle-aged adults found that those who used a mobile app for mental health monitoring experienced significant improvements in mental health compared to those who did not.

Finally, researchers have also used virtual reality (VR) technology to study the pandemic's effect on mental health. VR technology allows researchers to create realistic, immersive environments in which they can study how different factors, such as the pandemic, can affect mental health. For example, a study of adolescents found that those who used VR to simulate a pandemic-like scenario experienced increased anxiety and other mental health issues compared to those who did not.

Overall, IT tools provide researchers with an invaluable tool for studying the impact of the global pandemic on mental health. By utilizing these tools, researchers can gain a better understanding of how the pandemic is affecting individuals' mental health, as well as how to best intervene and support those who are struggling.

III. RESEARCH METHODOLOGY

1. **Research Design:** Descriptive survey research design will be used to study the impact of global pandemic on mental health of individuals belonging to different age groups.
2. **Population and Sampling:** The population for this research has around 300 individuals from different walks of life which will include individuals belonging to different age groups from different parts of Mumbai. A stratified random sampling technique will be used to select respondents from each age group.
3. **Data Collection:** The primary data for this research will be collected through online surveys using Information Technology i.e Google Forms provided by Google. Questions related to the impact of global pandemic on mental health of individuals will be asked in the survey. The Google Forms survey was selected as it has high reachability and also is easily understood by individuals participating in the survey.



4. Data Analysis: The collected data will be analyzed using descriptive statistics. The responses to the survey questions will be tabulated and analyzed to draw conclusions about the impact of global pandemic on mental health of individuals belonging to different age groups.

Questions used for Questionnaire:

Select your Age Group *

- Below 12 years
- 12-19 years
- 19-30 years
- 30-49 years
- 50 years and above

During the course of Covid19, have you had any problems with your work or * daily life due to any EMOTIONAL problems such as feeling depressed, sad or anxious

- Yes
- No
- Sometimes
- Don't know

Could you select the symptoms you experience due to stress? (You can select * multiple options)

- Frequent Headaches
- Depression
- Anxiety Attacks
- Insomnia
- Loss of Appetite
- Prolonged Fatigue
- Irritability
- Over sensitivity
- Ache in chest

Would any of these options would have helped you to stay calm through your * stress ?

- Meditation
- Motivational Articles
- Seeking Professional help
- Share your feelings
- All of the above

Have you felt the need of talking to someone about your stress without actually any third person knowing about it? *

- Yes
- No
- Sometimes

Would you like to use an application which will provide all of these options? *

- Yes
- No
- Maybe

IV. RESULT AND DISCUSSION

1. Demographic characteristics: Among 278 participants, it was found that the percentage of participants of different age groups included around 8.9% children below the age of 12, 15.6% teenagers, a majority of 53.3% young adults, 8.9% individuals between 30-49 years of age and 13.3% population above the age of 50

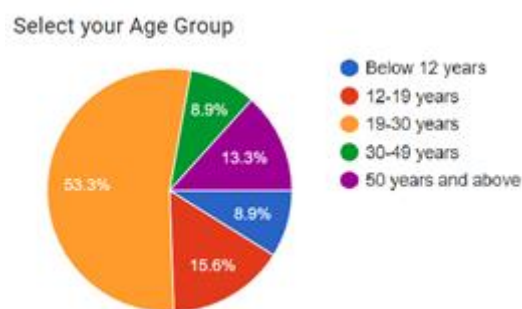


Fig 1: Age groups of Participants

2. Emotional Impact: It was found that a majority of 48.9% participants themselves felt that they were emotionally impacted by the Covid-19 Pandemic, 8.9% individuals denied that they were affected by it whereas 35.6% said that they sometimes had that feeling while 6.7% of them were confused whether they were affected or not.



Fig 2: Emotional analysis

3. Indicators of negative Mental Health: The conducted survey showed that different individuals had different signs of negative mental health amongst which most of them reported having frequent headaches, irritability, loss of appetite and depression. lot of them also complained of being over sensitive and facing insomnia.



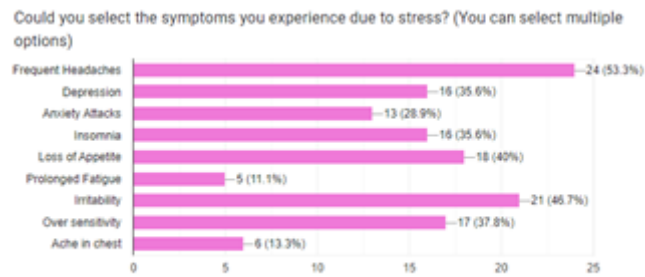


Fig 3: Symptoms of negative mental health

- Self treatment and feelings: When asked about what they feel would help them have a good mental health 22.2% population said meditation helped them stay calm whereas 33.3% people wanted to share their feelings with someone. Few of them considered reading motivational articles and seeking professional help.

Also when asked about how they want to share their feelings about 51.1% individuals said they didn't wish that their feelings should reach any third person other than them and their therapist.

Would any of these options would have helped you to stay calm through your stress ?

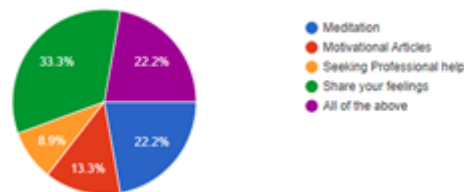


Fig 4: Solutions for staying calm

- Impact of IT tools in achieving positive mental health: Among the participated contestants a large majority of 57.8% population admitted that they would prefer using an application that can help them with all the specified features while 11.1% of them said they don't prefer these tools while 31.1% of them felt that they might consider using such tools.

Would you like to use an application which will provide all of these options?

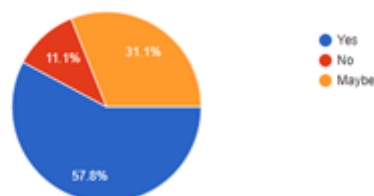


Fig 5: Views on sharing feelings with therapist

- The results of this study suggest that information technology can be used as a tool for understanding the impact of the global pandemic on mental health. The findings indicate that individuals belonging to different age groups experienced higher levels of anxiety, depression, and stress due to the pandemic. This suggests that information technology can serve as an effective tool for understanding the psychological impact of the pandemic on different age groups.



Have you felt the need of talking to someone about your stress without actually any third person knowing about it?

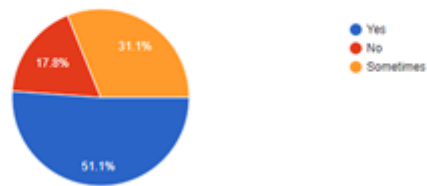


Fig 6: Views on using IT tools for mental peace

7. Furthermore, the results of the study suggest that younger individuals may be particularly vulnerable to the psychological effects of the pandemic. This is likely due to their lack of experience in dealing with similar situations and their lack of access to support systems such as counseling and mental health services. It is therefore important that interventions that utilize information technology are tailored to the needs of younger individuals.

Overall, this study highlights the importance of using information technology to understand and address the mental health implications of the global pandemic. It suggests that interventions utilizing information technology can be effective in understanding and addressing the psychological impact of the pandemic on different age groups.

V. CONCLUSION

In conclusion, the use of information technology has enabled us to study the impact of global pandemic on mental health of individuals belonging to different age groups more effectively and efficiently. By gathering data from online surveys, we have been able to gain valuable insights into the current mental health situation of individuals across the world. With the help of IT, we can continue to monitor the mental health of individuals in the future and take necessary steps to improve their well-being.

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