

## THE IMPACT OF HEALTH INDICATORS ON WELL-BEING-A STUDY OF PUNJAB

**Gunjan Malhotra**

Assistant Professor, Department of Economics, PGGCG-11, Chandigarh

---

### ABSTRACT

It is a common belief that people's happiness levels drop when they suffer from a significant illness or are in pain. Studies consistently show a strong relationship between well-being and physical and psychological health. Considering the literature, health indicator was studied along with its impact on happiness. Self-reported health was taken as an indicator in the questionnaire. A sample size of a total of 1205 individuals was selected according to the size of the population of the selected districts. An average sample of 200 individuals was taken from each of the 6 districts. Respondents were questioned about their happiness with existing health conditions. Besides, respondents were also enquired about their suffering from any disease, having health insurance, getting any remittances of medical spending, involvement in drugs, and attempting suicide. To study the impact of good health on happiness Tobit model was used. The results show that both physical and mental health plays a role in depicting happiness. People who are satisfied with their health conditions have higher happiness levels. It was also found that respondents who get monetary support through remittances or insurance are happier than those who have to bear the medical expenditure on their own. So, compensatory medical benefits can help in improving overall well-being of people.

**Keywords:** Health, Health remittances, Happiness, well-being.

### INTRODUCTION:

The new goal for worldwide Good Health promotes healthy lifestyles, preventive measures and modern, efficient healthcare for everyone.

It is necessary to have access to healthcare in order to preserve the physical, mental, and social well-being of people as well as communities. It is a fundamental right that ought to be extended to all people, irrespective of their socioeconomic standing, race, or ethnicity, and wherever they may be geographically located<sup>i</sup>. People may be unable to obtain preventative care or proper intervention for illnesses if they do not have access to healthcare, which can result in more serious health issues and higher costs for healthcare in the long run.

In addition, not having access to healthcare can have a considerable negative effect on an individual's quality of life. If an illness is not treated, it can lead to discomfort, disability, and even death.

Access to medical treatment is another factor that plays a significant role in determining a community's overall health and level of wellbeing. When individuals have access to medical care, they are more likely to seek treatment for illnesses and preventative care, which can help to avoid the spread of disease and enhance the health of the community as a whole. This is of utmost significance in view of the ongoing public disease, which has brought to light how essential it is to have access to medical care in order to safeguard the health of the general population<sup>ii</sup>. Access to healthcare can also serve to enhance social and economic outcomes for individuals and communities<sup>iii</sup>. This is because having access to healthcare can help individuals maintain their health and continue to be productive, which, in turn, adds to the growth of the economy.

The issue of healthcare disparities is one of the most urgent challenges associated with access to medical care. There may be differences in access to medical care depending on characteristics such as a person's race or ethnicity, their social standing, or their geographic location. These gaps can not only result in worse health outcomes for individuals and communities that do not have access to healthcare, but they can also perpetuate cycles of poverty and inequality. Studies have revealed, for instance, that people who belong to minority ethnic groups, or low-income origins, have less access to excellent healthcare services and are confronted with greater rates of chronic disease and mortality<sup>iv</sup>. In addition, people who live in rural locations frequently encounter major challenges when attempting to gain access to healthcare services<sup>v</sup>.

## REVIEW OF LITERATURE:

It is a common belief that people's happiness levels drop when they suffer from a significant illness or are in pain. Studies consistently show a strong relationship between well-being and physical and psychological health. Psychological health appears to be highly correlated with well-being compared to physical health. This is not surprising, given the close correspondence between psychological health and well-being. Zimu Hu (2012)<sup>vi</sup> found a negative relationship with ill health, indicating that improving health can increase happiness. Easterlin<sup>vii</sup> found that poor health negatively impacts happiness, which can be partly attributed to loss in income. Health and life satisfaction surveys showed that people in low-income countries have great confidence in their health care and medical systems compared to the US (Deaton, 2008)<sup>viii</sup>. Miret (2014)<sup>ix</sup> found that health was the most significant correlated factor with happiness.

On the contrary, Perneger (2004)<sup>x</sup> concluded that Happiness and physical health have a weak and statistically insignificant relationship. However, it is believed that health literacy and better health will make people happier<sup>xi</sup>.

Considering the literature, health indicator was added to the questionnaire for the present study. Self-reported health was taken as an indicator. Respondents were questioned about their happiness with existing health conditions. Besides, respondents were also enquired about their suffering from any disease, having health insurance, getting any remittances of medical spending, involvement in drugs, and attempting suicide.

## DATA:

Sample: Data was collected through a primary survey with a questionnaire to discover information relevant to the current study. The questionnaire was developed utilising the OECD's 2013 recommendations for gathering happiness statistics.

The study focused on the state of Punjab, which has 23 districts. A sample of six of these districts was selected to gather primary data. These districts were chosen using the indicator of district per capita income. The 23 districts were divided into three groups: High per capita districts, Medium per capita districts, and Low per capita districts. Roopnagar and Sahibzada Ajit Singh Nagar (S.A.S. Nagar) are the high per capita income districts, Shaheed Bhagat Singh Nagar and Moga are medium per capita income districts, and Gurdaspur and Pathankot are low per capita income districts.

The data were collected from these selected districts using a random sample approach. To create a sample, items were chosen from each stratum after the population had been separated into several sub-populations that were all more homogenous than the whole population. According to income levels and the industry in which they work, such as agriculture, industry, and services, the population was split into urban and rural, male and female. A

sample size of a total of 1205 individuals was selected according to the size of the population of the selected districts. An average sample of 200 individuals was taken from each of the 6 districts, out of which 100 were taken from urban areas and 100 from rural areas.

### RESEARCH METHODOLOGY:

An index of happiness has been calculated based on respondents' responses to rate their happiness levels in many areas, including well-being, life satisfaction, time usage, standard of living, etc., The results were then transformed into index scores, ranging from 0 to 10. A censored dependent variable has been provided since the happiness index ranges from 0-10. When there is left- or right-censoring in the dependent variable, the Tobit model, also known as a censored regression model, has been used to estimate linear correlations between variables. To achieve the stated goal, the Tobit model was employed with a lower limit of 0 and an upper limit of 10. Data with left and right censors will be accessible.

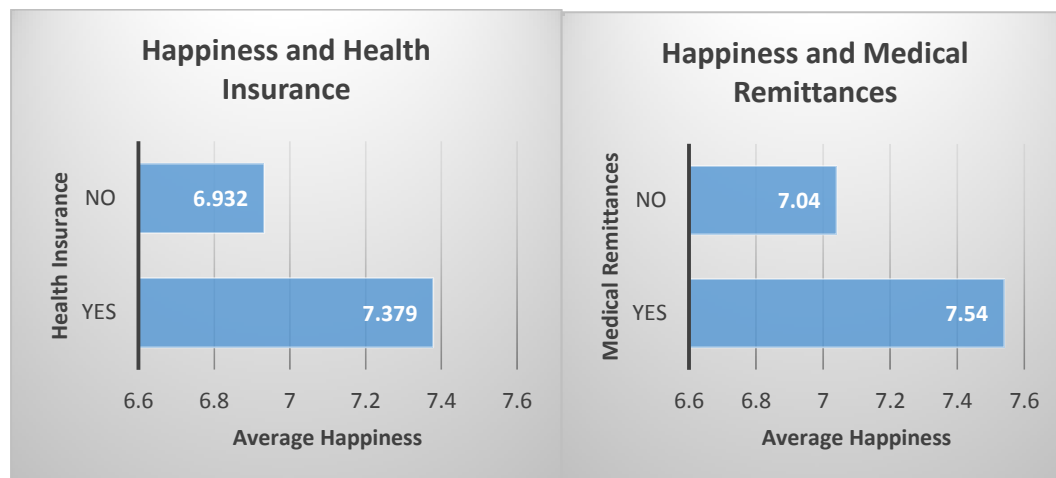
### Descriptive Statistics on health indicators of respondents and Correlation with Happiness Index

S. No.	Questions	Mean	T-test	Correlation with Happiness Index
1.	Are you suffering from any disease	0.15	14.24** (0.01)	0.001 (0.91)
2.	Do you have health insurance?	0.52	34.88** (0.01)	0.129** (0.01)
3.	Do you get any remittances for monthly medical expenditures?	0.23	14.71** (0.01)	0.218** (0.01)
4.	Are you happy with your health conditions	0.86	83.84** (0.01)	0.235** (0.01)
5.	Have you ever been involved in drugs	0.06	8.29** (0.01)	-0.138* (0.043)
6.	Have you ever attempted suicide	0.05	7.94** (0.01)	-0.266** (0.01)

**Source:** Author's calculation using primary data

Table shows that the p-value of t test of all the variables is statistically significant at a one per cent significance level. Correlation results show that suffering from diseases is insignificant to the happiness index. But, if remitted, financial loss due to bad health conditions adds to happiness. Having medical insurance or getting medical remittances is significantly related to happiness, evident from r values of 0.129 and 0.218, respectively. Other than physical health, for mental health, involvement with drugs and high stress leading to suicidal attempts showed a negative r value of -0.138 and -0.266, respectively, significantly correlated with happiness. On average, people happy with their health conditions show positive correlation results. However, being involved in drugs and having poor mental health leading to suicidal behaviour has a negative significant relation with happiness.

## HAPPINESS AND HEALTH-CARE WITH INSURANCE AND REMITTANCES:



**Fig. Average happiness index across the Health Insurance and Medical Remittances**

The above fig Depicts that respondents who get monetary support through remittances or insurance are happier than those who have to bear the medical expenditure on their own. So, compensatory medical benefits can help in improving well-being of people. It increases the access to health care facilities in form of financial support.

### The relationship between health and happiness index using TOBIT model:

The Happiness Index is calculated using factor analysis, ranging from 0-10. Since the index can be censored data, the Tobit model will be used for evaluation. The censored data with a lower bound of 0 and an upper bound of 10 is used for analysis. The analysis is done on R studio software using the censreg package<sup>xii</sup>. Table below gives the Tobit regression model determination results.

**Table: Tobit Regression Model**

Test	Value
Pseudo R-squared	0.2736
LR (Chi-Square)	1301.65
p-value	.0001**

**Source:** Author's calculation

Table gives the results of the pseudo-R-square and the goodness of fit test. The Tobit model does not estimate R square; instead, it calculates the LR statistic called pseudo R square. It is evident from Table that the pseudo-R-square is 0.2736. F-test has been run, and the results are significant at a one per cent significance level. From the Tobit model analysed, the constant value was -2.481, which is significant. Also, nine values were left censored, and 22 were right censored. Further, checking the coefficient value and p-value of all independent variables is shown in Table.

Health Indicators	Coefficient	Robust Std. Error	t-value	p-value
Are You suffering from any disease	-0.06	0.07	-0.82	0.464
Do you have health insurance?	0.064	0.079	0.810	0.420
Do you get any remittances for monthly medical expenditures?	0.091	0.097	0.940	0.348
Are you happy with your health conditions	0.541	0.109	4.970	.0001**

Have you ever been involved in drugs	-0.207	0.179	-1.160	0.248
Have you ever attempted suicide	-0.608	0.187	-3.250	.001**

**Health:** the above table signifies both physical and mental health plays a role in depicting happiness. People who are satisfied with their health conditions have higher happiness levels as the coefficient value is 0.541 significant, except that all other physical health-related questions were insignificant. This raises questions regarding the availability of medical facilities in Punjab. But people in a state of depression and who have attempted, have a significant negative coefficient value -0.608. Which depicts that poor mental health conditions negatively impact happiness.

## CONCLUSION:

However, inequalities in health care access still persist. The COVID-19 pandemic and other ongoing crises have impeded progress towards Goal 3. Childhood vaccinations have experienced the largest decline in three decades, and tuberculosis and malaria deaths have increased compared with pre-pandemic levels.

The Sustainable Development Goals make a bold commitment to end the epidemics of AIDS, tuberculosis, malaria and other communicable diseases by 2030. The aim is to achieve universal health coverage, and provide access to safe and affordable medicines and vaccines for all.

To overcome these setbacks and address long-standing health care shortcomings, increased investment in health systems is needed to support countries in their recovery and build resilience against future health threats.

### Access to essential health services

A significant portion of the global population still lacks access to vital healthcare services. To bridge this gap and ensure equitable healthcare provision, addressing disparities is critical. Various determinants of health, including environmental and commercial factors, need attention to pave the way for achieving our common objective of Health for All and achieving the Sustainable Development Goal targets.

How can we achieve these targets?

Ensuring healthy lives for all requires a strong commitment, but the benefits outweigh the cost. Healthy people are the foundation for healthy economies. Countries worldwide are urged to take immediate and decisive actions to predict and counteract health challenges.

This becomes especially critical in safeguarding vulnerable population groups and individuals residing in regions burdened by high disease prevalence. By doing so, we can strengthen health systems and foster resilience in the face of health adversities.

Health is the most essential criterion to measure the quality of life and well-being of people. The growing difference in health infrastructure will harm people's well-being. It has been noticed that population growth rates in Punjab have decreased due to falling birth rates and fertility. To address the problem of health inequality extensive funding is required for creating medical colleges, hospitals, and health centers, especially in areas that lack basic medical infrastructure such as Pathankot. Better and affordable medical facilities can help to promote medical tourism as well.

i R. Baeten, S. Spasova, B. Vanhercke, and S. Coster, "Inequalities in access to healthcare," European Commission, 2018.

- 
- ii M. L. Norredam, A. S. Nielsen, and A. Krasnik, "Migrants' access to healthcare," *Dan. Med. Bull.*, 2007.
  - iii D. Sakellariou and E. S. Rotarou, "The effects of neoliberal policies on access to healthcare for people with disabilities," *Int. J. Equity Health*, 2017.
  - iv M. Dixon-Woods, D. Cavers, and S. Agarwal, "Conducting a critical interpretive synthesis of the literature on access to healthcare by vulnerable groups," *BMC Med. Res. Methodol.*, 2006.
  - v S. Y. Tang, A. J. Browne, and B. Mussell, "'Underclassism' and access to healthcare in urban centres," *Sociol. Health Illn.*, 2015.
  - vi Hu, Z. (2012). Chinese happiness index and its influencing factors analysis.
  - vii Easterlin, R. A. (2003). Explaining happiness. *Proceedings of the National Academy of Sciences*, 100(19), 11176-11183.
  - viii Deaton, A. (2008). Income, health, and well-being around the world: Evidence from the Gallup World Poll. *Journal of Economic perspectives*, 22(2), 53-72.
  - ix Miret, M., Caballero, F. F., Chatterji, S., Olaya, B., Tobiasz-Adamczyk, B., Koskinen, S., ... & Ayuso-Mateos, J. L. (2014). Health and happiness: cross-sectional household surveys in Finland, Poland and Spain. *Bulletin of the World Health Organization*, 92, 716-725.
  - x Perneger, T. V., Hudelson, P. M., & Bovier, P. A. (2004). Health and happiness in young Swiss adults. *Quality of Life Research*, 13, 171-178.
  - xi Weech-Maldonado, R., Miller, M. J., & Lord, J. C. (2017). The relationships among socio-demographics, perceived health, and happiness. *Applied research in quality of life*, 12, 289-302.
  - xii Henningsen, Arne (2017). censReg: Censored Regression (Tobit) Models. R package version 0.5. <http://CRAN.R-Project.org/package=censReg>.