The Relationship Between Social Interaction, Economic Status, and Mental Health: An Empirical Study Based on the CSCS Dataset

Background

Fast development in society obviously influences the factor of living standard, social interaction, economic states, and mental states of people in life. Moreover, uncertainties from a global point of view, especially concerning the COVID-19 pandemic, have imposed additional stresses on individual lifestyles and thus caused irreversible influence in socio-psychological behaviors. A recent study showed that increased digital communication leads to lessened face-to-face interactions, increasing a rise in social solitude and anxiety. Lockdowns depress isolations and social circles greatly, and this could raise concerns for the mental health of the people. The research is based on the analysis of data from the Canadian Social Connection Survey or CSCS in examining such interaction between social interaction and economic status with mental health. Recommendations will be added at the end of the paper for the policymakers and practitioners serving in the field of mental health.

Research Objectives

To this effect, the first hypothesis of our study is to determine how social interaction can affect psychological well-being. The second one is to analyze how an individual's economic status affects the mental health perspective. And the last one is to look at how far the COVID-19 pandemic preventive measure has affected quality of life.

Methodology

We tend to investigate some fundamental variables. The social interaction will be measured based on the frequency of contacts with family and friends, the number of social events, and the quality of these contacts. All these variables are of paramount significance, as they are direct manifestations of one's psychological condition, especially during the pandemic, when a decrease in face-to-face interactions might lead to increased loneliness and anxiety. In regards to economic status, income satisfaction and financial security will be taken into consideration. This relationship has been in numerous studies, and with the quantification of these variables, we will be able to examine their interrelationships. Indicators of loneliness, anxiety, and life satisfaction will represent mental health. There are large variations in mental health during the pandemic, and these indicators will give insight into the influence of social and economic factors.

We shall also be able to clearly present our findings through the use of visualizations, in particular scatter plots, and bar charts indicating the trend between sets of variables. For instance, scatter plots may show how loneliness varies with the frequency of social interaction, while bar charts may present mental health indicators for different economic status groups.

Research Question 1: Investigating the Effect of Social Interaction on Mental Health through a Regression Equation

A. Statement

This research question aims to explore whether the frequency and quality of social interactions with family and friends significantly impact mental health, specifically

indicators like loneliness, anxiety, and self-esteem.

B. Variables and Exploration

1. **Independent Variable**: Social interaction frequency and quality, measured by the number and quality of interactions with family and friends, denoted as variable x.
2. **Dependent Variable**: Mental health indicators, including loneliness, anxiety, and self-esteem, representing an individual's mental health state, denoted as variable y.
3. **Basic Exploration**: A scatter plot will be used to visualize the relationship between social interaction scores and mental health scores, helping to observe any potential linear relationship.

C. Analysis Plan

To examine the association between social interaction and mental health, we will use correlation analysis with Pearson or Spearman correlation coefficients. The hypothesis is that individuals with frequent social interactions will experience lower levels of loneliness and anxiety, and higher levels of self-esteem. The analysis will assume a random and independent sample.

D. Result and Discussion

If the correlation analysis shows a positive relationship and the significance test supports this hypothesis, we can conclude that increased social interaction positively influences mental health. This finding would be useful for policymakers to foster an environment that encourages positive social interactions, ultimately enhancing public mental health.

Research Question 2: Investigating the Effect of Economic Status on Mental Health through a Regression Equation

A. Statement

This research question aims to determine whether an individual's economic status (e.g., income satisfaction and financial security) affects mental health, specifically life satisfaction, anxiety, and depression.

B. Variables and Exploration

1. **Independent Variable**: Economic status, including income satisfaction and financial security scores, denoted as variable x.
2. **Dependent Variable**: Mental health indicators, including life satisfaction, anxiety, and depression levels, denoted as variable y.
3. **Basic Exploration**: A scatter plot will illustrate the relationship between economic status scores and mental health scores to observe any potential linear relationship.

C. Analysis Plan

A multiple linear regression model will be used to analyze the impact of economic status on mental health. The hypothesis is that higher income satisfaction and financial security lead to increased life satisfaction and reduced anxiety and depression. During the analysis, we will ensure that the data meets the assumptions of linear regression, including linearity, independence, normality of residuals, and homoscedasticity.

D. Result and Discussion
If the results support the hypothesis that improved economic status positively correlates with improved mental health, we can conclude that better economic conditions contribute to better mental well-being. This finding could provide a basis for economic policy development aimed at enhancing life satisfaction and public mental health.

Research Question 3: Investigating the Effect of COVID-19 Preventive Measures on Quality of Life and Mental Health through a Regression Equation

A. Statement
This research question examines how COVID-19 preventive measures (e.g., social distancing and vaccination) affect quality of life and mental health, particularly loneliness and anxiety levels.

B. Variables and Exploration

1. **Independent Variable**: Preventive measures, including social distancing and vaccination status, denoted as variable x.
2. **Dependent Variable**: Quality of life and mental health indicators, including loneliness and anxiety levels, denoted as variable y.
3. **Basic Exploration**: A scatter plot will display the relationship between preventive measures scores and quality of life and mental health scores to observe any potential linear relationship.

C. Analysis Plan
The data will be stratified based on age, gender, and income to analyze how different demographic groups respond to preventive measures. The hypothesis is that stricter preventive measures might increase loneliness and social isolation; however, a stronger sense of social responsibility might aid in post-pandemic psychological recovery.

D. Result and Discussion
If results reveal complex effects of preventive measures on quality of life and mental health, we can conclude that COVID-19 measures have nuanced impacts on these factors. This finding could provide practical insights for mental health interventions, helping to design policies that better support societal needs.

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