Relationships Between Mental Health Severity and Industrialized/Agrarian Societies

Malica Feratovic

SUMMARY

The study aimed to investigate the correlation between mental health severity and agrarian/industrial societies. The valuableness of the investigation stemmed from discussions with immigrants that migrated to the United States, declaring that they were more content in their developing countries rather than the advanced society posed by the states. The discussions traversed my train of thought, as the lifestyle in 'subordinate' countries was expressed as pleasant and freeing, and life in the U.S. was seen as restricting and demoralizing. With a civilized society that has advantages economically, socially, politically, and environmentally, one would initially suggest that the U.S. would reduce an individual's stress levels while simultaneously increasing their 'eudaemonia.' The hypothesis is that mental health is far superior in agrarian communities rather than in industrialized societies, as an abundance of land and fewer manufacturing sites shy away from a conformed environment. The mitigative measures used to evaluate the hypothesis are the countries with the greenest space, highest and lowest mental well-being scores, least and most dependent on fossil fuels, overworked and underworked nations, and those that are the healthiest. The hypothesis was supported as the results showed a direct correlation between lower mental health scores and industrialized communities. In addition, higher mental health scores were associated with agricultural societies.

INTRODUCTION

Mental health is a human's emotional, psychological, and social well-being. Eudaemonia can diverge according to childhood abuse, trauma, neglect, social isolation or loneliness, discrimination, and stigma; however, the most overlooked attribute of mental illness is the individual's environment. Immigrants often reminisce on their childhood in their homeland, expressing their youth as a time of freedom and adventure. Aside from the financial burdens or environmental concerns that transpire in the agrarian society, immigrants describe positive mental health experiences, insinuating that the environment is of greater significance than the struggles people endure in that zone. An agricultural community is predominant in developing nations, which pride themselves in cultivating their extensive lands, leading to an open area and a relaxed mindset.

In contrast, industrialization is the period of social and economic change that transforms humanity from an agrarian society into an industrial organization. Mental illness can increase rapidly if one is reminded of the fast-paced lifestyle with the sight of buildings and depressing corporations. Manufacturing sites are eminent, and structures overtake land that once created a sense of broad-mindedness, commonly seen in developed nations with low mental health scores. In addition, most developed countries do not have abundant land due to industrialization; however, some modernized societies prioritize open land landscaping because

of its mental health advantages. That said, one must research which countries have unique green space according to Global EPI Distribution (areas reserved for parks and other "green spaces" correlate to high EPI quantities). Open space for an area's residents encourages a free mindset that escapes the world's troubles that ensue stress levels.

Nevertheless, it is reasonable for sentiments of anxiety and worthlessness to increase in urban settings. In moderately developed and mainly developing nations which are societies that thrive off of agriculture for economic purposes, the EPI was high. Mental health scores were inferior in exceptionally developed countries where industrialization is prominent. Once a society industrialized, an environment without green space due to the construction of manufacturing sites relates to increased employment opportunities and labor, thus contributing to an overworking community. The haste progression of an organization puts more pressure on civilians to keep up with the economy as new production centers are built, leading to less arable land. The most overworked countries need more time to perform other activities (bicycling, walking, and running), leading to an enclosed environment where a poor mindset befalls. In a notable facet, if a country is more dependent on fossil fuels, they will have less green space in return, equating to a lower incentive to go outside, increasing depression by isolating the individual from their residency. While on the importance of being outdoors, the healthiest countries, defined by their residents' amount of exercise, directly correlated with their happiness. That said, the countries appointed as the most beneficial scored the highest on the positive well-being assessment, and those immobile in activity had the worst mental health. Industrialized communities are extremely hyper-focused on turning their land into manufacturing sectors, creating fewer avenues for individuals to go outside and embrace nature while threatening the global environment with air-polluting machines. The premise of the investigation states that more space within an environment leads to more activity and an open mindset, corresponding with improved mental well-being while exploring how unexpected assessments relate to mental health severity.

RESULTS

To test how one’s mental health relates to their environment, it was critical to research countries with the most positive mental well-being scores, with one being the worst and ten being the best. In chronological order, Sweden was at 7.13, Germany at 6.60, Finland at 6.47, France at 6.40, the Netherlands at 6.27, Italy at 6.07, Canada at 5.80, Norway at 5.73, Slovenia at 5.53, and Australia at 5.47 (Figure 1). Succeeding the top 10 was Estonia, Ireland, Latvia, the Czech Republic, Greece, Switzerland, New Zealand, South Africa, Japan, and South Korea (Figure 1). In contrast, the countries that suffered the most from mental illnesses were China, India, the U.S., Brazil, Russia, Indonesia, Pakistan, Nigeria, Bangladesh, and Mexico, either industrializing or advanced urban societies (Figure 7). In order to verify that more ‘green’ seen within an environment relates to finer mental health, Global EPI distributions, which calculate nations with the greenest space from a percentage of 0 to 100, were taken into account. Leading off was Denmark at 82.5%, Luxembourg at 82.3%, Switzerland at 81.5%, United

Kingdom at 81.3%, France at 80%, Austria at 79.6%, Finland at 78.9%, Sweden at 78.7%, Norway at 77.7% and Germany at 77.2% (Figure 1). The following countries were the Netherlands, Japan, Australia, Spain, Belgium, Ireland, Iceland, Slovenia, New Zealand, and Canada (Figure 1).

Figure 1

Countries with the Most Green Space	EPI Global Distribution	Countries that have the Happiest Individuals	Positive Mental Well-Being Scores
Denmark	82.5	Sweden	7.13
Luxembourg	82.3	Germany	6.6
Switzerland	81.5	Finland	6.47
United Kingdom	81.3	France	6.4
France	80	The Netherlands	6.27
Austria	79.6	Italy	6.07
Finland	78.9	Canada	5.8
Sweden	78.7	Norway	5.73
Norway	77.7	Slovenia	5.53
Germany	77.2	Australia	5.47
Netherlands	75.3	Estonia	5.2
Japan	75.1	Ireland	5.13
Australia	74.9	Latvia	5.07
Spain	74.3	Czech Republic	5.07
Belgium	73.3	Greece	4.93
Ireland	72.8	Switzerland	4.8
Iceland	72.3	New Zealand	4.67

Slovenia	72	South Africa	4.53
New Zealand	71.3	Japan	4.33
Canada	71	South Korea	4.27

Figure 1: Countries with the Most Green Space Organized by EPI Global Distribution. Regional grouping in the report include: Global West, Asia-Pacific, Eastern Europe, Former Soviet States, Greater Middle East, Latin America & Caribbean, Southern Asia, and Sub-Saharan Africa. The table interprets the EPI ranking of 20 economies across 32 environmental health indicators by narrowing in on the top 40 greenest countries.Countries that have the Happiest Individuals according to Positive Mental Well-Being Scores. A list of OECD countries were analyzed on a number of different factors: hours devoted to leisure and personal care relating to positive mental health in each country, the average number of hours per day spent on leisure and personal care, the most green spaces, average temperature, average rainfall, and government spending on mental health. Each country was given a normalized score out of ten for each factor, before taking an average across all the factors to reach the final score out of ten.

There are significant correlations between green space and mental health. Sweden has the highest positive mental well-being score (PMWBS) worldwide and is eighth worldwide for open land. Germany has the second-highest PMWBS and is 10th worldwide for green space. Finland has the 3rd PMWBS and 7th for available land worldwide, France has the 4th PMWBS and 5th for green space globally, and the Netherlands is 5th for its mental well-being and is 11th worldwide for green space. 13 countries from the mental well-being and green space list correspond with one another, insinuating that the concept of open land should be implemented in every nation for heightened verdure. To discern how industrialization plays a critical role in mental illnesses, the top 5 manufacturing countries worldwide were considered. From most significant to least, the nations are China (28.7%), the United States (16.8%), Japan (7.5%), Germany (5.3%), and India (3.1%) (Figure 8). China, the United States, and India are the most significant contributors to global manufacturing output, resonating with the top 3 countries suffering the most from mental health issues (Figure 7).

Figure 2	
Countries Most Dependent on Fossil Fuels	Consumption (metric tons)
China	4.75
United States	2

India	1.25
Russia	0.75
Japan	0.5
Germany	0.45
South Korea	0.35
Saudi Arabia	0.25
Iran	0.2
Indonesia	0.18

Figure 2: Countries Most Dependent on Fossil Fuels stacked by Consumption (metric tons). The table was organized by the Global Material Flow Database developed by the UN Environment Programme. Fossil fuel consumption includes extraction within the country and imports, minus exports to other countries.

Figure 3	
Countries Least Dependent on Fossil Fuels	Alternative and Nuclear Energy (% of total energy use)
Iceland	89%
Tajikistan	64.10%
Sweden	48.50%
France	47%
Switzerland	39.50%
Costa Rica	38.70%
Norway	34%
El Salvador	33.80%
New Zealand	31.50%
Kyrgyzstan	29.50%

Figure 3: Countries Least Dependent on Fossil Fuels stacked by Consumption (metric tons). The top 10 countries that utilize alternative energy resources were observed by WorldAtlas.

When a nation is met with cleaner options that do not deteriorate a community's precious land, it is incredibly advantageous to a virtuous mind as it does not minimize spaces, thus preventing feelings of isolation. Along with using open land for industrialization, fracking sites are utilized for high-pressure fluid injections to shatter rock formations and extract natural gas. The process harms the Earth's resources and injures the amount of land within an environment. The five countries that use the most fossil fuels are China, the United States, India, Russia, and Japan (Figure 2). The five countries that use renewable energy sources the most are Iceland, Tajikistan, Sweden, France, and Switzerland (Figure 3).

Figure 4	
Most Overworked Countries	Average Annual Hours Worked
Mexico	2,148
Costa Rica	2,121
South Korea	1,993
Russia	1,972
Greece	1,956
Chile	1,941
Palestine	1,901.13
Czech Republic	1,792
Poland	1,792
United States	1,786

Figure 4: Most Overworked Countries based on Average Annual Hours Worked. The Organization for Economic Co-operation and Development (OECD) collected data on the average annual hours worked for its member states. Actual hours worked include regular work hours of full-time, part-time, and part-year workers, paid and unpaid overtime, and hours worked in additional jobs and excludes any time not worked because of holidays, sick or parental leave, schooling or training, and other factors. The table shows the ten most overworked countries in the world based on the average annual number of hours worked.

Figure 5	
Least Overworked Countries	Average Annual Hours Worked
The Netherlands	1,380
Germany	1,388
Norway	1,400
Denmark	1,411
France	1,489
Slovenia	1,547
Belgium	1,570
Switzerland	1,585
Sweden	1,607
Austria	1,607

Figure 5: Least Overworked Countries based on Average Annual Hours Worked. The Jagran Josh organization collected data on the average annual hours worked for its member states. Actual hours worked include regular work hours of full-time, part-time, and part-year workers, paid and unpaid overtime, and hours worked in additional jobs and excludes any time not worked because of holidays, sick or parental leave, schooling or training, and other factors. The table shows the ten most underworked countries in the world based on the average annual number of hours worked.

DISCUSSION

This study investigated the correlations between mental health severity and an agrarian/industrialized environment. The hypothesis is that agricultural societies have superb mental health, and industrialized countries suffer more from mental illnesses. This theory was supported, for instance, by countries that were least dependent on fossil fuels, indicating a prevalent nature setting, equated to a sustainable living space resulting in a higher EPI. If an environment is open and not bombarded with factories and residencies, the mindset will follow what the uncluttered city entails: impartiality. Although simplicity is predominantly found in post-industrial communities, industrialized societies are the medium that has not yet figured out advanced, imperishable approaches or primitive perspectives of embracing green spaces. In nations considered "progressive," the economy solely relies on overworking its residents in manufacturing. With manufacturing jobs outstripping industrialized countries, people have less

time to spend outside or partake in festive activities that bring them happiness (bicycling, walking, running, etc.), ultimately deteriorating their mental health in an enclosed environment. Preventing the act of overworking citizens not only leads to less stress but the ability to accomplish other activities. In addition, industrialized countries geographically do not have an abundant amount of space; if these individuals had more estate, they would feel inclined to spend their time outside, reducing depression and anxiety. More room in an environment leads to increased activity and improved mental well-being.

Figure 6
Healthiest Countries in the World
1. Spain
2. Italy
3. Iceland
4. Japan
5. Switzerland
6. Sweden
7. Australia
8. Singapore
9. Norway
10. Palestine

Figure 6: Healthiest Countries in the World. The Bloomberg Global Health Index is a study that ranks 163 countries based on variables such as life expectancy, environmental factors, and health risks including malnutrition, high blood pressure, and tobacco use. The table demonstrates the top 10 healthiest countries globally.

Figure 7
Countries that Suffer from Mental Illnesses the Most
1. China
2. India

3. United States
4. Brazil
5. Russia
6. Indonesia
7. Pakistan
8. Nigeria
9. Bangladesh
10. Mexico

Figure 7: Countries that Suffer from Mental Illnesses the Most. According to the Global Burden of Disease study, the countries listed in the table are the top 10 most depressed countries as measured by the percentage of the population affected.

Sweden, which received the highest positive mental well-being score globally at 7.13 on the EPI scale (Figure 2), is eighth worldwide for the greenest space (78.7%) (Figure 1), has a consumption of 16,962,353 MT regarding fossil fuels (Figure 3), ranks 3rd on the list of countries that are least dependent on fossil fuels (Figure 4), stands at 9th on the list of least overworked countries with an average of 1,607 hours (Figure 6), has the third most bicycles per capita in the world, and is the sixth healthiest country (Figure 7). Sweden insinuates that a post-industrialized nation with a pre-industrialized attitude of prioritizing subsistence is the perfect recipe for individuals seeking a positive mindset. Moreover, Sweden is a prime example of how imperative exercise is, which is granted by more green space. In contrast, China suffers the most from mental illnesses (Figure 8), as it is a country that is primarily dependent on fossil fuels (4,698,885,989 MT) (Figure 3), first in global manufacturing output correlating to excessive working hours (Figure 9), and ranked 120th in green space (37.3%) (Figure 1). China demonstrates how less green space, relating to more manufacturing centers that require the combustion of fossil fuels, leads to an overworked population that experiences mental disorders.

Figure 8	
Top Manufacturing Countries Worldwide	Global Manufacturing Output
China	28.70%
United States	16.80%

Japan	7.50%
Germany	5.30%
India	3.10%
South Korea	3%
Italy	2.10%
France	1.90%
United Kingdom	1.80%
Indonesia	1.60%

Figure 8: Top Manufacturing Countries Worldwide According to Global Manufacturing Output. According to the most recent data available by the United Nations Statistics Division, the list reflects the global manufacturing output in 2019. The table was configured with factors including compliance considerations, taxes, incorporation requirements, HR considerations, and other government regulations.

My research suggests that the relationship between green space and mental health is direct, as more green space results in an elevated mental health score; however, fossil fuels and mental health have an inverse relationship, as more metric tons of fossil fuels relate to a lower mental health score. My findings are consistent with what others have found, as industrialized countries have represented a fast-paced and stressful lifestyle, and post-industrialized nations have a naturalistic perspective. Green space can positively impact mental health, as the calming effects of being surrounded by greenery and fresh air can help lower cortisol levels, a hormone associated with stress. Green spaces also provide an opportunity for social interaction and community engagement, which can help foster a sense of belonging and improve overall well-being.

One limitation I encountered while collecting data was finding countries with a high score on the human development index that correlated with a high percentage of green space to support my hypothesis. In addition, it took much work to find countries that fit that criterion while also possessing low usage of fossil fuels and high levels of exercise. Another limitation was finding post-industrialized countries with increased mental health scores yet high fossil fuel production and being able to justify why its green space and exercise level primarily impacts its individuals optimistically. In the future, more countries should be added to the data to improve accuracy. People can pick out the differences between environments by having many more rural communities post-industrialized with industrialized societies on display. Observing countries that still need to be advanced still have a high mental well-being score is critical to show how vital green space is within an environment.

My research shows that straightforward, agrarian societies prioritizing green space's importance have superior mental health scores to industrialized countries. That said, nations that suffer most from mental illnesses must bring awareness to the dreadful epidemic and find ways to promote a better life for their residents.

MATERIALS AND METHODS

The data in my study was collected from various websites to find correlations between mental health and agrarian/industrialized countries. From “Visual Capitalist,” the countries with the most green space were documented; on William Russell’s blog, the countries with the best mental health care were listed, “ResourceWatch” shared which countries use the most fossil fuels, “WorldAtlas” shows which countries were least dependent on fossil fuels, “U.S. News” ranked the most depressed countries in the world, the “WorldPopulationReview” mapped the most overworked countries, the “WeForum” spotted the countries where people do the most exercise, “CNTraveler” gave the ten healthiest countries globally, and “GlobalUpside” cataloged the top 10 manufacturing countries in the world. The data was then configured into tables on Google Sheets. With the information, correlations were found between green space, leading to an inclination to exercise, and, thus, positive mental well-being. In addition, relationships were unveiled between countries dependent on fossil fuels, correlating to industrialization and the issues associated with overworking populations, ultimately suggesting mental health deterioration.

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