

Were Indians Happy During the COVID-19 Pandemic? A Cross-State Analysis

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Abstract

Purpose : This paper examined how economic and non-economic factors are associated with people's happiness in 36 states and union territories in India during the COVID-19 pandemic year 2020.

Methodology : This paper determined the significant factors that affected the average happiness of the Indian population by using a comparative analytical method and an ordinary least square regression analysis. These data were obtained from the Sustainable Development Goal India Report 2020–2021 and the Annual India Happiness Report 2020. The study examined the average happiness as the dependent variable, with COVID-19 cases and deaths as independent variables. A wide range of control variables was also included in the study; these included religious factors, economic growth, health indicators, education, relationship dynamics, health expenditure, forest coverage, corruption levels, the percentage of poor people, human trafficking, philanthropy, and female labor force participation.

Findings : The results indicated that COVID-19 cases and deaths had a negligible or infinitesimal effect on the overall subjective well-being of the people. The impact of economic growth ignored subjective well-being. Variables such as work, health, relationships, and health expenditure had a significant impact on the average person's happiness.

Practical Implications : This paper offered crucial practical insights for policymakers in developing countries, providing recommendations for better preparedness for future crises. The government should focus on both the qualitative and quantitative aspects of well-being to mitigate the challenges of a pandemic since both economic and non-economic factors equally determine the changes in happiness.

Originality/Value : This paper examined factors associated with people's overall happiness in 36 states and union territories in India during the COVID-19 pandemic year 2020. This paper discovered that during the early stages of the COVID-19 outbreak—when the nationwide lockdown and the entire economic shutdown of India were announced—there was a slight decline in the average happiness of Indians. This finding was based on secondary data from a variety of sources. The detrimental impact of COVID-19 on their economic lives is comparable to the reduction in happiness.

Keywords : happiness, COVID-19, lockdown, inequality, welfare policies, economic growth

JEL Classification Codes : I31, J08, J38, I12

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COVID-19 is a disease caused by a virus called SARS-CoV-2. It started in Wuhan, China, and spread to many places worldwide, affecting big cities and countries everywhere. In March 2020, the World Health Organization (WHO) declared the virus a Public Health Emergency and considered it a major issue for all because it spread so quickly around the world. They also called it a pandemic, which means it's a sickness that

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spreads over an extensive area. Since then, the virus has spread, making many people sick in different countries. A report from the European Centre for Disease Prevention and Control in February 2021 showed that over 109 million cases of COVID-19 were reported, and more than two million people died because of it in 219 countries.

The COVID-19 pandemic has brought about a paradigm shift in people's lives worldwide, significantly impacting every aspect of human existence. Governments across the globe have implemented various measures to mitigate the spread of the virus, including bans on public gatherings, travel restrictions, closures of schools and non-essential workplaces, and the enforcement of social distancing protocols. These measures have compelled individuals to confine themselves to their homes, disrupting daily routines and social interactions. The pandemic and ensuing lockdowns have had far-reaching effects on multiple sectors, including food security, global trade, education, tourism, hospitality, and sports and leisure activities. The disruptions have posed challenges to ensuring adequate food supplies, disrupted supply chains, and led to economic downturns in many regions. The closure of educational institutions has forced a shift to remote learning, exacerbating existing disparities in access to education.

Similarly, the tourism and hospitality industries have suffered significant losses due to travel restrictions and decreased consumer spending. Moreover, the pandemic has taken a toll on mental health and subjective well-being as individuals grapple with uncertainty, social isolation, and economic hardships. The prolonged periods of lockdown and social distancing measures have contributed to increased levels of stress, anxiety, and depression among populations worldwide (Andersen et al., 2020; Baker et al., 2020; Beland et al., 2020; Carvalho et al., 2020; Chen et al., 2020; Coibion et al., 2020; Forsythe et al., 2020; Hoke et al., 2020; Kim et al., 2020).

The first COVID-19 case in India was confirmed on January 27, 2020. Since then, the number of cases has increased drastically in India. As of November 30, 2020, India recorded 9,462,809 confirmed cases and 137,621 deaths. The month-wise COVID-19 cases and deaths are depicted in an appendix in Figures A1 and A2. The government of India prioritized containing the disease's spread by strictly adhering to WHO guidelines such as social distancing, self-isolation, restrictions on mobility and gatherings of people, closure of educational institutes and public facilities, and complete lockdown of the country. In order to prevent the disease from spreading, the Indian government has imposed four unprecedented lockdowns. First, for the first two lockdowns, which took place from March 25, 2020, to May 3, 2020, only essential services—banks, rations, and medical shops—and 50% of staff were allowed. It brings all the economic activities to a halt. In the third lockdown phase, some relaxations have been given to the non-essential services. In the fourth phase of the lockdown, transport facilities and parks are open to the general public with certain conditions. It has brought immense pressure on the country's health sector, which is already in dire condition. India's expenditure is 1.28% of GDP on the health sector, which is very low compared to other worst-affected countries, the USA, the UK, Italy, Russia, and many European countries (Chandna, 2019).

Subjective well-being is the degree to which a person perceives the overall quality of his/her life as a whole or how well he/she enjoys his/her life. It measures the global assessment of all aspects of a person's life. Initially, subjective well-being was widely studied in psychology, but it gained importance in economics after Easterlin's seminal work in 1974. Easterlin (1974) showed that happiness remains constant or slightly decreases as income increases. Helliwell (2001, 2007), Paul and Guilbert (2013), and Helliwell and Barrington-Leigh (2010) have been the subjects of numerous studies since that time.

Despite the traumatic experiences brought about by COVID-19, the impact on well-being is complex and not uniformly negative, as evidenced by emerging international studies. While some research, such as that by Cheng et al. (2020) in Singapore, suggested an adverse effect of COVID-19 on subjective well-being, other studies from regions like the UK, US, and Europe, conducted by Banks and Xu (2020) and Brodeur et al. (2020a), highlighted severe mental health challenges arising from lockdowns and the pandemic. Interestingly, contrasting findings have also emerged, with studies by Foa et al. (2020) in the UK and Recchi et al. (2020) in France indicating an improvement in overall subjective well-being during lockdown periods.

While there have been numerous studies conducted by researchers, institutions, and organizations in India to assess the effects of the pandemic on various sectors such as healthcare, economy, and education, there has been a noticeable gap in research regarding the subjective well-being and happiness of the people during the pandemic. Understanding the impact on people's general sense of well-being and happiness in India has been limited despite the significant disruptions to daily life and mental health challenges that COVID-19 has caused.

Studying happiness and people's subjective well-being is crucial for individual and societal welfare. Understanding the factors that contribute to happiness improves overall quality of life and has implications for health outcomes, productivity, social relationships, and the overall development of an economy. By unraveling the complexities of subjective well-being, researchers can inform policies and interventions aimed at promoting resilience, enhancing community cohesion, and building sustainable and equitable societies.

Consequently, the purpose of this investigation is to investigate the subjective well-being of the population. We carry out a cross-state analysis using information from the SDG India Report 2020–2021 by NITI Ayog and the annual India Happiness Report 2020. As control variables, we include a variety of factors, including economic growth, health indicators, religious affiliation, employment status, healthcare expenditure, and environmental factors, such as forest coverage, interpersonal relationships, corruption rates, poverty rates, human trafficking incidences, philanthropic activities, and female labor force participation, in addition to COVID-19 cases and deaths. In order to gain a comprehensive understanding of the multifaceted effects that the pandemic has had on people's overall happiness and life satisfaction, we estimate the impact of COVID-19 on subjective well-being by using the multiple regression method.

Review of Literature

Conceptual Aspects

The theoretical frameworks of the economics of happiness elucidate the intricate relationship between economic factors and individuals' subjective well-being. Subjective well-being, which describes self-reported happiness or life satisfaction, is at its core. In this area, conventional economic metrics are challenged, and the assessment of well-being is broadened to include non-economic factors such as leisure, health, social relationships, and environment, as well as beyond economic parameters. Traditional economic theory often employs the concept of utility to explain individual well-being or satisfaction; thus, in the economics of happiness literature, researchers utilize utility as a measure of happiness or life satisfaction (Stutzer & Frey, 2012). Through rigorous analysis, economists endeavor to understand how various economic policies, institutional structures, and personal choices shape happiness levels (Radcliff, 2013). They investigated phenomena like hedonic adaptation, which describes people's tendency to adjust to changes in circumstances over time (Armenta et al., 2014).

Additionally, challenging the conventional assumption that higher income invariably accompanies higher happiness, Easterlin demonstrated that beyond a certain point, higher income levels do not necessarily lead to greater happiness (Easterlin, 1974). According to Lakshmanasamy & Maya (2020b), various explanations for this paradox have been offered; among them is the importance of relative income and social comparison in determining individual happiness. According to this view, people frequently compare their well-being and income to those in their social group; accordingly, feelings of inequality and happiness are strongly affected by relative income, which, in turn, affects overall well-being. Another group of researchers has emphasized that the economics of happiness transcends purely economic factors to consider non-material aspects such as social relationships, health, and leisure time (Methorst et al., 2020). Factors such as the quality of social connections, a sense of purpose, and work-life balance are essential in determining happiness.

Economics of Happiness

The field of happiness literature has changed a lot since the discovery of the Easterlin paradox; a lot of research has sought to find the primary factors that affect happiness. Since the 1990s, research examining the relationship between happiness and income across multiple countries and periods has grown (Frey & Stutzer, 2002; Graham, 2012; Stevenson & Wolfers, 2008). Over time, the study of the economics of happiness has evolved into a robust discipline, demonstrating its relevance across various domains (Frey & Stutzer, 2002). First and foremost, the foremost concern of every economy worldwide is the well-being of its citizens, shaping policies to improve every aspect of human life. Second, investigating happiness can offer novel insights into addressing pressing economic issues such as inequality, unemployment, and inflation. By understanding these concerns, policymakers can develop strategies to enhance the quality of life for their populace. Third, research on happiness can assist governments in fortifying various institutions by identifying weaknesses and loopholes in their functioning (Long, 2021).

The determinants of happiness can be categorized in various ways, with one commonly accepted classification proposed by Lyubomirsky et al. (2001). They divide these factors into three groups: (a) life circumstances and demographics, encompassing socio-economic, demographic, institutional, and political factors; (b) personality traits, which are internal characteristics of individuals; and (c) intentional behaviors, where individuals engage in activities aimed at enhancing their long-term happiness. However, research in this area remains limited.

Ngamaba et al. (2017) pointed out that distinguishing between individual- and national-level drivers of happiness is an additional method of classification. At the national level, factors influencing life satisfaction include economic growth, national wealth, GDP per capita, income inequality, environmental quality, governance quality, inflation rates, aggregate unemployment levels, and more. Conversely, individual-level drivers encompass personal socio-economic and demographic factors such as income and demographic characteristics, social factors like relationships with friends, family, and others, levels of trust, spiritual beliefs, and psychological factors. This categorization provides a comprehensive framework for understanding the multifaceted nature of happiness determinants.

In contrast to the socioeconomic, demographic, institutional, and political factors, psychologists argue that the major portion of the variation in happiness is explained by the influence of personality traits or psychological factors, and 40 to 50% of the variation in happiness is due to the presence of these factors (Diener & Oishi, 2000; Lyubomirsky et al., 2001). Researchers persistently manifest that personality traits are strongly associated with happiness or life satisfaction (Costa & McCrae, 1988). Individual happiness and the five personality traits are collectively referred to as the Big Five Inventory (BFI) by economists and psychologists (Boyce, 2010; Budria, 2013). The BFI is treated as the widely accepted approach for modeling personality traits. BFI includes (a) neuroticism, negative emotions such as depression, stress, or anxiety; (b) extraversion, the habit of being sociable, active, smart, or cheerful; (c) openness, a tendency to be creative, emotionally sensitive, being imaginative; (d) Agreeableness, being an adjustable, trustable, tendency to be cooperative; and (e) conscientiousness, self-motivated, strong-willed, following certain principles and rules (Budria, 2013).

Research on subjective well-being within the context of India is relatively scarce. Biswas-Diener and Diener (2001) surveyed sex workers in Kolkata, revealing their satisfaction with various life aspects despite challenging economic conditions. Spears (2016) examined the correlation between caste and life satisfaction, while Majumdar and Gupta (2015) and Lakshmanasamy (2010, 2021) investigated factors like employment, gender, and education on life satisfaction, finding a positive link between absolute income and life satisfaction. However, subsequent studies by Lakshmanasamy and Maya (2020a, 2020b) discovered the presence of the Easterlin paradox in India, highlighting the impact of income and relative income on life satisfaction.

COVID-19 Pandemic and Subjective Well-Being

Numerous studies have delved into the multifaceted impacts of the pandemic across various domains, including its effects on economic growth (McKibbin & Fernando, 2020), service trade (Long, 2021), fiscal policy (Sarmah & Sikka, 2023), work culture (Chakraborty & Altekar, 2021; Roshan & Mehta, 2022), livelihoods (Glover et al., 2023), inequality (Alon et al., 2020), and the labor market (Fadinger & Schymik, 2020). Moreover, a growing body of research examines the pandemic's impact on mental health (Brodeur et al., 2020b; Le & Nguyen, 2022; Pedraza et al., 2020), highlighting its significant psychological effects on individuals' well-being. Despite the negative mental health implications, the pandemic and subsequent lockdown have also brought about some positive impacts, such as increased family time, personal interactions, and opportunities for pursuing individual interests, which are often rare during normal circumstances (Long, 2021). Additionally, studies have noted positive environmental changes during the pandemic, including reductions in air pollution, improved water and air quality, decreased noise levels, and lower land surface temperatures (Dang & Trinh, 2022; Praveena & Aris, 2021). Additionally, these benefits of the lockdown may have an impact on people's general well-being. While many current studies focus exclusively on the harmful effects of lockdown measures on mental health, such as anxiety, loneliness, and boredom, they ignore how the positive benefits of lockdown measures and these mental health issues may collectively impact people's overall well-being.

From the literature on happiness and its determinants during the COVID-19 pandemic, particularly in developing countries like India, the authors found a lack of systematic studies empirically analyzing the significant factors influencing happiness, especially in the Indian context. Various facets of human life have been profoundly affected by the measures that governments around the world have put in place to mitigate the harmful effects of COVID-19, including daily routines, employment and economic status, family and social relationships, and, most importantly, health status. These changes are likely to affect individuals' levels of happiness significantly. Thus, this study aims to identify and elucidate the factors contributing to happiness during the pandemic. While analyzing people's happiness levels is essential to a nation's development in order to improve its citizens' general well-being, there are still difficulties in precisely defining and measuring happiness. According to earlier Indian literature, absolute and relative income play a significant role in determining happiness. While the COVID-19 pandemic has changed global conditions, this study aims to verify whether income continues to be a significant factor in happiness during the pandemic.

The following are the hypotheses to be tested through this study:

- ✧ **H1** : When it comes to the factors that impact happiness during the pandemic, there are significant differences between various groups of states.
- ✧ **H2** : Income significantly increases happiness even during crisis times.
- ✧ **H3** : The level of happiness in India is heavily influenced by non-monetary factors.

Data Source and Methodology

The present study utilized multiple Indian annual cross-sectional datasets covering 2020–2021 sourced from various outlets. The dependent variable, happiness score, for the 36 states and union territories was obtained from the Annual India Happiness Report Rajesh K. Pillania (2020) at the Management Development Institute, Gurugram, India. Additionally, SDG India 2020–2021, developed by NITI Ayog (2021), provided some explanatory variables, including work, relationships, health, philanthropy, and religion. The India Happiness Report 2020, on the other hand, provided some independent variables: health expenditure, education, female labor force participation, corruption, economic growth, forest coverage, human trafficking, and relationships.

Table 1. Definition of Variables Used in the Study

Happiness	State-wise Average Happiness Score.
Economic Growth	Annual growth rate of GDP (constant prices) per capita.
Poor	Percentage of the population in the lowest two wealth quintiles.
Forest	Forest cover as a % of total geographical area.
Trafficking	Number of victims of human trafficking per 10 lakh population.
Corruption	Cases under the Prevention of Corruption Act and related sections of IPC per 10 lakh population.
Health Expenditure	Monthly per capita out-of-pocket expenditure on health as a share of Monthly Per capita Consumption Expenditure (MPCE).
Higher Education	Gross Enrolment Ratio (GER) in higher education (18–23 years).
Female Labor Force	The ratio of female to male Labor Force Participation Rate (LFPR) (15–59 years).
Elected Women	% of elected women over total seats in the state legislative assembly.
Work	Work and related issues, such as earning and growth.
Relationship	Relationships, including family and friends.
Health	Health, including physical and mental.
Philanthropy	Social concerns.
Religion	Religious and spiritual orientation.

Data on state-wide COVID death cases and COVID cases were collected from the Ministry of Health and Family Welfare (2020). To bolster the cross-sectional findings, data on Indian happiness score and log GDP per capita at purchasing power parity were sourced from the World Happiness Report 2021, compiled by UNDP. Detailed information on the data variables is provided in Table 1.

Since the dependent variable, happiness, is in average form, the ordinary least squares (OLS) regression method is suitable for identifying the significant factors influencing happiness. The cause-and-effect relationship between the happiness score and its determinants can be displayed in structural form as follows:

$$\text{Average Happiness} = \beta_0 + \beta_1 \text{Economic Growth} + \beta_2 \text{Poor} + \beta_3 \text{Forest} + \beta_4 \text{Trafficking} + \beta_5 \text{Corruption} + \beta_6 \text{Health Expenditure} + \beta_7 \text{Higher Education} + \beta_8 \text{Female Labour Force} + \beta_9 \text{Elected Women} + \beta_{10} \text{Work} + \beta_{11} \text{Relationship} + \beta_{12} \text{Health} + \beta_{13} \text{Philanthropy} + \beta_{14} \text{Religion} + \beta_{15} \text{Covid Death Cases} + \beta_{16} \text{COVID Cases} + \varepsilon \dots (1)$$

To better understand the nature and direction of the results obtained from the data, the present study also examines summary statistics (Table 2). Significant variations exist between states and union territories for each variable, as evidenced by the standard deviation, maximum, and minimum values. This diversity underscores the influence of cultural and geographical differences on happiness levels across India's states and union territories. It is

Table 2. Descriptive Statistics

Variable	Mean	SD	Min.	Max.	Obs.
Happiness	3.36	0.08	3.19	3.57	36
Economic Growth	5.69	2.31	0.74	13.79	33
Poor People	31.12	21.58	1.2	75.2	36
COVID Death Cases	3551.8	7773.779	0	44548	35
COVID Cases	238973.9	344970.8	2958	1698198	35
Forest	36.40	27.77	1.47	90.33	36
Trafficking	8.99	15.43	0	60.77	36

Corruption	3.31	2.77	0	8.61	36
Health Expenditure	12.09	3.48	6	18.6	35
Higher Education	28.79	11.27	7.4	53.9	36
Female Labor	0.38	0.16	0.06	0.8	36
Elected Women	7.44	3.88	0	14.44	32
Work	2.99	0.19	2.77	3.95	36
Relationship	3.90	0.09	3.68	4.09	36
Health	3.66	0.09	3.39	3.91	36
Philanthropy	3.42	0.08	3.24	3.57	36
Religion	3.60	0.11	3.34	3.86	36

Table 3. Distribution of Variables Across States

Variables	Low	Lower Middle	Upper Middle	High
Happiness	3.40	3.32	3.34	3.34
Growth	3.30	5.27	5.99	8.48
Poor People	32.32	42.75	21.73	32.21
COVID Death Cases	2140.875	6853.556	1567.889	3488.111
Reported COVID Cases	192759.1	315092.8	136687.4	306221.2
Forest	37.16	29.98	25.39	39.85
Trafficking	13.32	6.35	8.20	10.96
Corruption	4.08	2.14	3.96	3.26
Health Expenditure	14.92	12.31	10.19	12.3
Higher Education	28.9	27.96	35.21	28.91
Female Labor Force	0.37	0.40	0.37	0.39
Elected Women	5.09	10.61	7.73	6.68
Work	2.99	3.06	3.00	2.95
Relationship	3.94	3.85	3.93	3.87
Health	3.69	3.61	3.64	3.64
Philanthropy	3.46	3.39	3.44	3.41
Religion	3.6	3.6	3.64	3.57

imperative to examine how each variable varies across states and union territories with different levels of economic growth. To achieve this, Table 3 illustrates the nature of these variables across the 36 states and union territories, categorized into four groups based on their economic growth levels. The methodology suggested by Mukherjee et al. (2014) is used to determine these growth levels. In terms of income distribution, the states with the slowest growth fall below or equal to the first quartile, the lower-middle states fall between the first and second quartiles, and the upper-middle states fall between the second and third quartiles.

The Easterlin view states that happiness tends to plateau or even slightly decline as income increases; this is consistent with the nature of the happiness score. In lower-middle states, the percentage of the population in the lowest two wealth quintiles is the highest, indicating that there is higher income inequality in these areas. In contrast, in the states that are highest in growth, the percentage of forests is significantly higher. As expected, the rate of victims of human trafficking per 10 lakh people is high in the states that are slowly growing; this is a consequence of the socioeconomic difficulties that exist in these areas. Additionally, the lowest-growing states allocate relatively higher funds toward health-related activities. The gross enrolment ratio (GER) in higher

education (18–23 years) is higher in upper-middle states, suggesting better access to education in these regions. The female-to-male labor force participation rate (LFPR) (15–59 years) and the % of elected women over total seats in the state legislative assembly are slightly higher in lower-middle states, indicating progress toward gender equality. Meanwhile, the remaining components of happiness (work, relationship, health, philanthropy, and religion) appear to follow a similar trend across states and union territories as income levels increase.

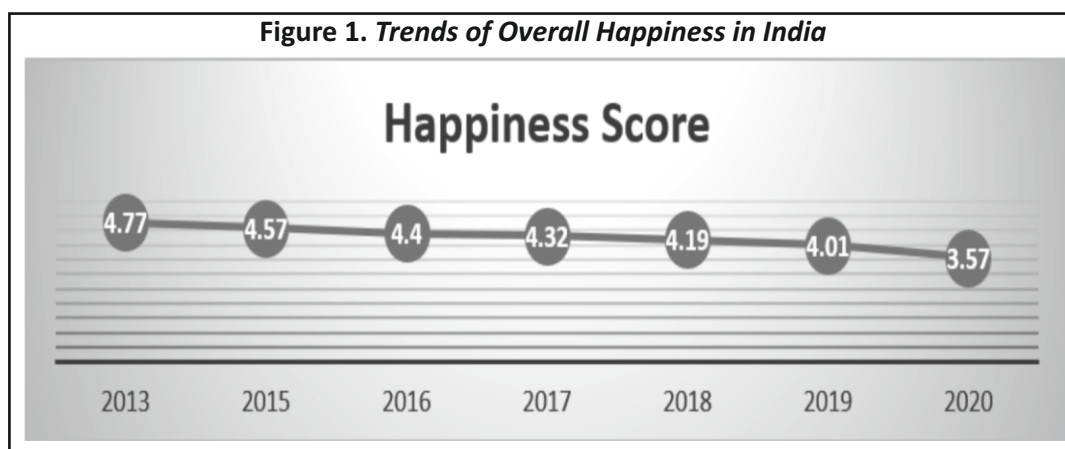
Empirical Analysis and Results

Economic Growth and Level of Happiness

Figure 1 depicts the trends in the overall happiness of India from 2013 to 2020, with data sourced from the World Happiness Report 2020. The mean overall happiness score exhibits a declining trend until 2019. But in 2020, the score drastically fell to 3.57 from levels in the past years. When the COVID-19 pandemic began and a nationwide lockdown was imposed in the country, this significant decrease coincided. Reflecting the significant impact of the pandemic and lockdown measures on the nation's well-being, the lowest happiness score recorded during this time was recorded in 2020.

The traditional economic perspective often views happiness through the lens of higher economic growth, maximizing utility, reducing poverty, inequality, and unemployment, and improving health and environmental standards. However, a central question that has long intrigued economists is whether money or income indeed buys happiness. There is a prevailing belief that money brings happiness, as higher income allows individuals to purchase essential goods and services like food, shelter, clothing, healthcare, and education. Similarly, wealthier nations may allocate more resources to basic social and economic infrastructure, enhancing the well-being of their citizens. Consequently, it is commonly assumed that wealthier individuals and countries tend to be happier compared to their less affluent counterparts. However, the reality is more nuanced. While equating higher income with greater happiness is tempting, empirical evidence suggests a more complex relationship. According to research examining this connection, returns to income in relation to happiness diminish; therefore, an increase in income may not substantially increase happiness levels beyond a certain threshold.

Moreover, countries with larger economic prosperity may not necessarily lead in all development indices, and higher economic growth does not always translate to enhanced well-being for all segments of society. Additionally, the extent to which GDP accurately reflects an economy's welfare is debated, as GDP fails to account for factors like income distribution, environmental sustainability, and overall quality of life. Therefore, while economic growth and income are important to improve well-being, they are not the sole determinants. A more holistic approach to measuring welfare and development is needed.



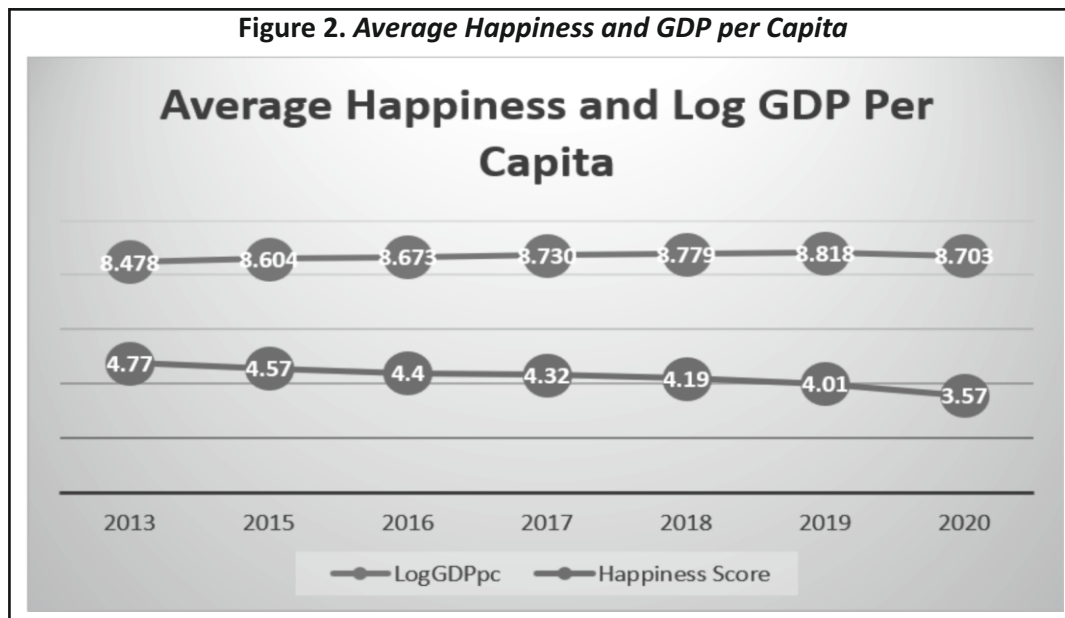


Figure 2 illustrates the relationship between log GDP per capita and mean values of happiness from 2013 to 2020. Interestingly, it reveals that increasing national wealth is not consistently accompanied by a corresponding increase in national happiness. In spite of the COVID-19 pandemic's slight stagnation of GDP per capita in 2020, there has been little variation in GDP per capita in comparison to average happiness fluctuations over the years, suggesting an inverse relationship between the two. The Easterlin Paradox is the name of the American economist Richard Easterlin, who first observed this pattern in the United States.

Traditional economic thinking has long emphasized that growing GDP per capita is the paramount indicator of quality of life, explicitly by administrative authorities and implicitly by society itself. However, recent studies suggest that emphasizing economic growth as a measure of overall well-being may not serve society well, especially during the COVID-19 pandemic. The pandemic has highlighted the detrimental effects of prioritizing economic growth at the expense of the natural and social environment. This approach has increased the likelihood of pandemics occurring and undermined response measures' effectiveness. In light of these perspectives, the subsequent sections of this analysis systematically examine the significant factors influencing changes in happiness in India, focusing on the effects of COVID-19 on overall well-being across the 36 states and union territories.

Effects of COVID-19 on Happiness

Average happiness in India for 2020 was distributed state-wise in Figure 3. This study is dependent solely on cross-sectional data from 2020 because individual and state-wise happiness-related data had not been available in previous years. Among Indian states and union territories, Mizoram, Punjab, Andaman, and Nicobar Islands rank highest in average happiness scores, with scores of 3.57, 3.52, and 3.47, respectively. Conversely, Odisha, Uttarakhand, and Chhattisgarh occupy the lowest three positions, with happiness scores of 3.25, 3.22, and 3.19, respectively. This distribution provides insight into the varying happiness levels across different regions of India in the specified year.

In Figure 4, this paper illustrates the relationship between changes in the total number of death cases during the COVID-19 pandemic and the movement of average happiness across states, categorized based on their economic growth rates. The impact of the pandemic on overall happiness varies across states, with low-income states

Figure 3. Average Happiness Across States in India

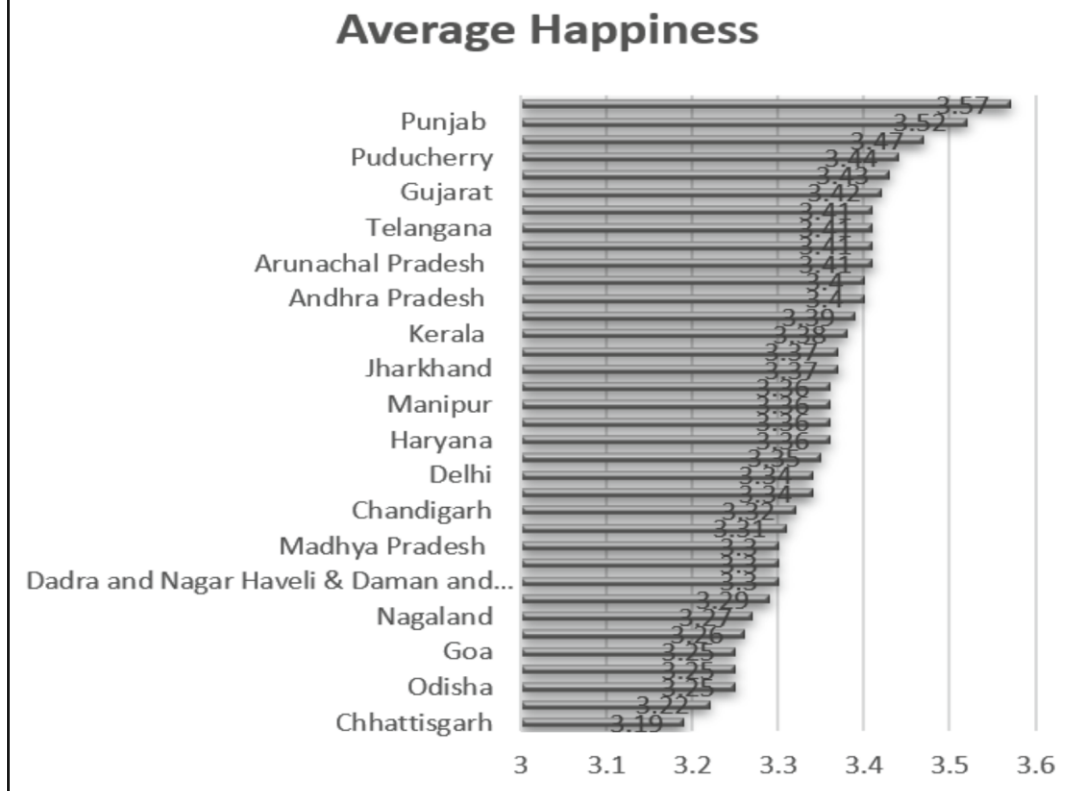
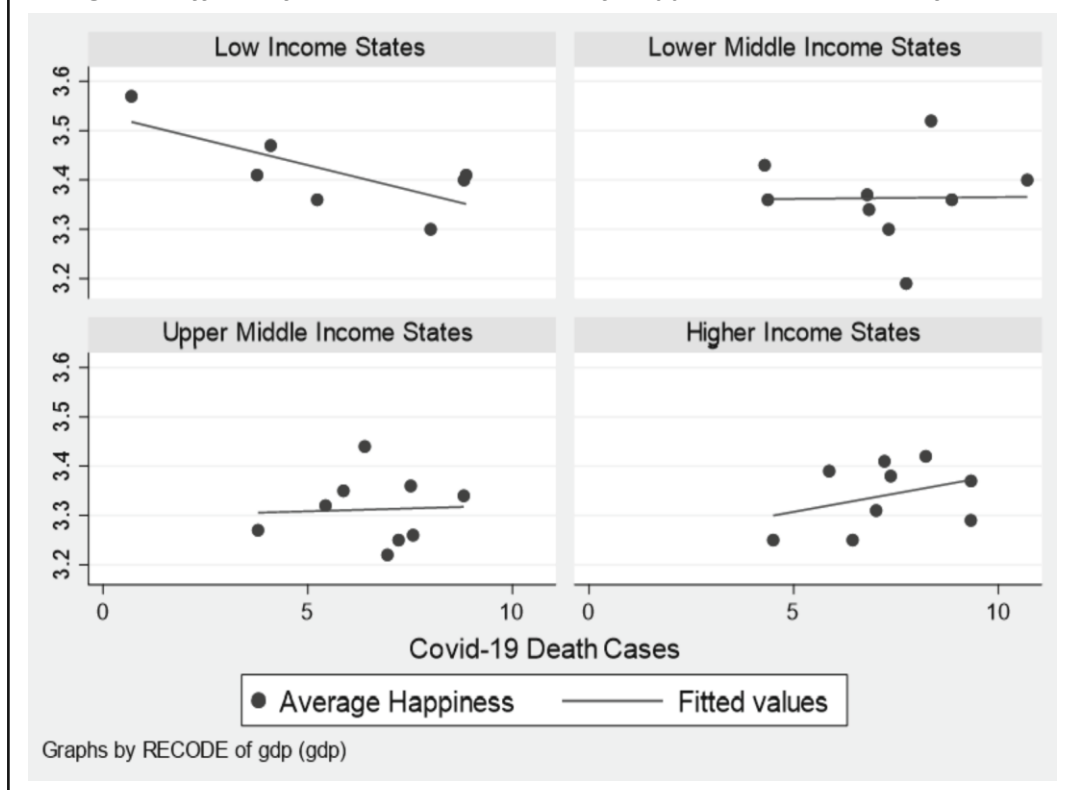


Figure 4. Effects of COVID-19 on the Level of Happiness in the States of India



experiencing a decline in happiness due to a rise in death cases. Specifically, the economic repercussions of national lockdowns and the closure of non-essential workplaces may disrupt the daily lives of individuals in these states. Furthermore, the decrease in household income resulting from these measures may impede investment in health expenditure, ultimately negatively impacting happiness and mental well-being. It may manifest in increased anxiety, depression, fear of death, and other negative emotions among the population in low-income states (Brooks et al., 2020; Cheng et al., 2020; Holmes et al., 2020).

Contrary to this, in the fastest-growing states, happiness is increasing during the COVID-19 pandemic. It suggests that the pandemic did not significantly reduce their level of happiness; instead, it may have increased their overall well-being. Higher-income levels in these states allow for sufficient healthcare expenditure, alleviating mortality fears. Additionally, with the relatively low mortality rate during the pandemic, robust economic support can mitigate the negative impact on overall well-being. Moreover, the national-level lockdown and subsequent pandemic outbreak may have improved mental health in these states by strengthening family relationships, allowing for more time spent with loved ones, and providing work flexibility (Cornell et al., 2022).

In both lower-middle-income and upper-middle-income states, the effect of COVID-19 pandemic death cases appears to leave average happiness unaffected, as indicated by a horizontal fitted line. This trend suggests that the disutility caused by pandemics may be offset by emotional well-being resulting from implementing national-level lockdown measures. Therefore, it is evident that both mental well-being and economic welfare are crucial for enhancing the quality of life of individuals. We found little evidence to support our initial hypothesis (H1). To support these findings, this study conducts an OLS regression analysis to comprehensively understand the significant determinants of happiness in India, particularly during the pandemic period.

To identify the significant determinants of happiness levels in India, the present study constructed a simple linear regression model segmented into three models, as mentioned in Table 4. In the first model (Model 1), all variables collected from both the India Happiness Report and the NITI Ayog SDG Report were included. The second model added the total number of death cases in India during COVID-19 to assess the impact of pandemic-related situations on explaining happiness in India.

Table 4. OLS Regression Results

Variables	Model 1	Model 2	Model 3
Economic Growth	-0.003 (0.005)	-0.004 (0.004)	-0.004 (0.004)
Number of Poor People	-0.002* (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Forest Coverage	0.0001 (0.001)	0.0001 (0.001)	0.0001 (0.0005)
Trafficking	0.0001 (0.001)	0.0001 (0.000)	0.0001 (0.0005)
Corruption	-0.003 (0.004)	-0.003 (0.003)	-0.003 (0.003)
Health Expenditure	0.004 (0.005)	0.004* (0.002)	0.004* (0.002)
Higher Education	-0.001 (0.002)	-0.002* (0.001)	-0.002* (0.0009)
Female Labor Force	-0.026 (0.071)	-0.027 (0.064)	-0.026 (0.063)

Elected Women	0.007 (0.004)	0.007* (0.004)	0.007* (0.004)
Work	0.125* (0.056)	0.123** (0.044)	0.122** (0.044)
Relationship	0.278 (0.175)	0.265* (0.137)	0.267* (0.136)
Health	0.415* (0.209)	0.407** (0.155)	0.409** (0.152)
Philanthropy	0.207 (0.140)	0.177 (0.108)	0.172 (0.104)
Religion	0.071 (0.157)	0.076 (0.119)	0.076 (0.119)
COVID-19 Death Cases	–	0.0000002 (0.0000006)	–
COVID-19 Cases	–	–	0.000000006 (0.00000001)
Constant	–0.558 (0.667)	–0.344 (0.414)	–0.347 (0.413)
Observations	35	35	35
R^2	0.805	0.821	0.8214
F Statistic	4.729***	29.93***	29.65***

Note. Standard Errors in parenthesis. *, **, *** are 10%, 5%, and 1% levels of significance respectively.

From the first model, it was observed that the importance of work and health in life, along with the increasing number of poor people, significantly determined the level of happiness in India. As indicated in the table, a one-unit increase in the proportion of people who believe work is important in life led to more than a 13% point increase in happiness. Similarly, individuals who prioritized health were more than 42% happier. Both variables were significant at the 10% level. Additionally, the increasing number of poor people in a state slightly reduced happiness by 0.002 units. However, these variables alone were insufficient to explain India's happiness level during the pandemic fully. The R -squared value, a measure of goodness of fit, was relatively high at 81%, indicating that the selected variables in the model explained a significant portion of the variation in average happiness.

Consistent with the findings of the above descriptive analysis, the second model (Model 2) reveals that economic and non-economic factors are significantly associated with people's overall happiness during a pandemic. Despite the widespread mortality and morbidity caused by the COVID-19 pandemic, this study found little evidence to suggest that the pandemic decreased average happiness in India (the coefficient of the total number of death cases due to the COVID-19 pandemic was insignificant). This finding aligns with previous literature that has found a negligible effect of pandemics on overall life satisfaction (Cheng et al., 2020).

When COVID-19 death cases were included in the model, several previously insignificant variables became significant, although the signs of the variables remained consistent. In addition to the previously identified three significant variables (being poor, the importance of work, and health in life), a few more qualitative variables were found to be significant with the expected signs, providing a more comprehensive explanation for the study. An increasing number of poor people was found to significantly reduce happiness by 0.002 units, underscoring the importance of income in determining the nation's overall well-being (Lakshmanasamy & Maya, 2020a). Average happiness slightly increased by 0.004 units for those who spent more money on health expenditure. This

finding can be interpreted in conjunction with the insignificant impact of COVID-19 death cases on happiness. Greater healthcare capacity is associated with a lower rate of COVID-19 death cases, thereby positively influencing happiness (Khan et al., 2020).

In contrast to earlier findings, higher education students in India exhibited a lower level of happiness during the pandemic period, with average happiness significantly reduced by 0.002 units for each additional student enrolled in higher education during this time. This could be attributed to financial constraints, the transition to remote online teaching methods, uncertainties surrounding academic careers and prospects (Sundarasan et al., 2020), and issues related to the lockdown. On the other hand, the increasing number of elected women positively influenced average happiness, with each additional elected woman improving happiness by 0.007 units, significant at the 10% level. This supports previous literature's findings that greater participation of women in leadership positions reduces the likelihood of corruption and gender inequality, thereby contributing to higher levels of happiness (Jha & Sarangi, 2018; Kabene et al., 2017).

Furthermore, qualitative variables such as the importance of work, relationships, and health became significant in explaining average happiness when the total number of COVID-19 death cases was included in the regression model. This suggests that the risks associated with the pandemic were offset by the positive effects of the lockdown, such as spending more time with family, prioritizing social distancing, sanitation, and mask usage (recognizing the importance of health in life), and the opportunity to work from home, all of which improved the happiness levels of people in India. Therefore, financial and non-financial factors must be considered equally important when maximizing happiness. We find evidence to accept our second (H2) and third hypotheses (H3).

The results remained consistent regardless of the variables included (COVID-19 death cases or the total number of COVID-19 cases reported). Model 3 was designed to be used as a diagnostic check to find any alterations in the determinants of happiness. Variables with comparable signs and significance explained changes in India's average happiness. Overall, this study suggests that changes in overall happiness in India during a pandemic are likely attributable to changes in both non-economic (e.g., number of elected women, importance of work, health, and relationships in life) and economic (e.g., increasing number of poor people, health expenditure, and higher education) circumstances.

Theoretical and Managerial Aspects

The study delves into the economics of happiness, expanding upon existing theories by examining the determinants of well-being amidst the COVID-19 pandemic in India. The Easterlin Paradox is revealed by the empirical analysis, emphasizing the multifaceted nature of factors impacting individual well-being and demonstrating that economic growth might not necessarily lead to greater happiness. In addition, the study emphasizes the importance of social capital, including relationships and community support, in promoting overall happiness. This is in line with theories that stress the importance of social connections for well-being.

The results have a significant impact on resource allocation and policy formulation on the managerial side. Policymakers can use these insights to develop focused measures to enhance well-being during crises; these include improvements in healthcare, economic support, and social welfare initiatives. Moreover, the study guides effective resource allocation, enabling policymakers to prioritize areas with the most significant impact on happiness, including healthcare, education, poverty alleviation, and gender equality initiatives.

Managers can draw upon the study's insights to implement strategies fostering employee well-being within organizational settings. This may involve adopting flexible work arrangements, offering mental health support programs, and cultivating positive workplace environments. Recognizing the impact of economic uncertainties on happiness, organizations can also provide resources to address career concerns, enhancing employee satisfaction and productivity. Finally, community leaders and organizations can utilize the study's findings to develop programs that promote social connections, support networks, and community resilience, particularly

during adversity. By leveraging these insights, policymakers, managers, and community leaders can work towards fostering greater happiness and well-being across various domains of society.

Conclusion

In the COVID-19 pandemic year of 2020, this paper examined factors related to the general happiness of people in India's 36 states and union territories. Utilizing secondary data from various sources, the paper observes a slight decline in the average happiness of Indians at the onset of the COVID-19 outbreak, coinciding with the announcement of a nationwide lockdown and the cessation of economic activities in India. This decrease in happiness parallels the adverse economic effects of COVID-19 on individuals' lives. Although the coefficient of economic growth is insignificant in regression analysis, descriptive analysis reveals a negative relationship between economic growth and average happiness. Consistent with this, the increasing number of poor people significantly reduced average happiness, indicating that economic growth widened the wealth gap between rich and poor in India (Lakshmanasamy & Maya, 2020a). Thus, the decline in average happiness among Indians during the pandemic is primarily attributed to adverse economic conditions rather than fear of increasing death and reported COVID-19 cases. Similarly, other factors such as health expenditure, the number of elected women, and the importance of work, health, and relationships significantly improve overall happiness among Indians. In contrast, the number of students enrolling in higher education displays less happiness due to changing teaching patterns and career uncertainties.

These empirical findings hold several policy implications. As eminent economists like Amartya Sen and Raghuram Rajan advocate, the government should focus on measures ensuring economic support for households and small-scale businesses to cope with the adverse economic conditions brought about by COVID-19. Economic growth may enhance happiness when accompanied by low-income inequality, healthy relationships, generous welfare policies, expansion of advanced health facilities, and psychological interventions. Therefore, the government should prioritize both qualitative and quantitative aspects of well-being to mitigate the challenges posed by a pandemic, as economic and non-economic factors equally influence changes in happiness.

Limitations of the Study and Scope for Further Research

While this paper offers insightful information for further studies, it also has limitations. Using one-year cross-sectional aggregate data limits the ability to assess the impact at the unit level. Moreover, the availability of state-wise subjective well-being data in India is limited, and existing data were collected before the COVID-19 pandemic. The scarcity of data limits the authors' ability to delve deeper into understanding the impact of the pandemic on individual-level happiness.

The study opens avenues for future research in several key areas. First, longitudinal studies could provide deeper insights into the dynamics of happiness over time, allowing researchers to track changes in individual well-being before, during, and after significant events such as the COVID-19 pandemic. Second, comparative studies across different countries or regions can help contextualize the findings within broader socio-cultural and economic contexts. By examining variations in happiness determinants across diverse settings, researchers can identify universal principles and context-specific factors contributing to well-being. Third, future studies can explore interventions' role in enhancing happiness during crises. Evaluating the effectiveness of policy measures, community initiatives, and workplace interventions in mitigating the negative impact of crises on well-being could offer valuable insights for policymakers, managers, and community leaders.

Authors' Contribution

Dr. Maya K. originated the concept and conducted a comprehensive review of research papers. She formulated the entire conceptual and theoretical framework for the paper, collaborating with the co-author during the manuscript writing process. Neeraj Kumar conducted the complete analysis for the study using STATA software.

Conflict of Interest

The authors declare that there are no potential conflicts of interest with respect to the research, authorship, and/or publication of this paper.

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Compliance with Ethical Standard Statement

This article does not contain any studies with human participants or animals performed by any of the authors.

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Appendix

Figure A1. Number of Cases

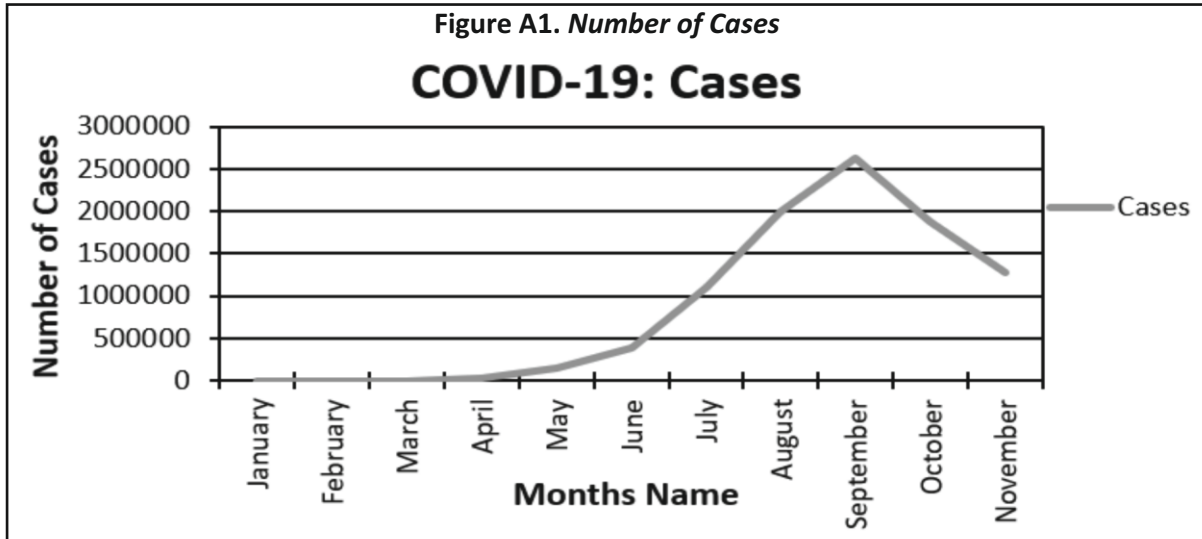
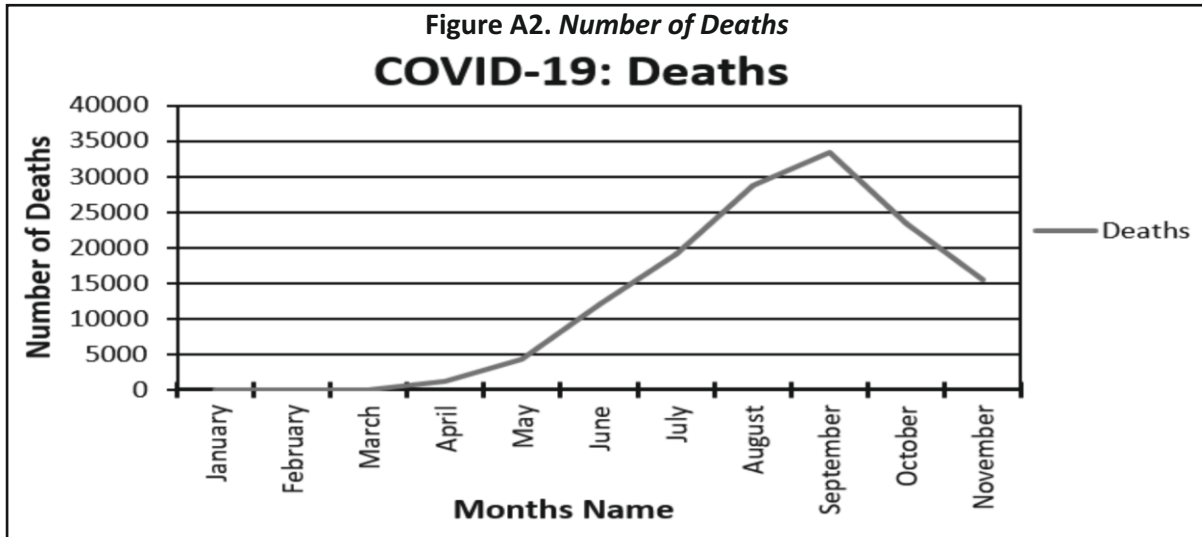


Figure A2. Number of Deaths



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