



Mental Health on a Global Level

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Introduction

Social class is one of the main factors that can affect people's access to mental health. There are other factors that can influence the access to healthcare based on social class, but the factors that had the most correlation included:

- Religion/spiritual activity
- Poverty
- Amount of psychiatrists/mental health professionals
- Mental disorders
- Country

Our goal for this project was to explore why and how people in certain countries are not able to get help for their mental health based on the factors that are listed above.

Methods

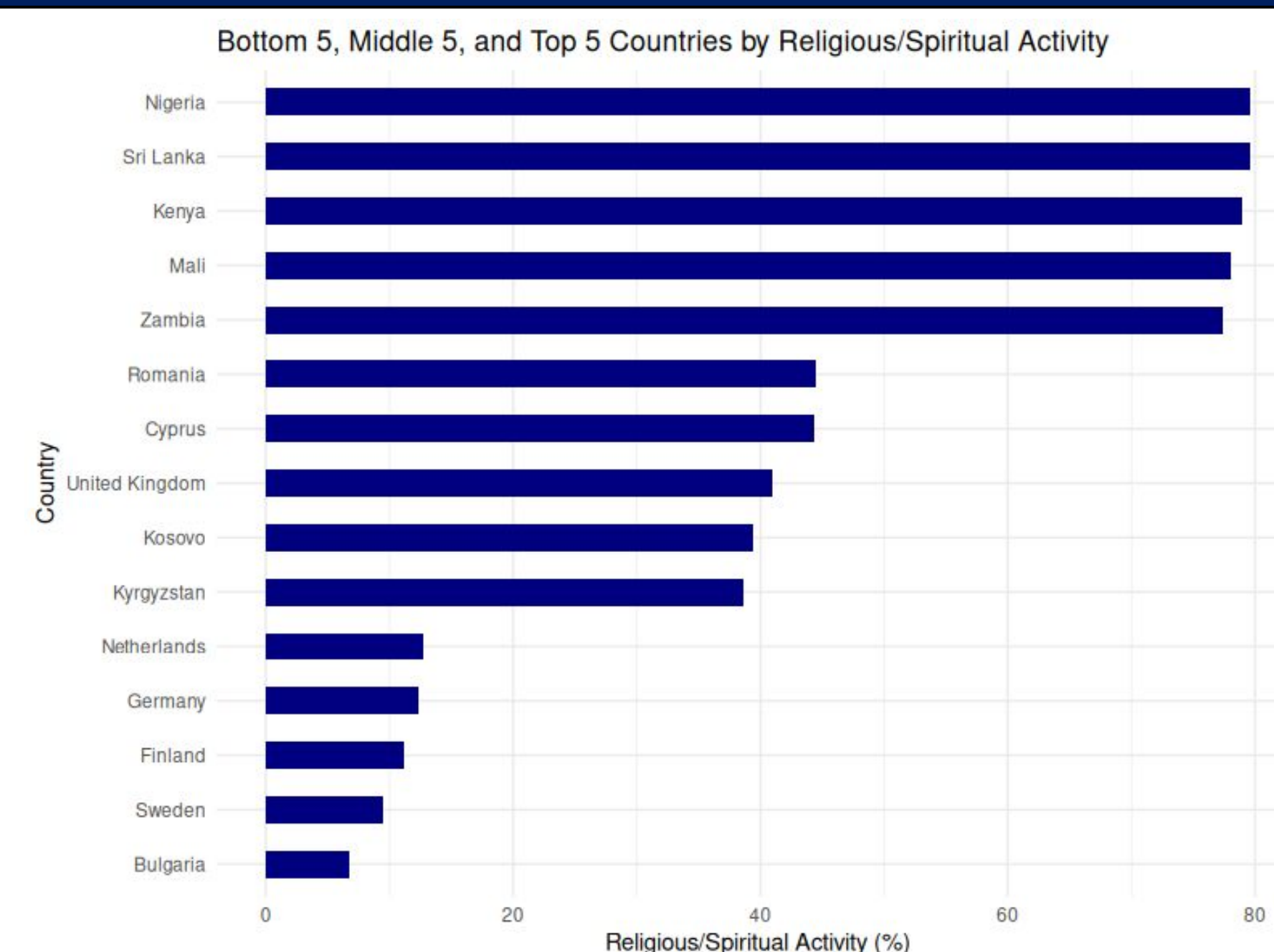
Through RStudio, we analyzed two datasets gathered from **Our World in Data**. The first dataset had 113 observations and 8 variables while the second dataset had 216 observations and 13 variables.

- Rstudio
- Used all data sets to create scatter plots, bar plots, run regressions
 - Installed various packages such as dplyr, ggplot2, GGally, and ggpairs to create different graphs

- Data filtering:
- Filtered top 5, middle 5, and bottom 5 by religious and spiritual activity due to a large amount of countries

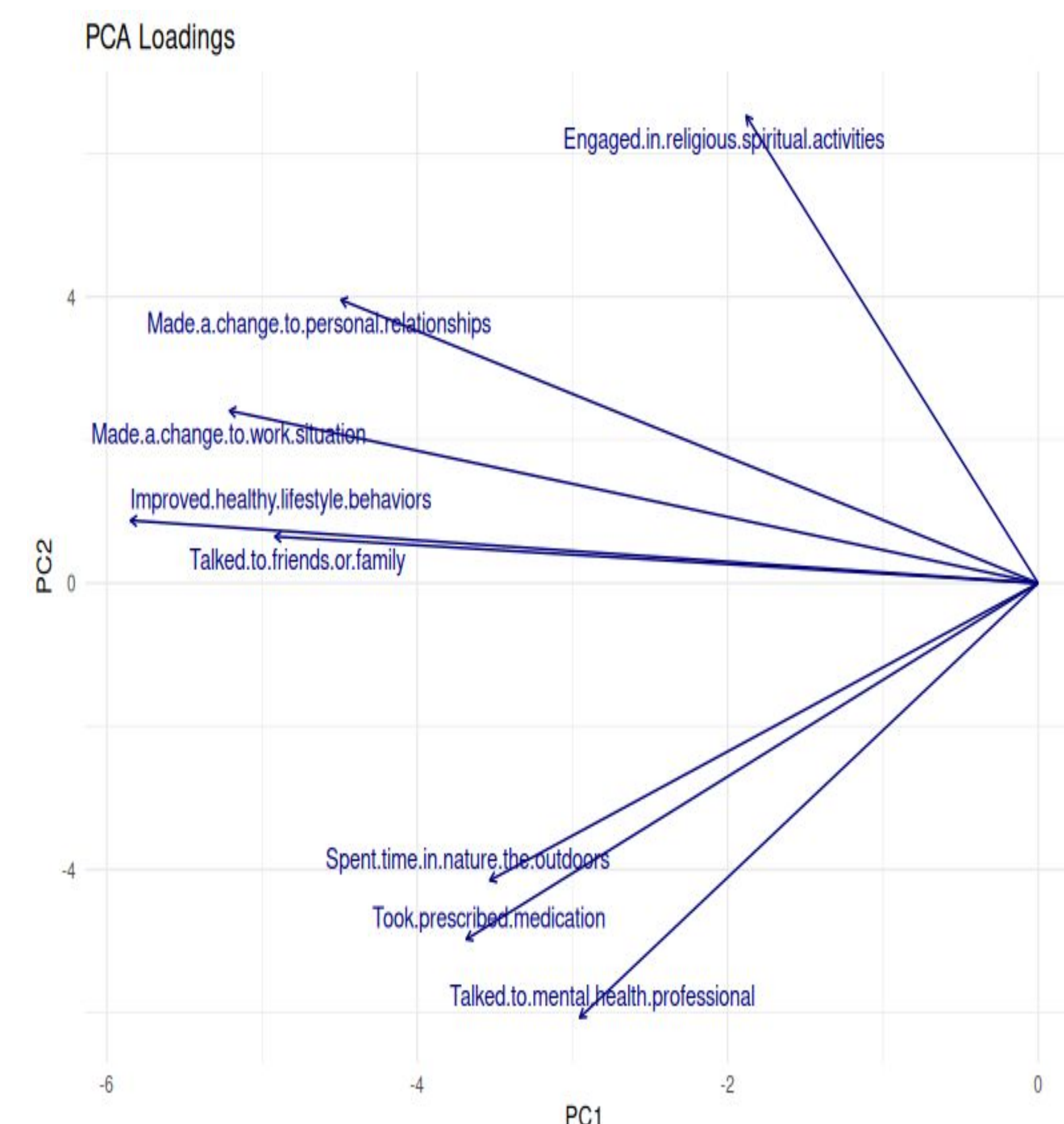
- Principal Component Analysis (PCA):
- Ran a PCA Analysis on the Dealing with Anxiety and Depression Comparison data set and narrowed down eight variables to two variables

Religious/Spiritual Activity by Country



This graph was produced from the Our World in Data dataset and was filtered by the top 5, middle 5, and bottom 5 countries by religious/spiritual activity. This graph supports the trend shown in the PCA Scores and Leading by Country and factors respectively.

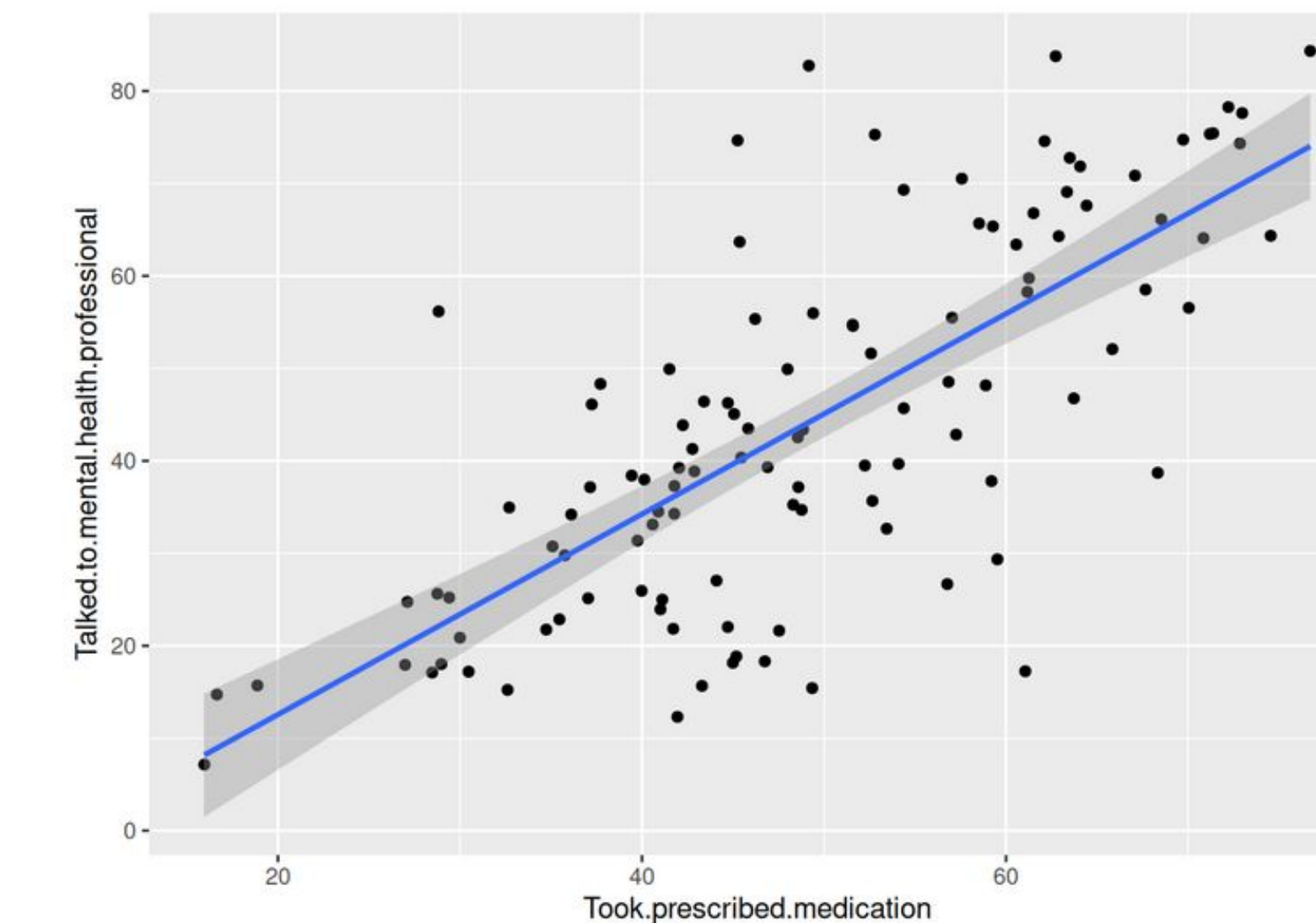
How Each Country Engages in a Certain Activity to Help with Mental Health



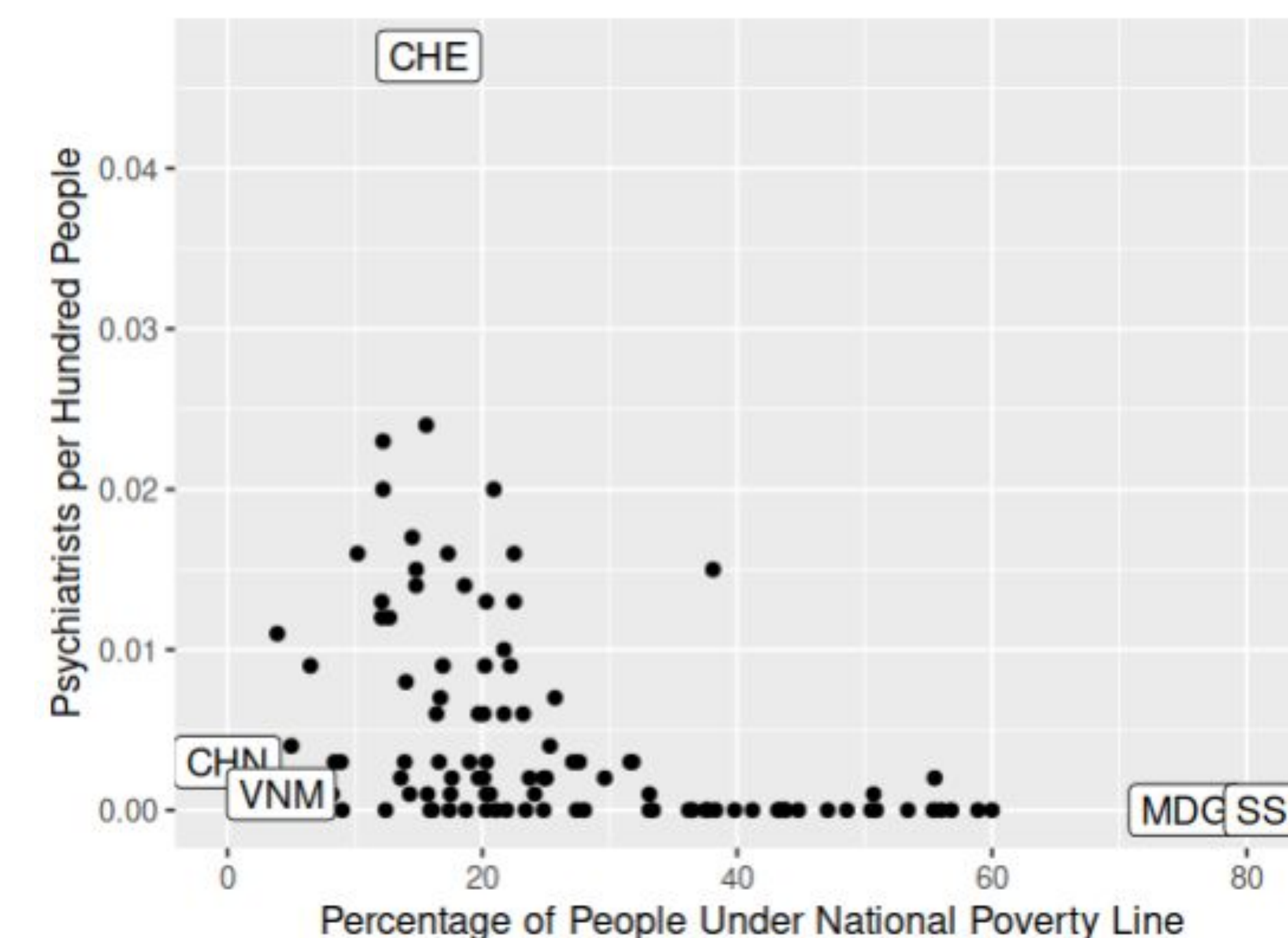
These graphs show how each country (represented by country codes) leans toward a certain activity to help with mental health. For example, the countries towards the top (African countries) lean toward religious and spiritual activities as opposed to the countries towards the bottom (European countries) that lean towards talking to a mental health professional. We infer that this trend can be supported by the top 5, middle 5, and bottom 5 countries by religious/spiritual activity graph, which shows the African countries as most religious and European countries as the least religious.

Poverty and the Treatment of Mental Health

Relation Between Taking Meds and Having Talked to a Mental Health Professional



Here we see a positive correlation between those that take prescribed medications and talking to a mental health professional. This shows that people who have access to a mental health professional are more able to get treatments for their problems. This is difficult for people living in poorer countries and poverty as there are fewer psychiatrists.



In further support of the above point, this graph shows that the more impoverished a country is, the less psychiatrists they have, meaning that it'd be difficult to be able to find help and get treatment in these countries.

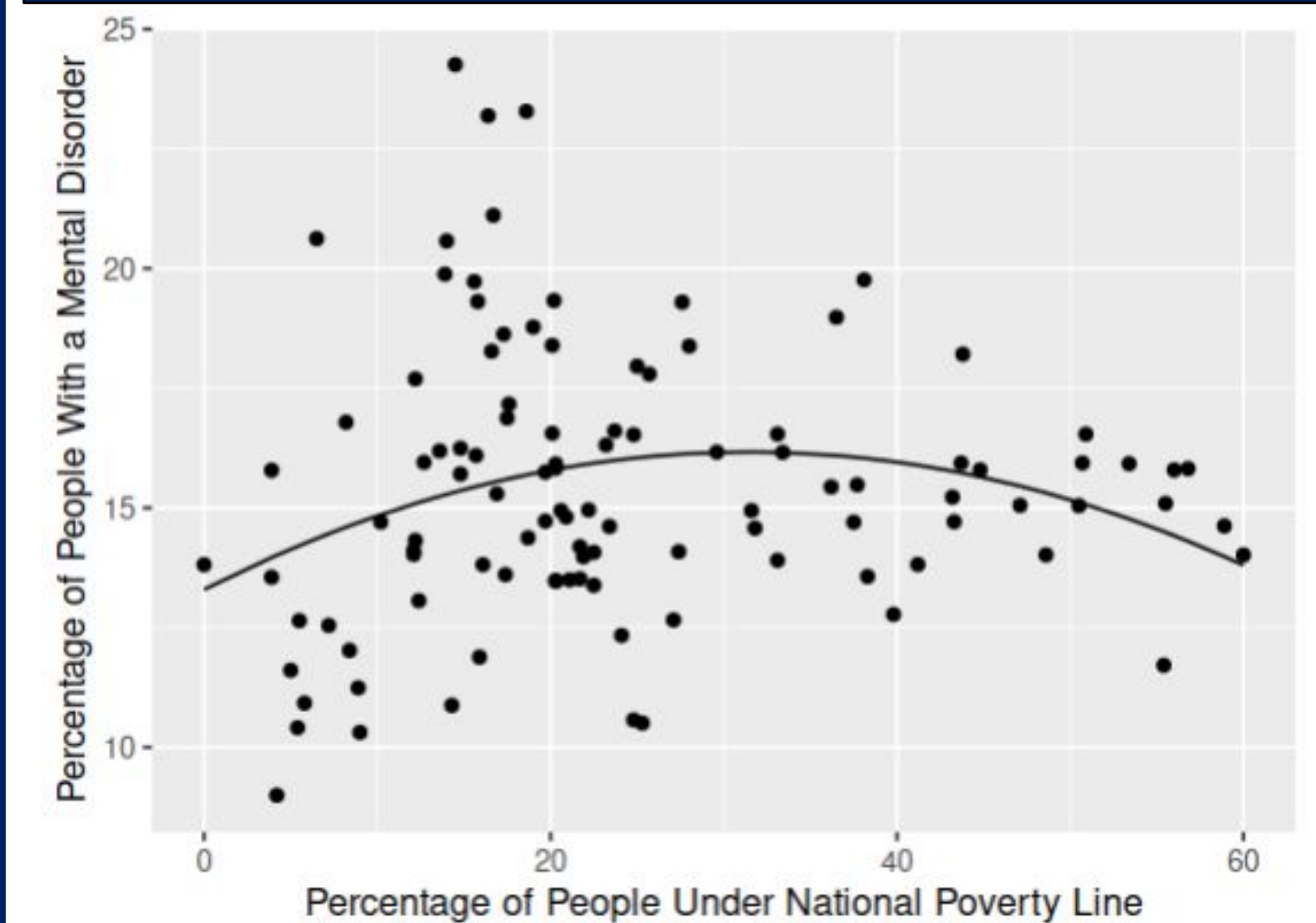
Especially in South Sudan (SSD) where there's an ongoing civil war, it'll be difficult for people to get help and thus diagnosed.

Another key point on this graph is Switzerland (CHE), with an overwhelming amount of psychiatrist per 100 people, shows why a majority of people there are able to seek professional help.

Acknowledgement

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Poverty and the Treatment of Mental Health



This graph relates poverty population and the population of those with mental disorders. We ran a quadratic regression on this and were able to deduce that the fit of the curve was significant. Poorer countries, on the right have lower rates, which we would assume is because they have less means of being able to get care or even diagnosed in the first place. We had to take out two outliers, South Sudan and Madagascar. Those two countries were very poor but had low disorder population, which most likely isn't true given the situation in South Sudan, and so we related to the fact that they probably didn't have access to be able to be diagnosed.

Conclusion

Our findings show that mental health is heavily influenced by where people live and how they cope with it. Some factors such as "made a change to work situation" were irrelevant and showed less correlation from other factors such as religion and country.

In addition, we also found that poorer countries had less access to professional care given the correlation between the population of people in poverty and amount of psychiatrists per hundred people in a specified country. Those who were able to see a psychiatrist were also better able to get care such as prescribed medicines.

References

1. Religious data from Pew Research Center (2025)
2. Psychiatry data from WHO Mental Health Atlas 2020 via UNICEF (2023)
3. World Bank, Poverty and Inequality Platform. Data are compiled from official government sources or are computed by World Bank staff using national (i.e. country-specific) poverty lines.
4. US Poverty Data from USDA ERS
5. Coping Skill Data from Wellcome and Gallup (2021)