The Park Place Economist

Volume 29 | Issue 1 Article 8

2022

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Abstract

This research paper examines the correlation between economic and non-economic factors and mental health. The Mental Health Hygiene Movement began in 1908 and led to the development of a new field of economic study: Mental Health Economics. Existing economic theories are applied to determine how pecuniary and non-pecuniary factors interact with mental health. Data from IPUMS Health Survey was used to run two linear regression models to evaluate how individuals' social position, human capital characteristics, and demographic characteristics influence their mental health. Results social position, unemployment, educational attainment and mental health. Implications of the results suggest further analysis of mental health economics and policy reform for businesses and the government.

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November 27, 2021

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This research paper examines the correlation between economic and non-economic factors and mental health. The Mental Health Hygiene Movement began in 1908 and led to the development of a new field of economic study: Mental Health Economics. Existing economic theories are applied to determine how pecuniary and non-pecuniary factors interact with mental health. Data from IPUMS Health Survey was used to run two linear regression models to evaluate how individuals' social position, human capital characteristics, and demographic characteristics influence their mental health. Results social position, unemployment, educational attainment and mental health. Implications of the results suggest further analysis of mental health economics and policy reform for businesses and the government.

I. Introduction

In 2019, 64.6 million United States adults and 7.7 million United States children experienced mild to severe mental illness (National Association of Mental Illness, 2021). In other words, nearly 50% of adults and children have chronic mental illness. Since the start of the Mental Health Movement in 1908, there has been a continuous rise in mental health cases, which led to further research and analysis of the causes and effects of mental illness. The creation of the World Health Organization (WHO) in 1948 established global efforts surrounding the investigation and mitigation of mental health illness in our global society (Bertolote, 2008).

As mental health becomes more relevant and the stigma behind it fades, mental health research has increased in order to understand its nature and the effect it has on individuals. In 1998, the International Center of Mental Health Policy and Economics released the first journal of mental health economics, pioneering this new field of study and furthering efforts to understand what can be seen as a mental health pandemic (The Journal of Mental Health Policy and Economics, 2021). With the rise of mental health cases transcending economic downturn and growth, alike, new theory was needed to explain the intersection of economics and mental health. Richard Easterlin, one of the first happiness economists, developed a new theory in 1974 that took an expansive approach to understand individual wellbeing by developing the first theory of Happiness Economics known as the Easterlin Paradox (Clark et al., 2008).

The Easterlin Paradox follows a set point model wherein after basic needs are met, one's sustained level of happiness will not extend past a set point with any increase in per capita income (Clark et al., 2008). The paradoxical nature of happiness relies on the Hedonic Treadmill, a metaphor supporting the set point level of happiness, to explain the anomaly. This theory implies there are other factors that determine well-being, and calls into question the integrity of existing economic theories (Hancock, 2013). study will use mental health indexes to explore the

implications of the Easterlin Paradox and the Hedonic Treadmill to further understand mental health economics. The effects of economic and noneconomic variables on mental well-being are explored to answer the following questions:

A. Is social position a significant determinant of mental health?
B. To what extent do economic and noneconomic factors impact mental health?
C. Are racial and ethnic minorities disproportionately affected by mental health factors?

II. Background and Literature

The start of the mental health movement began in 1908 with the alliance of psychiatric physicians and patients demanding a reform of the inadequate mental healthcare system. In 1948 the International Health Conference responded to these concerns and established the World Health Organization (WHO), with mental health hygiene as part of its mission. This development sparked the Mental Health Hygiene Movement. Continued advocacy and lobbying results in developments in global responses to mental health. A holistic definition of mental health and the creation of a global mental health report in 2001 are two examples of the advances made during the Mental Health Hygiene Movement (Bertolote, 2008). Although this is seen as progress, the rate at which tangible and applicable developments are being made is slow-moving.

In looking at the intersection of mental health and economics, an array of research was done to explore the toxic relationship that exists between low income and mental wellness. Economists have discovered a relationship between debt and mental health. Economist John Gathergood claims that high amounts of personal debt are directly associated with high levels of mental health disorders, suicidal ideations, and alcohol/substance abuse. Implications of this relationship include a 23% causality rate between those in debt and successful suicide attempts

(Gathergood, 2013). Poverty status is another mechanism used to measure economic well-being. A study done in 1993 by Jane D. McLeod at the University of Minnesota found that persistent poverty status as a child results in high levels of mental health disorders in the future. Additional findings assert a direct relationship between maternal punishment (physical discipline) and mental health disorders (McLeod, 1993). Given children have no ability to control what financial situation they are born into, familial income levels play a large deciding factor in future mental health disorders.

Employment status is another significant determinant of financial status given its implications on income and insurance. A study done in 2017 proved mental health disorders often result in a period of unemployment; however, psychiatric treatment led to a high rate of return to work. (Mitra, 2017). The implications of these findings identify a need for policy reform for businesses and the government. Since 1974 and the adoption of the Easterlin Paradox, economists have found new developments in subjective well-being and economics. Happiness economics is an example of economists taking a more expansive approach to truly understand the economic conditions of being happy. Happiness economics takes a subjective approach to happiness by tying in psychology to determine how factors like social position, health, marital status, and civic trust affect happiness (Graham, 2008). Adopting the concept of the Easterlin Paradox, Hancock determined that social position, marital status, age, and health conditions have a large role in one's general happiness (Hancock, 2013). Hancock's research is a primary example of the implications described by the Easterlin Paradox.

Moreover, the American Psychiatric Association (APA) released numerous reports uplifting mental health disparities amongst diverse populations. This includes individuals who have a diverse racial, ethnic, or sexual identity. The APA claimed these disparities are rooted in

to proper mental healthcare, cultural stigma, discrimination, and lack of awareness about mental health. In comparing racial minorities to white identifying individuals, there are lower rates of mental health among minorities; however, this population often bears a disproportionately high burden of long-lasting disability (American Psychiatric Association, 2021). Th research experiment enhances our understanding of this disparity and how economic factors add to it.

There is extensive research and literature surrounding this unique relationship between economic factors and their effects on mental health. This research paper seeks to further these findings, while improving upon our understanding of the various mechanisms at play. These additions will improve our understanding of mental health economics, while suggesting policy implications to help mitigate the effects of the mental health pandemic on American workers and citizens.

III. Theory and Hypothesis

The Easterlin Paradox acts as an addendum to microeconomic theory of utility to make up for its the microeconomic theory of utility relies on a direct positive relationship between utility (happiness) and income. Utility refers to the satisfaction an individual gains from purchasing a good and is restricted by income (Black, 2008). That said, the Easterlin Paradox argues that income, both at the macro and micro level, is not an accurate determinant of one's happiness, rather it is relative income, or one's earnings compared to those around them, that acts as a determinant (Graham, 2008). Implications of this economic theory include the role of relative social position in determining happiness, as well as the Hedonic Treadmill.

The Hedonic Treadmill argues an individual's relative happiness level will inflate or deflate to a point of equilibrium after a positive or negative life event. In economics, happiness obtained through the consumption of goods is short-term and will return to the point of

equilibrium (Hancock, 2013). This causes a cycle of disappointment where more consumption results in disappointment rather than satisfaction. Moreover, the Hedonic Treadmill dismisses the notion that the utility one receives from an economic deed is sustainable and restricted by income, supporting Easterlin's theory claiming relative income as a determining factor of happiness.

As stated previously, the Easterlin Paradox holds that happiness will not increase with a rise in national or personal income, rather, it is relative income, or one's earnings compared to those they are surrounded by that has a positive relationship with one's general well-being (Shifa, et al., 2017). This finding introduced a new level of understanding of happiness economics and social positionality, while lending to alternative determinants of happiness. That said, in general, happiness economics takes a subjective approach to determine overall by considering non-pecuniary factors, relative social position, the hedonic treadmill.

This research project applies happiness economic theory to mental health and identifies the relationship between mental health and other factors. After review of the literature and theory, I hypothesize that:

A. Relative social position will be a significant determinant of mental health.
B. Non-pecuniary and pecuniary variables will play a strong role in determining mental health status.
C. Racial and ethnic minorities will be disproportionately affected by mental health.

IV. Empirical Model and Data

This research project utilizes data from IPUMS Health Surveys (Blewett et al., 2019). The Health Survey includes cross-sectional variables that this research project uses to find the determinants of mental health status (Ruggles et al., 2021). I created two empirical models to

find the primary socio-economic determinants of mental health. Model A looks at the relationship between social position and mental health, while Model B includes non-pecuniary and demographic variables (i.e., health and marital status). These models seek to answer my three research questions with a mental health index as their dependent variable. The mental health index originates from the IPUMs variable, DEPFEELEVL. The survey question asked respondents whether their level of depression was "a lot, a little, or somewhere in between," and also provides the option for individuals to note they have not felt depressed. This datapoint was coded in R-studio to encompass all individuals who note having some form of depression, whether that be a lot or a little.

Model A includes three social position variables that include poverty status, family income, and relative social position. Poverty status is a dichotomous variable indicating that an individual is either in poverty or not, while the family income variable is a continuous variable. The relative social position variable is empirically derived using coefficient estimates for educational attainment, age, and race with income as the dependent variable. The resulting coefficient estimates were then used to predict the earnings of those from the survey pool given their human capital characteristics. Once their predicted income was determined, it was subtracted from their actual income, to determine whether or not they were making more or less than they should. The relative social position variable is named *residual*. Model A focuses on social position as a determinant of mental health and is shown below:

Model A: Baseline Model

$$Residual = Actual\ Earnings\ -\ Estimated\ \ Earnings$$
$$Depression\ Index\ =\ \beta_0 + \beta_1(Family) + \beta_2(Residual) + \beta_3(Poverty)$$

Our second model, Model B, builds off of Model A by controlling for pecuniary and non-pecuniary variables. The pecuniary variables are employment status, educational attainment, relative social position, family income, and poverty status. The non-pecuniary variables are marital status, health status, age, and gender. The education variable is separated into high school, bachelors, masters, doctorate, and professional degrees to see the effects of different levels of education on mental health. A more detailed analysis of these variables can be found in Table 3**.**

Finally, Model B also controls for race, ethnicity, and sexual orientation. The addition of demographic variables add another dimension of understanding the correlation between minority identities and mental health. This subgroup analysis provides support and direction when addressing policy implications and lends itself to further investigation. Given America's diverse citizen population, a comprehensive understanding of racial and ethnic minorities and their relationship with mental health provides policy makers and employers with guidance on the living and working experience of minorities within the United States. Model B is shown below:

Model B: Pecuniary and Non-Pecuniary Variables

$$Depression\ Index = \beta_0 + \beta_1(Independent\ V) + \beta_2(Social\ Position) + \beta_3(Demographic)$$

These two equations help evaluate the multiple dimensions in which mental health is determined. The data is confined to the year 2018 and respondents are between 25 and 65 years old. These restrictions are due to availability of data in the 2018 year and the economic implications of analyzing individuals outside that age range. Table 1 provides descriptive statistics for the survey respondents on the basis of mental health status.

Table 1: Descriptive Statistics

Variable	Depressed	Not Depressed
Average Family Income	$72,152	$94,925
Average Age	45.79	45.39
Male	40.9%	49.77%
Female	59.09%	50.22%
Married	56.27%	65.88%
High School Grad	19.01%	21.58%
Some College	17.42%	15.22%
Bachelors	23.32%	22.79%
Masters	10.71%	10.05%
Professional (MD, JD)	1.56%	1.54%
Unemployed	25.86%	19.03%
Poverty	14.64%	7.38%
Good Health	18.80%	29.98%
White	82.18%	77.95%
Black	11.27	12.17%
Sample Size	**7,156**	**31,223**
Notes: All data is collected from IPUMS Health Survey for the year 2018.		

There are clear differences in the experiences of those who are depressed and those who are not. On average, an individual who is depressed makes $22,000 less than an individual who is not depressed; age not being a significant factor. There is a 10% gender gap between respondents who have depression and an 11% gap between individuals who are married and not

depressed. Evaluation of the two groups shows a larger percent of depressed individuals live in poverty or are unemployed, with good health having a positive influence on mental health. Certain conclusions can be drawn in relation to variables such as health, poverty, unemployment, and marital status, and one's chances of having depression. Table 2 defines the variables in the regression equations and the expected signs given the information observed above.

Table 2: Variable Descriptions

Variable Names		**Description**	**Expected Signs**
Dependent:			
	Depression_ Index	Response to survey question asking individuals what level of depression they had with an indicator of no depression, as well.	N/A
Demographic			
	Gender	1= Male 0= Female	-
	Age	Age of respondents in years	+
	Black	1= Black 0= Not black	+
	Hispanic	1= Hispanic 0= Not hispanic	+
	Asian	1= Asian 0= Not asian	+
	Homosexual	1= Gay 0= Not gay	+
Pecuniary			
	Employment Status	1= Unemployed 0= Employed	+
	Poverty level	1= Below poverty level 0= Above poverty level	+

	Residual	Empirically derived measure of relative social position that describes whether an individual is making more or less money given human capital and demographic characteristics.	-
Non-Pecuniary			
	Education Level	1= High School Education or above 0= No high school education	-
	Marital Status	1= Married 0=Not married	-
	Health Conditions	1= Good health conditions 0= Poor health conditions	+

V. Results

This research seeks to determine how economic and noneconomic factors affect one's mental health. Given existing theory and literature, I hypothesize that relative social position will be a significant determinant of mental health, non-pecuniary and pecuniary variables will play a strong role in determining mental health status, and racial and ethnic minorities will be disproportionately affected by mental health. The results of these regressions can be found below.

Taking into account the subjective nature of wealth as presented by the Easterlin Paradox, I hypothesize that an individual will be less likely to have depression given they are making more money than they should (given their education, race, and gender). This hypothesis was tested in Model A and the results are shown in Table 3 below.

Table 3: Model A

Variable	**Coefficient**	**Percentage**
Residual	0.00139***	0.139%
Family Income	-0.00797*	-0.797%

Poverty	0.06864***	6.864%
R-squared Sample Size	0.021 44,209	
***indicates P-Value at ρ<.001 level; **Indicates significance at ρ<.01 level; *indicates significance at ρ<.1 level. **Notes:** Data collected from IPUMS Health Survey (2018). Percentages are rounded to the nearest thousandths.		

The coefficients in Table 3 were computed in terms of $10,000. It can be said that for every $10,000 more an individual makes than they should, they are 0.139% more likely to have depression. The same can be said for family income, wherein for every $10,000 more in family income, an individual is 0.797% less likely to have depression. For those who are below the poverty line, they are 6.864% more likely to have depression as compared to those who are not. When looking at the coefficient a positive sign denotes a higher chance of having depression, while a negative coefficient denotes lower probability of having depression.

Many of the hypotheses based on the theory and literature were not consistent given the results of Model A. The results show that a higher social position did not result in less depression, which is inconsistent with the Easterlin Paradox. The results for family income state an increase in income results in a lower probability of having depression. This is consistent with the microeconomic theory of utility, yet inconsistent with my hypothesis based on the Easterlin Paradox. The Easterlin Paradox states once individuals surpass the level of poverty, income is no longer a significant determinant of happiness. According to the results an individual living in poverty is 6.864% more likely to have depression compared to someone who is not, which is consistent with the notion that living in poverty negatively impacts an individual's mental health, as stated by the Easterlin Paradox (Clarke, 2016). All three coefficients are statistically significant at the 0.05% level of significance, affirming the integrity of the data. Although the

results of Model A are not consistent with the first hypothesis, I controlled for an array of independent variables in Model B, which enhanced my understanding of the results.

Since happiness economics dismisses the notion of money buying happiness, I hypothesized that both pecuniary and non-pecuniary variables play a statistically significant role in determining mental health. This hypothesis was tested in Model B. These results are shown in Table 5.

Table 5: Model B		
Variable	**Coefficient**	**Percent**
Residual ($10,000)	-0.1565***	-15.65%
Family Income ($10,000)	0.1486***	14.86%
Poverty	0.065***	6.50%
Unemployment	0.348***	34.80%
Good Health	-0.329***	-32.90%
Married	-0.571***	-57.10%
High School Graduate	-0.061***	-6.10%
Some College	-0.185***	-18.50%
Bachelors	-0.523***	-52.30%
Masters	-0.756***	-75.60%
Professional	-1.300***	-130.00%
Doctoral	-1.037***	-103.70%
Age	0.002***	0.20%
Male	-0.099***	-9.90%
R-squared	0.063	

Sample Size	44,209	
***indicates P-Value at ρ<.001 level; **Indicates significance at ρ<.01 level; *indicates significance at ρ<.1 level. **Notes:** Data collected from IPUMS Health Survey (2018). Coefficients are rounded to the nearest thousandths.		

In Model B, observation of the data shows the coefficient estimations for *residual* and *family income* changed signs. Although the results of the *residual* abide by the Easterlin Paradox and are statistically significant, the change in the sign from Model A to B suggests instability of the results and should be excluded from analysis. The *family income* variable remains statistically significant with every $10,000 in family income resulting in a 14% risk of having depression, on average and ceteris paribus. The coefficient results for family income are consistent with the Easterlin Paradox and the notion that money does not buy happiness or mental fortitude.

The final two variables, poverty and employment status, suggest unemployment or living in poverty increases one's likelihood of having depression. Individuals who are unemployed are 34.8% more likely to have depression than an individual who is employed, while an individual in poverty is 6.3% more likely to be depressed than an individual who is not in poverty, on average and ceteris paribus. These results are consistent with the findings by Mcleod and Mitra (1993), who identified the negative impact of poverty and unemployment on mental health.

Statistically significant results were observed for the non-pecuniary variables, health and marital status. Having good health and being married both decrease one's chances of having depression by 33% and 57%, respectively, on average and ceteris paribus. These results suggest that noneconomic factors positively influence one's mental health, which is consistent with the Easterlin Paradox.

Educational attainment provides a multitude of statistically significant results that suggest one's educational achievements positively influences their mental health. It is important to note that coefficients are compared to the reference group, individuals without a high school diploma. The variable *High School Graduate* suggests the highest level of educational attainment was a high school diploma. The variable *Some College* suggests the surveyed person was a high school graduate but does not possess a college degree. Both of these variables had negative coefficients when compared to mental wellness, showing an individual with a college diploma is less likely to have depression compared to an individual without a high school diploma. A bachelor's degree alone decreases one's chances of having depression by 52%, a master's degree by 75%, doctorate by 103%, and a professional degree by 130% compared to the reference group, on average and ceteris paribus. These results suggest a robust relationship between educational attainment and mental health.

My final hypothesis is that racial and ethnic minorities will be disproportionately affected by mental health factors. To answer this question, Model B was extended to include racial and ethnic variables. The results can be found below in Table 7.

Table 7: Model B

Variable	**Coefficient**	**Percent**
Black	0.2292**	22.92%
Hispanic	-0.08143***	-8.14%
Filipino	0.01314	1.31%
Asian Indian	-0.004730	-0.47%
Chinese	0.009833	0.98%
Gay	0.3829***	38.29%

R-squared Sample Size	0.063 44,209	
***indicates P-Value at ρ<.001 level; **Indicates significance at ρ<.01 level; *indicates significance at ρ<.1 level.		

The results show Hispanics are less likely to have depression, while black individuals and homosexuals are more likely to have depression. The coefficient estimate for Filipino, Asian Indian, and Chinese individuals was not statistically significant. This model demonstrates the disparity that exists within certain racial and ethnic minority groups, increasing one's likelihood of having depression. Further interpretation of these results requires an understanding of the social and economic differences that exist within and between these different groups. Additional factors include availability of resources, access to health care and immigration status.

VI. Policy Implications

Many of the findings within this research project lend themselves to further development and analysis and offer an array of policy improvements. An important question when looking at happiness economics, is addressing the government's role in supporting mental health or happiness. Model B demonstrates an increase in income results in a higher chance an individual has depression. Analysis of expansionary fiscal policy calls into question the role that increased GDP and income serve in the betterment of mental health.

My results from Model B suggest the implications of the Easterlin Paradox are true. Relative social position acts as the main determinant of mental health, while a higher income increases one's risk of having depression. A logical, although controversial, response to the data would be a redistribution of the tax bracket that lends to higher taxation for those with higher

incomes. Although this policy implication may be perceived as hurting individuals, in reality every $10,000 an individual makes, they are 14% more likely to have depression.

Building off this initial policy implication, a more equitable taxation system would lend itself to more allocation of welfare funds. These funds can provide more financial support for individuals obtaining a college education. Model B suggests a bachelor's degree alone decreases the likelihood of an individual having depression by 52%, on average and ceteris paribus. These funds can provide more financial support for individuals to obtain a college education, creating a more productive workforce, and a more prosperous society. Model B suggests that individuals who are unemployed are 34% more likely to have depression, on average and ceteris paribus.

Efficient allocation of resources to individuals who are unemployed in the form of unemployment benefits and mental health care will assist in decreasing the high rates of depression of those who are unemployed.

Finally, the data also supports stronger healthcare policy given individuals with good health are 20% less likely to have depression, on average and ceteris paribus. A more inclusive healthcare system will reduce the number of individuals who develop injury or health related depression. Finally, increasing support to black individuals or those who identify as homosexual will promote understanding of the cultural differences that exist in addressing mental illness in this diverse population.

VII. Conclusion

Although mental health economics is an emerging field of study we must acknowledge that more effort is needed. Given the COVID-19 pandemic and the economic turmoil it caused for many families and individuals, the economic effects and mental health implications of 2020-

2021 will be long-lasting. For that reason, more research and more understanding is needed to truly combat these negative effects in the future. The results presented in this paper provide a preliminary foundation in understanding the complicated relationship that exists between mental health and economics.

The significant role of social position, unemployment, and educational attainment is supported by the results of Model A and B. Although unstable, it was found that a higher relative social position results in a lesser chance of having depression. While a higher educational attainment proved to be a significant driving force in a more mentally stable life. On the contrary, unemployment plays a negative role in one's mental wellness. The most significant finding from this research experiment was *multiple* factors that contribute to an individual's mental health that extend past economic factors. This study provides insight into the complex relationship between mental health and economics within the United States. The results provide groundwork for further research and mental health advocacy to combat the mental health pandemic within the United States.

References

Bertolote J. (2008). The roots of the concept of mental health. World psychiatry: official journal of the World Psychiatric Association (WPA), 7(2), 113–116. https://doi.org/10.1002/j.2051-5545.2008.tb00172

Black R.D.C. (2008) Utility. In: Palgrave Macmillan (eds) The New Palgrave Dictionary of Economics. Palgrave Macmillan, London. https://doi.org/10.1057/978-1-349-95121-5_1320-2

Clark, A. E., Fleche, S., & Senik, C. (2016). Economic Growth Evens Out Happiness: Evidence from Six Surveys. Review of Income and Wealth, 62(3), 405–419.

Clark, A. E., Frijters, P., & Shields, M. A. (2008). Relative Income, Happiness, and Utility: An Explanation for the Easterlin Paradox and Other Puzzles. *Journal of Economic Literature*, *46*(1), 95–144. http://www.jstor.org/stable/27646948

Gathergood J. (2013) Personal Debt and Psychological Health. In: Palgrave Macmillan (eds) The New Palgrave Dictionary of Economics. Palgrave Macmillan, London. https://doi-org.proxy.iwu.edu/10.1057/978-1-349-95121-5_2861-1

Graham C. (2008) Happiness, Economics of. In: Palgrave Macmillan (eds) The New Palgrave Dictionary of Economics. Palgrave Macmillan, London. https://doi.org/10.1057/978-1-349-95121-5_2 587-1

Hancock, Elizabeth K. (2013) Assessing Happiness: How Economic Factors Measure Up. Honors Projects. 123. https://digitalcommons.iwu.edu/econ_honproj/123

Lynn A. Blewett, Julia A. Rivera Drew, Miriam L. King and Kari C.W. Williams. IPUMS Health Surveys: National Health Interview Survey, Version 6.4 [dataset]. Minneapolis, MN: IPUMS, 2019. https://doi.org/10.18128/D070.V6.4

McLeod, J. D., & Shanahan, M. J. (1993). Poverty, Parenting, and Children's Mental Health. American Sociological Review, 58(3), 351–366. https://doi.org/10.2307/2095905

Mental health by the numbers. NAMI. (n.d.). Retrieved November 16, 2021, from https://www.nami.org/mhstats.

Mental health disparities: Diverse populations. (n.d.). Retrieved November 27, 2021, from https://www.psychiatry.org/psychiatrists/cultural-competency/education/mental-health- facts.

Mitra, S., & Jones, K. (2017). The Impact of Recent Mental Health Changes on Employment: New Evidence from Longitudinal Data. Applied Economics, 49(1–3), 96–109. https://doi.org/http://www.tandfonline.com/loi/raec20

Real median household income in the United States. FRED. (2021, September 15). Retrieved November 16, 2021, from https://fred.stlouisfed.org/series/MEHOINUSA672N.

Shifa, & Leibbrandt, M. (2017). Relative Economic Position and Subjective Well-Being in a Poor Society: Does Relative Position Indicator Matter? Social Indicators Research, 139(2), 611–630. https://doi.org/10.1007/s11205-017-1739-5

The Journal of Mental Health Policy and Economics. (n.d.). Retrieved November 27, 2021, from http://www.icmpe.org/test1/journal/journal.htm.