

# **Poverty and Depression Analyzation of Past Studies**

Xingtong Mao<sup>1,\*</sup>

#### **ABSTRACT**

Nowadays, poverty is a common phenomenon in many developing countries, and much economic evidence has proven that the economic status of a country correlates, to some extent, with the well-being of its people. People with the lowest incomes in the community suffer from depression, anxiety, and other common mental illnesses 1.5 to 3 times more frequently than those with the highest incomes. Therefore, this article will analyse the relationship between poverty and depression through the analysis of several experiments. The experiments are conducted to study the relationship between the two and focus on different groups or aspects. Through multiple experimental readings and studies, we found that poverty can have a significant impact on an individual's psychological state and that this impact is sustained and direct.

Keywords: "Poverty" "Depression" "Mental" "Social Economy"

## 1. INTRODUCTION

"Poverty" refers to individuals or multiple people's economic levels falling below the minimum social standards, in other words, it means economic backwardness. There are 3 baselines for defining poverty, which means all poverty cases are likely to fit in at least one of the criteria (Townsend 1979, Desai 1985, and Hagenaars 1986): (1) one's possession level is below the absolute minimum, (2) most people in society own more than one individual, (3) one's feeling of what he/she has cannot maintain his/her living.

Besides these three categories that either stand for absolute, relative, or both, other important standards for being defined as poverty also needs to be included. For example, the absence of social insurance, vulnerability to potential damages from the environment, and the existence of obstacles when getting access to health organizations. Even though defining poverty is not absolutely objective, it is certain that individuals in a state of poverty will feel a strong emotional blow in associate with physical and mental destruction. As of 2013, over 1.5 billion of the world obtain a salary that is below 1 dollar per day (Cambridge 2013) and the average death age is nearly 2 decades earlier than that in Europe.

For the definition of depression, according to WHO, depression is a mental illness that displays symptoms of chronic depression, loss of interest in things one is passionate about and is sometimes accompanied by physical disorders like sleeping or eating disorders. Based on DSM-5, depression is shown in different forms, such as postpartum depression, psychotic depression, bipolar disorder, and so on. More than 264 million people in the world are suffering from this mental disease, it is no longer rare but rather widely spread. In certain circumstances, poverty is greatly related to depression. Abundant research has already suggested that an explicit correlation is established between the two factors. Several studies have shown that depression levels are inversely related to personal economic status. For example, Indian National Mental Health Survey published that in India the population that owns the lowest overall income maintains a depression rate of 3.4, compared to the rate of 1.9 among the rich people.

Therefore, based on the previous studies, the paper is going to analyze studies providing evidence to support the hypothesis that poverty affects depression to a great extent. A desirable resolution is needed to be reached through the analysis of the studies.

<sup>&</sup>lt;sup>1</sup> Beijing National Day School

<sup>\*</sup>Corresponding author. Email: xingtongmao1021@163.com



# 2. RELATIONSHIPS BETWEEN POVERTY AND DEPRESSION

In Joshi et al, in order to investigate how being in the status poverty could have an impact on older adults, they conducted an experiment. The New York City Neighborhood and Mental Health in the Elderly Study II provided participants, which is an observation object targeted at elders aged between sixty-five to seventyfive. The participants were randomly recruited with an equal possibility from the 16 classes of New York City. In order to measure the depression level, researchers used the PHQ-9 questionnaire (Spitzer et al., 1999) to testify the participants. Researchers also encoded the living areas of the participants and the districts around them. Within a range of 1 km, the area is defined as the buffer zone. Community poverty was defined as the proportion of households living below the federal poverty level in each participant's 1-km network buffer. Intermediaries in the community are also encountered, including the safety level that the participants rated themselves and are the community cohesive enough. In association with the data on homicide from New York Times, the result showed that even though the economic status of individuals does not impact the level of depression much, a significant positive trend exists between poverty status in the community and depression levels of individuals older adults. The study showed how community poverty is affecting mental diseases.

In Heflin et al, the aim was to investigate to what extent insufficient economic supply affects the likelihood of depression. The participants of this study were 4700 children and their parents who were randomly picked from local hospitals. Interviews were conducted three times with the mothers: when the baby was born, one year after birth, and three years after birth. The interviews were CIDI, a structured interview that helps the researcher to examine and rate the potential rate of having a mental disorder in the participants. The questions researchers asked mainly focused on the material absence of the mothers, such as rent, food, phone bill, electricity, water, health care, and living places. They used conditional logistic regression models to estimate the relationship between the possibility of having depression and economic status. The result shows that with more material hardship, one is more likely to be caught in depression, and a direct relationship between the two factors is established clearly through the result.

In Galea et al, in order to investigate the relationship between the economic status of urban areas and the possibility of depression, researchers gathered 1570 adults who live in New York City. They were chosen via random phone dials. Participants were interviewed multiple times: first contact, after 6 months, and after 18 months. 1120 participants completed the survey in the end. Except for basic information, during the interview,

the participants were also required to answer questions about their serious events, traumas, and personal states (economic, relationships, etc). The PTSD model was also involved in projecting one's possibility of having PTSD. The result showed that the accumulative morbidity of depression among relatively low-income areas is 19.4 cases per 100 people. However, the morbidity among the relatively high-income social group is 14.6, which is lower than the previous group. This proves that in wealthy urban regions, depression is less likely to occur among the citizens. An explicit relationship is introduced through the result, the overall poverty in the community could greatly affect the depression risk.

In Kathleen et al, they examined the relationship between family poverty and the cognitive development of children, as well as other factors like the depression level of the mother or family social status. The participants are obtained from a project named MCS, research that targeted babies from 2001 to 2002 in the UK. The sample the researchers have chosen mainly aimed at three social groups: poverty families, ethnic minorities, and countries that has a relatively small area. They conducted follow with these families when the babies are 3. The result showed that no matter what age the babies are, their cognition tends to show a trend of delay when poverty occurs. In other words, the financial disadvantages would affect children's behaviors mentally and physically, and we can interpret that the effects on the children at their early ages might play a role in forming later depression diseases.

Najman et al investigated the possibility of the existing poverty affecting children at a relatively young age, which caused them to suffer from depression later when they grow up. The researchers used the method of the cohort study. The participants were mothers in their early pregnant phases and were followed up when children are 14 to 21. Overall, 2609 mothers and youngsters are included in the study. Within the survey, researchers measured the household income, and the level of depression via YSR and YASR. The result showed that for teenagers, exposure to financial disadvantages impacts one's mental state to a great extent. For teens living in relatively poor environments, the possibility of having depression was bigger than for those who didn't. However, when a family is caught in poverty when the mother is pregnant, the likelihood of children having depression is not significant, which means in order to have impacts the children must be exposed to poverty straight-forwardly. This indicates that too much exposure to poverty when children are young increases their risks of having depression, and economically vulnerable teenagers are more likely to have mental diseases.

Yen and Kalpa's study examines the possibility of individuals having depression due to a poor financial



status. Participants were 1737 residents from poverty communities and a longitudinal cohort is used to investigate the data. Multiple logistic regression analyses were used. The result showed that when other variables such as age and gender are controlled, depression is more likely to occur when people live in relative poverty areas. For people in 1965 that reported themselves as healthy, if they lived in a poverty area they are more likely to have health problems both physically and mentally 1974. Of the 1296 participants who maintained a normal mental state in 1965, 18% of them showed a trend of depression if they live in poor areas in 1974, compared to 9% of those who avoided living in poor regions. In addition, the health situation for those who remained poor is significantly worse. This indicates that the community feature on economy influences individuals' mental states, depression may occur during the process.

In Simmons et al, in order to investigate the relationship between financial problems or low economic social and the depressive symptoms of women in the rural areas of the U.S, researchers used structural equation modeling to analyze the data from 23 counties between 2000-and 2002. They collected and compared the data of sociodemographic variables, economic status, and depression levels. In a three-wave data analysis based on three different variables, the researchers found a negative trend in economic status and mental health. The result showed that an intense relationship between poverty and depression exists, which indicates that poverty promotes poorer mental health.

#### 3. SIGNIFICANCE

This article reveals the relevance between poverty and depression, further solidifying the inextricable relationship with an analysis of past articles. In some cases, if an individual's economic situation cannot be drastically changed, he or she can determine and self-perceived his or her psychological situation to a certain extent, thus increasing the possibility of seeking help. At a time when many countries lack a complete psychological treatment system, the ability to recognize one's own psychological problems and to find the root cause of them is an important ability and quality.

#### 4. CAUSATION AND RESOLUTIONS

According to research done by WHO, only one-third of the total cases are correctly identified as depression and only 5% of the patients are treated with appropriate medical services correspondingly. On the aspect of poverty, the main factor for the causation of depression over poverty firstly is due to the uncertainty of lacking financial support. Evidence proves that in countries with well-developed social insurance systems like Sweden,

unreliable social status has few negative effects on people. This proves that a progressive social insurance system could promote overall well-being to some extent. Poverty, especially in urban areas also means a degenerative living environment. For example, households who are in poverty maintain an insufficient state for choosing a suitable house. Pollution might occur and extreme climate circumstances may affect people greatly. With the decline of physical health, the safety of mental health also lacks protection. Researchers did professional examinations and analyses on the air pollution in China affecting citizens' mental disorders. The result elicits that being exposed to pollutants in the atmosphere increases the risk of having mental problems. Poverty usually occurs in zones. In cities, rich and poor neighborhoods tend to co-exist. Diversity of people lives within one area, promoting potential conflicts. Therefore, violence and crimes also takes a large part in the causation of depression. Research done by Haushofer et al further proves with data showing that with the increase in cash transfer among couples, the violent behaviors and risks are decreased accordingly. Once violence and crimes happen to individuals, traumas may follow. For example, people struggling with financial problems may encounter traumatic events like the death of important family members or other individuals who are in a special relationship with them. (Michael Marmot, 2005) Along with the traumas comes the arising risks of all sorts of mental disorders. Previous engagement with traumatic events enhances the possibility of PTSD. (Naomi Breslau). In addition, as previously mentioned in the studies, a poverty environment for children may affect their cognitive functions. For adults, individuals might pay too much attention to overcoming the difficulties of poverty, which further influences the long-term function of the brain.

Having discussed the cause-and-effect relationships, we will further investigate how current global situations might affect mental problems and what are the possible solutions. For the most direct causation, the overall progress of a country's social status cannot improve the mental state. According to the research done by the Burden of Disease Study in 2017, wealthier countries tend to maintain an overall higher score of mental diseases. It is possibly and partly due to the excessive gap between the rich and the poor that is so prone to occur in capitalist countries. This gap may widen as the country's overall economy grows, while too rapid economic development can be accompanied by a deterioration of the living environment, further driving the emergence of psychological problems. Mentioning the environment, climate also influences the states of the poverty majority. According to V. Masson-Delmotte, the frequency of extreme weather has a more direct impact on the psychological state of the public. Natural disasters and economic loss are the two main reasons for



the worsening of mental states. On the third aspect, the fast-growing Internet and globalization are also important factors. Machines that are more sophisticated than humans and artificial intelligence that can calculate at high speed have replaced a large part of humans in relatively mechanical occupations, such as factory workers, and these skilled occupations are the ones that most poor people would choose first, which in part promotes poverty and accelerates the emergence of mental illness, especially in developed countries (D. H. Autor, 2016). Social media, as a newly raised modern technology, both promoted and decreased the situation. The Internet offers people better opportunities, but also brings mental disorders like depression due to cyberbullying and addiction. A recent study directly provides the evidence that after stopping the contact with the internet for 4 weeks, the depression level decreased by 0.1 SD.

Overall, depression due to poverty is a multifaceted problem that cannot be completely solved in a short period of time, but it can be alleviated by making adjustments from different perspectives.

#### 5. CONCLUSION

Globally, families with significant economic disadvantages are more likely to produce individuals with mental health problems, meaning that individuals with depression are far more likely to suffer from depression than those from wealthy families. In the analysis of this paper, many previous experiments and surveys have clearly demonstrated that depression and poverty are inextricably linked and that poverty tends to affect mental health to a large extent. Therefore, poverty is an important issue in both developing and developed countries because it has a direct correlation with people's well-being. Furthermore, the paper discussed the causation of the current situations, and evaluated the possible methods to mitigate the depression caused by poverty.

### REFERENCES

- [1] Lipton, Michael (1995). [Handbook of Development Economics] Volume 3 || Chapter 41 Poverty and policy., (), 2551–2657. doi:10.1016/S1573-4471(95)30018-X
- [2] Haushofer, J.; Fehr, E. (2014). On the psychology of poverty. Science, 344(6186), 862–867. doi:10.1126/science.1232491
- [3] Aldi Hagenaars and Klaas de Vos (1988). The Definition and Measurement of Poverty. The Journal of Human Resources, 23(2), 211–221. doi:10.2307/145776

- [4] Abdul Latif Jameel Poverty Action Lab, Massachusetts Institute of Technology, 30 Wadsworth Street, Cambridge, MA 02142, USA.
- [5] Program in Economics, History, and Politics, Harvard University, Cambridge, MA 02138, USA.
- [6] https://www.nimh.nih.gov/health/topics/depression
- [7] https://www.who.int/healthtopics/depression#tab=tab 1
- [8] J. Sareen, T. O. Afifi, K. A. McMillan, G. J. G. Asmundson, Relationship between household income and mental disorders: Findings from a population-based longitudinal study. Arch. Gen. Psychiatry68, 419–427 (2011)
- [9] B. A. Arvindet al., T. M. Shibukumar, NMHS Collaborators Group, Prevalence and socioeconomic impact of depressive disorders in India: Multisite population-based cross-sectional study.BMJOpen9,e027250(2019)
- [10] B. Meyer, Applying "Design by Contract", Computer 25(10) (1992) 40–51. DOI: <a href="https://doi.org/10.1109/2.161279">https://doi.org/10.1109/2.161279</a>
- [11] Spitzer, R.L., Kroenke, K., Williams, J.B.W., 1999. Validation and utility of a self-report version of PRIME-MD. JAMA: J. Am. Med. Assoc. 282 (18), 1737–1744.
- [12] Colleen M. Heflin; John Iceland (2009). Poverty, Material Hardship, and Depression., 90(5), 1051– 1071. doi:10.1111/j.1540-6237.2009.00645.x
- [13] Sandro Galea; Jennifer Ahern; Arijit Nandi; Melissa Tracy; John Beard; David Vlahov (2007). Urban Neighborhood Poverty and the Incidence of Depression in a Population-Based Cohort Study., 17(3), 0–179. doi:10.1016/j.annepidem.2006.07.008
- [14] KIERNAN, KATHLEEN E.; MENSAH, FIONA K. (2009). Poverty, Maternal Depression, Family Status and Children's Cognitive and Behavioural Development in Early Childhood: A Longitudinal Study. Journal of Social Policy, 38(4), 569–. doi:10.1017/s0047279409003250
- [15] Yen, I. (1999). Poverty area residence and changes in depression and perceived health status: evidence from the Alameda County Study. International Journal of Epidemiology, 28(1), 90–94. doi:10.1093/ije/28.1.90
- [16] Jake M. Najman, Mohammad R. Hayatbakhsh, Alexandra Clavarino, William Bor, Michael J. O'Callaghan, Gail M. Williams, "Family Poverty Over the Early Life Course and Recurrent Adolescent and Young Adult Anxiety and



- Depression: A Longitudinal Study", American Journal of Public Health 100, no. 9 (September 1, 2010): pp. 1719-1723.
- [17] Leigh A. Simmons; Bonnie Braun; Richard Charnigo; Jennifer R. Havens; David W. Wright (2008). Depression and Poverty Among Rural Women: A Relationship of Social Causation or Social Selection?., 24(3), 292–298. doi:10.1111/j.1748-0361.2008.00171.x
- [18] C. Lundet al., Poverty and common mental disorders in low and middle income countries: A systematic review. Soc. Sci. Med 71,517–528 (2010). doi:10.1016/j.socscimed.2010.04.027;pmid:206217 48
- [19] D. Cesarini, E. Lindqvist, R. Östling, B. Wallace, Wealth,health, and child development: Evidence from administrativedata on Swedish lottery players.Q. J. Econ.131, 687–738(2016). doi:10.1093/qje/qjw00135.
- [20] E. Lindqvist, R. Östling, D. Cesarini, Long-run effects oflottery wealth on psychological wellbeing. Rev. Econ. Stud.87, 2703–2726 (2020). doi:10.1093/restud/rdaa006
- [21] Z. Jiaet al., Exposure to ambient air particles increases the risk of mental disorder: Findings from a natural experiment in Beijing.Int. J. Environ. Res. Public Health15,160 (2018). doi:10.3390/ijerph15010160;pmid:29351245
- [22] V. Masson-Delmotte, Global Warming of 1.5 OC: An IPCC Special Report on the Impacts of Global Warming of 1.5° CAbove Pre-industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty(World Meteorological Organization, 2018).
- [23] M. L. A. Dückers, L. Reifels, D. P. De Beurs, C. R. Brewin, The vulnerability paradox in global mental health and its applicability to suicide.Br. J. Psychiatry215, 588–593(2019). doi:10.1192/bjp.2019.41
- [24] D. H. Autor, D. Dorn, G. H. Hanson, The China shock: Learning from labor-market adjustment to large changes in trade. Annu. Rev. Econ.8, 205– 240 (2016). doi:10.1146/annurev-economics-080315-015041
- [25] H. Allcott, L. Braghieri, S. Eichmeyer, M. Gentzkow, The welfare effects of social media.

Am. Econ. Rev.110, 629–676(2020). doi:10.1257/aer.20190658