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# A Research Study To Demonstrate The Effect Of Economic And Demographic Data Inequalities On Healthcare Usage And Assessments In The Older People

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**ABSTRACT**

In the current climate of fast and ubiquitous urbanization, worries over the decrease and aging of the population pose severe threats to sustainability. From this vantage point, their interface is justified by (a) discussing new interventions to make the most of the opportunities and (b) mitigating the threats to sustainability that shrinking urban populations and ageing populations pose to achieving the UN's Sustainable Development Goals (SDGs). Researchers must undertake a myriad of environment-specific technical, economic, institutional, and governance initiatives if researchers are to enjoy the benefits and avoid the hazards of an urban population that is becoming older without sacrificing long-term sustainability. The ability to access resources and data online is rapidly becoming fundamental to modern living. This study examines the impact of Internet access on health inequities across various socioeconomic categories using the WHO Health Equity Analysis Toolkit (HEAT) and cross-country panel data. Studies show that overall health is improved, and health disparities are reduced when more people have access to the internet. Further, this study examines the social and economic factors that influence healthcare access by making use of GBD database data from throughout the world. In instance, having access to the internet considerably improves healthcare accessibility while simultaneously reducing the negative effects of economic disparity.

**Keywords:** *Discrimination in health care Health connectivity, commercial inequality, demographics advancing age, and population disparities.*

## 1. INTRODUCTION

Life expectancy was substantially lower than 40 years at the start of the 1900s, and GDP per capita was less than a sixth of what it is today. (Zhang et al., 2019) cites extensive descriptions of various critical variables that drove economic development during this period in economics literature. It is well-established that health is impacted by environmental factors, individual behaviors, and medical interventions. The connections between health and economic development, however, are still largely unclear. It is challenging to demonstrate the relationship between health and economic development because of the many social and economic channels via which health affects development and because of the two-way causality between economic success and improved health. In addition, prosperous economies and healthy populations are outcomes of better institutional frameworks and technological advancements. It is more difficult to create traceable scientific models and conduct actual

identification due to certain obstacles. According to the research, GDP and health are highly correlated. The "Preston curve," a link between health and GDP, indicates that wealthier nations tend to have lower per capita incomes. It has long been known that a nation's ability to progress depends on the wellness of its inhabitants, so this isn't exactly groundbreaking. It was from this epiphany that the public health movement was born. Health improvement can be seen as an essential strategy for increasing income and decreasing poverty in low- and middle-income nations. This realization was further bolstered by the 2001 publication of the World Health Organization's Commission on The Study of Macroeconomics and Health report. Following this study in 2005 was an analysis of the statistics pertaining to the effect of health on the economies of high-income countries, with a focus on the EU. Healthcare expenditure has substantial monetary advantages, according to recent studies; Europe must increase its investments in human capital if it wants to become competitive on a global scale. All these studies point to the same conclusion: healthcare costs should be considered both a social expense and an economic growth driver. Many studies investigating the correlation between the two have concentrated on average health, even though health is highly unequally distributed in society (Gu et al., 2019).

## 2. BACKGROUND OF THE STUDY

Using a cross-national analysis, this research investigates the impact of the Internet on health inequalities and access to medical treatment, filling a crucial information gap (Shareef et al., 2021). Beginning with a comparison of Internet access impacts on health inequities across various socioeconomic groups, this study moves on to the next steps. According to studies, health disparities are lessened, and general health is improved when more people have access to the Internet. If more individuals could go online, the income disparity in health may shrink. This trend holds true even after controlling for a plethora of potential confounding factors that affect health inequality estimates. Secondly, the research explores the economic and social factors that influence healthcare accessibility. Focusing on income inequality, internet access, and their interplay with one another and the other variables included in the estimate, researchers isolate their effects. Contrary to popular belief, better internet speeds make it easier for those of lower incomes to receive healthcare. In addition, (Liu & Tao, 2022) found that internet use greatly reduces the impact of economic gaps on healthcare access. Three key points have been identified by this investigation. For the first time, this research explains the connection between the Internet and serious health effects. Researchers demonstrate that Internet connection has a major impact on health disparities and access to medication. Removing obstacles to health information access and improving Internet connection might enhance public health initiatives, according to students results. The study's examination of the Internet's function in clarifying the link between wealth disparity and healthcare accessibility is another distinctive feature. Students' results highlight the paramount importance of the Internet in influencing health outcomes by demonstrating that access to the Internet lessens the adverse effects of wealth disparity on healthcare access. Third, the study's use of representative data expands students' knowledge of the elements influencing healthcare accessibility and health inequalities. This

study employs cross-country panel data that covers more than 20 years and incorporates a sizable sample of both developed and developing nations to conduct an empirical analysis. The data is so large and detailed that researchers can include changes over time and across nations into the calculations to their fullest extent. It is a valuable resource for studies examining historical health inequalities and plans to address technological gaps in public health (Tibber et al., 2022).

## 3. PURPOSE OF THE RESEARCH

The primary objective of this research is to examine the relationship between socioeconomic status and healthcare use and its impact on the health outcomes of the elderly. This research examines the relationship between socioeconomic status, level of education, and access to healthcare in order to identify disparities in healthcare use and outcomes among the elderly. This study aims to educate lawmakers and healthcare professionals on the important links between inequality and health to implement targeted initiatives that enhance older individuals' access to healthcare and health outcomes.

## 4. LITERATURE REVIEW

This essay develops two literary threads. The first group of research looks at how Internet access affects health and economic growth. The second body of literature includes studies related to healthcare access, health disparities, and the factors that influence and quantify these issues. According to (Cui & Chang, 2021), the Internet has completely changed the way people communicate and do business by making information easily accessible and exchangeable anywhere in the world. The Internet's powerful and pervasive capabilities enable access to electronic data for many uses, in addition to providing a diverse array of goods and services. Innovations in technology over the last few decades have led to a considerable increase in networking speed and a precipitous drop in the cost per unit of data processing. The spread of Internet connection was substantially hastened by this enhanced performance and the corresponding cost reductions in the 1990s, but there are still significant regional differences. Because dense networks, online services, and many applications all function together, companies in the modern Internet era are increasingly integrating. Small enterprises and individual customers have felt the most empowering effects of the Internet, even if national economies and multinational corporations have reaped enormous benefits from the technological revolution. When it comes to people's health, the Internet has far-reaching impacts, just as it does on the economy. Access to health information has been revolutionized, made possible by the widespread availability of the Internet, which has substantially reduced informational barriers. Patients and doctors no longer have the power to control the sharing of personal health information due to the simple and open access to medical data online. It is well recognized that a concerning number of individuals use the Internet to seek out information about their health. A growing body of evidence suggests that the Internet is serving as a goldmine of health-related information, as there is a favorable correlation between Internet access and healthcare utilization and, therefore, health outcomes (Li & Huang, 2021).

## 5. RESEARCH QUESTIONS

- What is the impact of the physical environment on health measures?

## 6. RESEARCH METHODOLOGY:

### 6.1 Research design:

The quantitative data analysis was performed using SPSS version 25. The direction and magnitude of the statistical link were assessed using the odds ratio and the 95% confidence interval. Researchers determined a statistically significant criterion at $p < 0.05$. A descriptive analysis was used to ascertain the principal characteristics of the data. Data obtained by surveys, polls, and questionnaires, or by altering existing statistical data using computational tools, is often evaluated mathematically, numerically, or statistically using quantitative approaches.

### 6.2 Sampling:

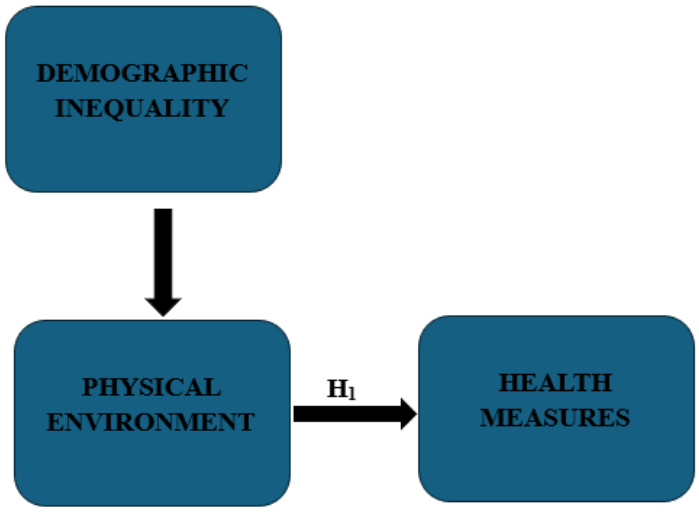
Research participants filled out questionnaires to provide information for the research. Using the Rao-soft programme, researchers determined that there were 875 people in the research population, so researchers sent out 962 questionnaires. The researchers got 945 back, and they excluded 27 due to incompleteness, so the researchers ended up with a sample size of 918.

### 6.3 Data and Measurement:

The major tool for gathering information for the study was a questionnaire survey. Part A of the survey asked for basic demographic information, while Part B asked respondents to rate various aspects of the online and offline channels using a 5-point Likert scale. Secondary data was gathered from a variety of sources, with an emphasis on online databases.

**6.4 Statistical Software:** The statistical analysis was conducted using SPSS 25 and MS-Excel.
**6.5 Statistical Tools:** To grasp the fundamental character of the data, descriptive analysis was used. The researcher is required to analyze the data using ANOVA.

## 7. CONCEPTUAL FRAMEWORK




## 8. RESULT

### ❖ Factor Analysis

One typical use of Factor Analysis (FA) is to verify the existence of latent components in observable data. When there are not easily observable visual or diagnostic markers, it is common practice to utilise regression coefficients to produce ratings. In FA, models are essential for success. Finding mistakes, intrusions, and obvious connections are the aims of modelling. One way to assess datasets produced by multiple regression studies is with the use of the Kaiser-Meyer-Olkin (KMO) Test. They verify that the model and sample variables are representative. According to the numbers, there is data duplication. When the proportions are less, the data is easier to understand. For KMO, the output is a number between zero and one. If the KMO value is between 0.8 and 1, then the sample size should be enough. These are the permissible boundaries, according to Kaiser: The following are the acceptance criteria set by Kaiser:

A pitiful 0.050 to 0.059, below average 0.60 to 0.69
Middle grades often fall within the range of 0.70-0.79.
With a quality point score ranging from 0.80 to 0.89.
They marvel at the range of 0.90 to 1.00.

Table1: KMO and Bartlett's Test

Testing for KMO and Bartlett's
Sampling Adequacy Measured by Kaiser-Meyer-Olkin .960
The results of Bartlett's test of sphericity are as follows: approx. chi-square
df=190
sig.=.000

This establishes the validity of assertions made only for the purpose of sampling. To ensure the

relevance of the correlation matrices, researchers used Bartlett's Test of Sphericity. Kaiser-Meyer-Olkin states that a result of 0.960 indicates that the sample is adequate. The p-value is 0.00, as per Bartlett's sphericity test. A favourable result from Bartlett's sphericity test indicates that the correlation matrix is not an identity matrix.

**Table 10: KMO and Bartlett's**

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .960 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 3252.968 |
| | df | 190 |
| | Sig. | .000 |

Bartlett's Test of Sphericity further confirmed the overall significance of the correlation matrices. An appropriate value for Kaiser-Meyer-Olkin sampling is 0.960. The researchers achieved a p-value of 0.00 using Bartlett's sphericity test. The correlation matrix was shown to not be a valid correlation matrix by a significant result from Bartlett's sphericity test.

- **INDEPENDENT VARIABLE**

❖ **Demographic Inequality**

Determinants of demographic inequality include disparities in age, gender, race/ethnicity, socioeconomic position, and geographical location, among others, that exist across distinct population groupings (Avancea et al., 2021). Access to opportunities, resources, and services is a common manifestation of these inequalities, which in turn cause substantial discrepancies in health outcomes and quality of life. The most glaring example of population inequality is the gap between rich and poor. Job opportunities, fair compensation, and advancement opportunities may be out of reach for certain groups due to institutionalized racism or inadequate educational opportunities. Generations may be impacted by this economic imbalance, which could impede social mobility and perpetuate cycles of poverty. When it comes to healthcare access, there is also a clear demographic disparity. People on the margins of society tend to have lower life expectancies and higher illness rates for a variety of reasons, including a lack of access to insurance, basic medical care, and preventive services. Patients from these communities may have an even more difficult time accessing healthcare due to language and cultural barriers. Disparities in educational attainment can contribute to demographic inequality. If children from low-income families attend schools that are underfunded and lack resources, their educational attainment may suffer.

❖ **FACTOR**

- **Physical Environment**

Everywhere people go to school, work, and play are a part of their physical environment. Everything from the air researchers breathe to the water researchers drink, students houses to the vehicles researchers ride in, all contribute to the physical environment in which researchers live. A person's health is affected by their physical environment, which consists of external factors such as the weather and the places where researchers live. Everything in nature, such as air, trees, flora, lakes, and the ocean, is part of the physical environment. Human health is impacted by several elements of the built environment, including but not limited to noise pollution, air and water pollution, housing conditions, interior settings, and accessibility to green spaces and recreational places. The physical environment of a community has a significant effect on the health and happiness of its residents. Poor air quality is especially harmful to disadvantaged communities, although water and air quality are also crucial for health. Similar risks exist for those who are exposed to disease-causing microbes, excessive noise, and solar and other forms of radiation. Reduced lung function, chronic bronchitis, asthma, and other harmful pulmonary symptoms are some of the negative outcomes of air pollution. Students can better safeguard student health if student are aware of the hazards that may exist in student physical surroundings. If a student is informed about the air quality and potential pollution levels every day, student may adjust student outside activities to minimize the risks to student health (Glauber, 2022).

- **DEPENDENT VARIABLE**
- **Health Measures**

Health measures are necessary for the maintenance and improvement of community and individual health (Krings et al., 2022). To ensure that people have access to necessary medical care, promote healthy living, and reduce the prevalence of diseases, these strategies include a wide range of approaches. Core components of health programs include public health campaigns that educate people on the need of a healthy diet, frequent exercise, and checkups. Issues like smoking, obesity, and mental health are often the focal points of these advertisements in an effort to encourage positive behavioral changes. Vaccination drives are another crucial component. These programs focus on vaccinating populations against infectious diseases, which significantly reduces the incidence of illnesses that may cause major health issues or even death. Public health experts often highlight herd immunity, which protects those who are unable to get vaccines. The availability of medical treatment is another critical indicator of health. Part of this is ensuring that communities have easy access to affordable healthcare, including doctors, hospitals, and other medical services. Telemedicine has emerged as a valuable tool in the last few years, allowing those with mobility challenges or who reside in remote areas to have easier access to healthcare. Another important stage is the implementation of legislation that promotes ecologically sound systems. Managing pollution, ensuring access to drinkable water, and providing safe housing are all part of this. Preventing diseases and improving overall health depend on these factors. Mental health programs have grown in popularity due to the significant impact mental health has on overall health. Health programs are increasingly including support networks, counseling

services, and educational campaigns to tackle this crucial aspect of health (Meng, 2022).

- **Relationship between Physical Environment and Health Measures**

Human health is impacted by several elements of the built environment, including but not limited to noise pollution, air and water pollution, housing conditions, interior settings, and accessibility to green spaces and recreational places. Physical variables that are important for health and wellness in the environment include Surrounded by high-quality green and blue spaces that are easily accessible on foot. A location where one may walk or ride a bike about with ease and safety. Experiencing nature daily. Pollutants in the environment may increase the risk of developing respiratory illnesses, cardiovascular ailments, and even certain cancers. The likelihood of low-income people living in polluted locations with dangerous drinking water is higher. Additionally, pollution-related health issues are more common in youngsters and pregnant women. Environmental factors have the potential to aggravate preexisting health conditions. Diseases of the respiratory system, cardiovascular system, cancer, nervous system, and brain may all be brought on by exposure to pollutants. Numerous scientific studies have shown a link between physical fitness and better health. Exercising regularly improves cardiovascular health, builds stronger bones and muscles, and increases cognitive function, according to the research. The health benefits of a healthy environment may be felt by those who live there. People whose living conditions are unhealthy are more likely to suffer from chronic illnesses and other health problems, which may shorten their lifespan (Chen et al., 2021).

- ***$H_{01}$: There is no significant relationship between Physical Environment and Health measures.***
- ***$H_1$: There is a significant relationship between Physical Environment and Health measures.***

**Table 2: $H_1$ ANOVA Test**

| ANOVA | | | | | |
|---|---|---|---|---|---|
| **Sum** | | | | | |
| | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
| **Between Groups** | 39588.620 | 206 | 5655.517 | 965.479 | .000 |
| **Within Groups** | 592.770 | 711 | 5.356 | | |
| **Total** | 40081.390 | 917 | | | |

Important findings will be derived from this research. The p-value of.000 (less than the.05 alpha threshold) approaches significance with an F-value of 965.479 A rejection of the null hypothesis and acceptance of ***"H1: There is a significant relationship between Physical Education and Health measures"*** is accepted, is accepted and the null hypothesis is rejected.

## 9. CONCLUSION:

Through this lens, researchers have analyzed the pros and cons of an urban population that is both

becoming older and shrinking from a sustainability standpoint, and researchers have suggested some new ways to maximize the pros and minimize the cons (Mcmaughan et al., 2020). Several SDGs will be considerably affected by this demographic transition, according to students research. There have been several promising new methods, and they are as follows: (a) better healthcare both in terms of accessibility and quality; (b) changes to the size and layout of parks and other public spaces; and (c) encouraging social inclusion via citizen engagement and the collective production of urban knowledge. Taking advantage of opportunities and eradicating obstacles caused by aging populations and deteriorating sustainability will need incorporating policy and practice courses that are specific to the context. Reason being, there is a significant difference in the underlying reasons of SDG objectives and geographical settings. It is imperative that researchers move quickly in response to these shifts, especially because official statistics may be underestimating the pace of population reduction and aging. Several studies have shown a favorable correlation between economic growth and health outcomes, particularly for women's and children's health, as well as in less developed countries that have a recent demographic change. Populations with better health have lower birth rates, higher rates of female labor force participation, and more funds available for adult education and training. It is feasible that these elements, when combined, may lead to a demographic dividend and future sustainable economic growth. The long-term success, prosperity, and economic growth are expected to be greatly influenced by efforts to improve mother and child health via methods such as iodine supplementation and the human papillomavirus vaccination. Established economies find it more difficult, even with significant improvements in production. People in their later years are less likely to be working, therefore any effort to lessen the impact of chronic diseases will have a greater impact on them. How much longer life expectancy increases capital and efficacy growth is dependent on the details of social security systems as well as the potential leveling impacts of a longer working life. Another cause for concern is the prospect of unproductive health care spending stunting economic growth. A more relevant measure for assessing the value of health and health care would be economic growth, notwithstanding the seeming need for more efficient health care systems in general. Any gains in health for affluent nations, no matter how little, would more than cover the expenses of cutting down on consumption. Due to the increased rate of medical innovation made possible by healthcare's broad accessibility, these benefits are amplified even more. Reduce the widening gap between the rich and the poor in access to health benefits before worrying about healthcare spending (Wu et al., 2023).

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