Prolonged ECONOMIC IMPACT of COVID-19 on MENTAL HEALTH

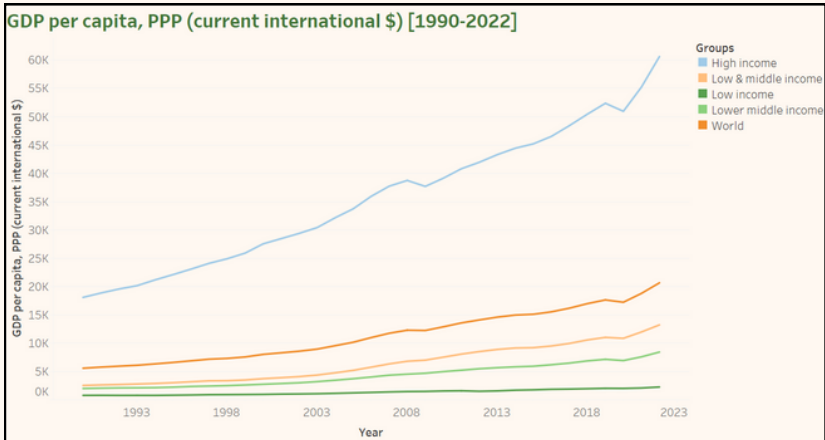**3 GOOD HEALTH AND WELL-BEING**

Objective

- The COVID-19 pandemic has globally caused profound and unforeseen disruptions (Mir et al., 2023).
- This infographic aims to unravel the complex relationship between COVID-19, mental health and economic instability, with the goal of contributing to a more sustainable and improved future.

1

Total COVID-19 cases worldwide

769,369,059
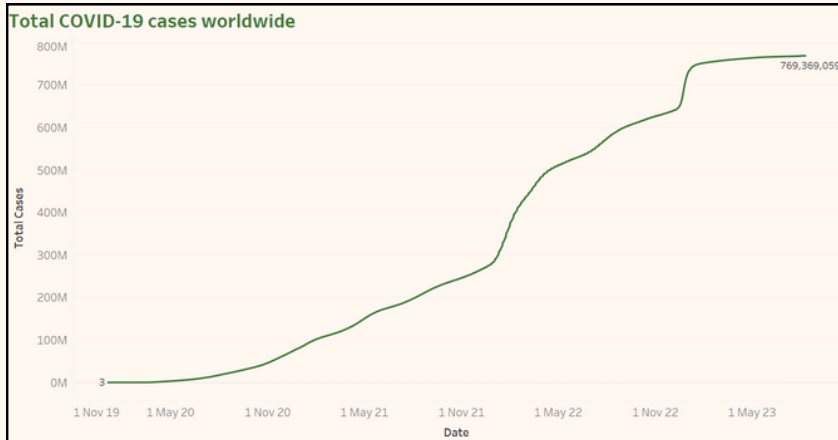
Footnote: COVID-19 Data is used to illustrate the cumulative COVID-19 daily cases worldwide starting from 4 January 2020 to 9 August 2023

GDP per capita, PPP (current international $) [1990-2022]

Groups: High income, Low & middle income, Low income, Lower middle income, World

Footnote: GDP per capita, PPP (current international $) dataset is used to display how GDP per capita, PPP has changed from 1990 to 2022. The chart illustrates global GDP per capita, PPP, along with the categorization of countries into their respective income groups.

As the number of **COVID-19 cases increased** around the world, it had far-reaching implications not only on public health but also on various aspects of the global economy. One of the notable economic consequences was the **decline in Gross Domestic Product (GDP) per capita**, particularly when **adjusted for Purchasing Power Parity (PPP)** in **2020**.
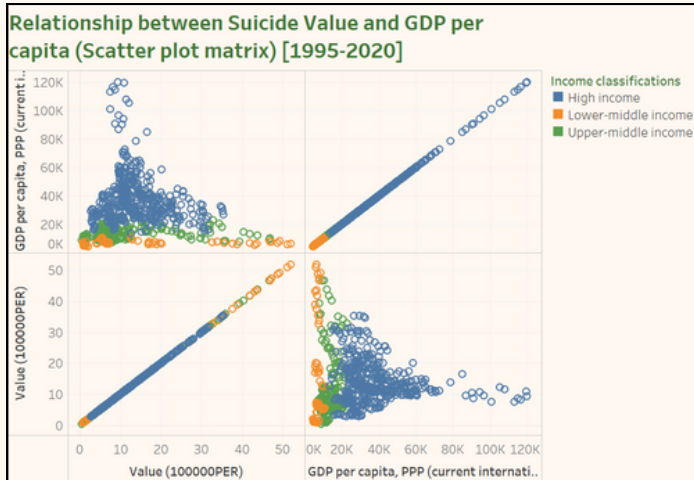
Income Classifications of 26 countries (1995-2020)

2

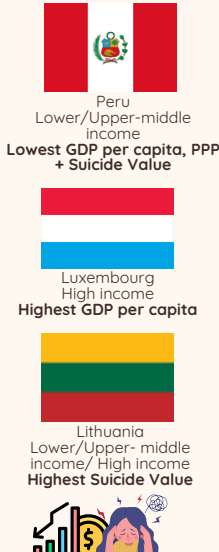| Income classifications	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
High income	12	13	14	13	13	13	14	14	14	14	14	15	16	16	17	16	16	19	19	19	20	19	19	20	19	19
Lower-middle income	7	7	6	6	6	5	3	4	4	4	4	2	2													
Upper-middle income	7	6	6	7	7	8	9	8	8	8	8	9	8	10	9	10	10	7	7	7	6	7	7	6	7	7
Grand Total	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26

Income classifications: High income, Lower-middle income, Upper-middle income, Grand Total

Footnote: After combining four datasets (COVID-19 Data, GDP per capita, PPP (current international $), Income Classifications & Suicide Rates) ensuring the absence of missing values and verifying that all countries possess complete data spanning from 1995 to 2020, a total of 26 countries remain. The table highlights how the income group classifications for these countries have evolved over the years. The countries include: Argentina, Austria, Brazil, Bulgaria, Chile, Colombia, Costa Rica, Czechia, Denmark, Estonia, Germany, Greece, Iceland, Israel, Japan, Korea, Rep., Latvia, Lithuania, Luxembourg, Mexico, Netherlands, Peru, Slovenia, Spain, Switzerland & the United States.
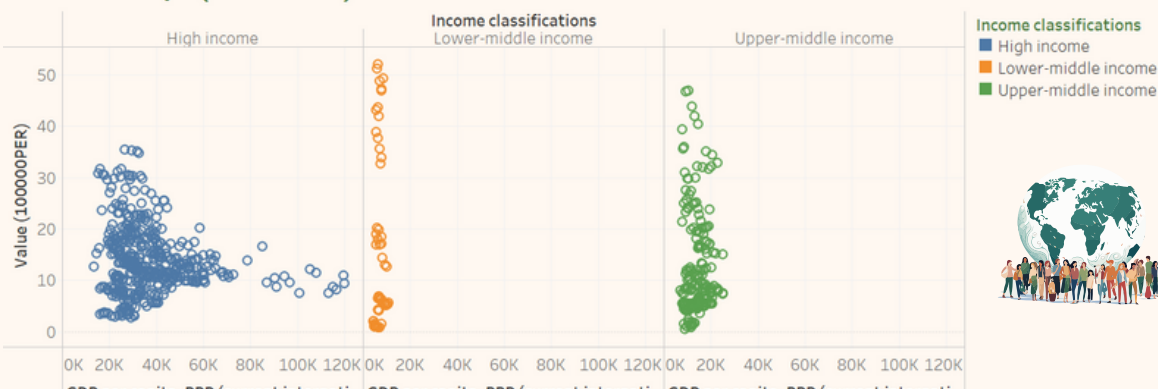
Scan here for references

3

Relationship between Suicide Value and GDP per capita (Scatter plot matrix) [1995-2020]

Income classifications: High income, Lower-middle income, Upper-middle income

Footnote: Reading from the right, the scatter plot related the correlation of GDP per capita, PPP (y) with the Suicide Value (x). There is a weak negative correlation which suggests that, as GDP per capita, PPP decreases, the Suicide Value increases, although the relationship is weak. The two scatter plots have a 45° line because they are plotted using the same variable for x and y. The time span is 25 years (1995-2020).

Peru — Lower/Upper-middle income — **Lowest GDP per capita, PPP + Suicide Value**

Luxembourg — High income — **Highest GDP per capita**

Lithuania — Lower/Upper- middle income/ High income — **Highest Suicide Value**

4

Relationship between Suicide Value and GDP per capita, PPP based on Income Groups (1995-2020)

Income classifications: High income, Lower-middle income, Upper-middle income

Footnote: This scatter plot is used to show the relationship between GDP per capita, PPP (current international $) (x) and Suicide Value (100000PER) (y), categorized by income groups including high income, lower-middle income, and upper-middle income.

According to the scatter plot matrix (x = GDP per capita, PPP (current international $), y = Value (100000PER)), there seems to be a **weak negative non-linear** relationship between the two variables.

Weak - The spread of data points indicates that while there seems to be a trend, it is not a strong or highly predictable relationship (close to 0 correlation). This indicates that other factors besides GDP per capita, PPP influence Suicide Values.

Negative - The overall pattern in the scatterplot indicates a downward trend, implying that as GDP per capita, PPP increases, there is a tendency for Suicide Values to decrease. This suggests a negative correlation, although it is relatively weak.

Non-Linear - This means that changes in GDP per capita, PPP do not have a constant effect on Suicide Values across different countries in different years.

High income
- No clear linear trend -> a weak linear relationship between GDP per capita, PPP, and Suicide Value (1995-2020).
- Most data points cluster below a Suicide Value of 40 (per 100,000 persons) -> these countries had <40 recorded suicides per 100,000 individuals in their populations during this period.

Lower-middle income
- A vertical line of data points -> a potentially strong but non-linear relationship between GDP per capita, PPP and Suicide Value.
- A wide range of suicide values -> significant variability, spanning from the lowest value of 0.8 to the highest value of 52.0.

Upper-middle income
- Similar to the lower-middle-income group -> a vertical line of data points, with a bit more spread.
- The range of Suicide Values is narrower compared to the lower-middle-income group, with <50 recorded suicides per 100,000 persons.

Higher Income Groups -> Higher GDP per capita, PPP + More variability in GDP per capita, PPP & Lower Suicide Value + Less variability in Suicide Value

What's New?

Weak Negative Non-Linear Relationship: Suggests that **as GDP per capita, PPP increases, Suicide Values tend to decrease**, it's important to note that this trend is **not highly predictable and varies across countries and years**.
- **Existing literature:** Studies examining historical events such as the Great Depression of the 1930s, the Asian economic crisis in 1997, and the global financial crisis in 2008, consistently demonstrate that **severe economic downturns are frequently linked to rises in suicide rates** (Gunnell & Chang, 2016).

Income Classifications: High income countries generally had a **wide range of GDP per capita, PPP** and **lower suicide rates** during 1995-2020. **Lower- and Upper-middle income** countries had a **wide range of suicide values** which highlights significant variability.
- **Existing literature:** In high income countries, **economic instability heightens the risk of suicide**, while approximately **75% of suicides** take place in **low and middle income** countries (Er et al., 2023; Bantjes et al., 2016).

So What?

Current Knowledge
- **Challenge:** This research diverges from the established theory that economic factors affect mental health outcomes, including suicide rates. While it's commonly believed that individuals in less economically developed countries may experience more stress and socioeconomic challenges, potentially leading to higher suicide rates, **this study specifically examines one economic variable (GDP per capita, PPP) and does not account for other potential economic factors**, which could explain the weak relationship observed.

- **Support:** The research supports the existing literature and acknowledges that lower income individuals and countries tend to face greater challenges in accessing mental health services and resources. **Vulnerable populations might be more prone to mental health and suicide issues during crises due to increased stressors and reduced support systems.**

Current Practice
- **Governments** and **NGOs** often implement **targeted outreach programs** aimed at providing **mental health support** to **vulnerable populations**. These programs could involve community-based initiatives, mental health awareness campaigns, and access to counselling services.

Contribution

- The COVID-19 pandemic has significantly impacted global mental health, highlighting the need for comprehensive strategies as we move from pandemic to endemic phases. This research explores the intricate relationship between the pandemic, mental health, and economics, emphasizing the importance of a holistic approach that considers both medical and psychological well-being.
- Promoting open conversations, reducing stigma around seeking help, and fostering safe spaces for sharing experiences are driving a cultural shift in mental health perception. This aligns with the broader aim of creating a more compassionate and resilient society ready to tackle challenges together.
- In conclusion, the alignment with SDG reflects a commitment to creating a sustainable future where both physical and mental health are prioritized.