

Sample Size vs Mean Age - Scatter Plot

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# Load the Excel file
CD <- read_excel("C:/Users/Tashi/OneDrive/Documents/New folder/Covid_Depression_Case_Studyxlsx.xlsx")

# Rename the columns
colnames(CD)[4] <- "Sample_size"
colnames(CD)[5] <- "mean_age"

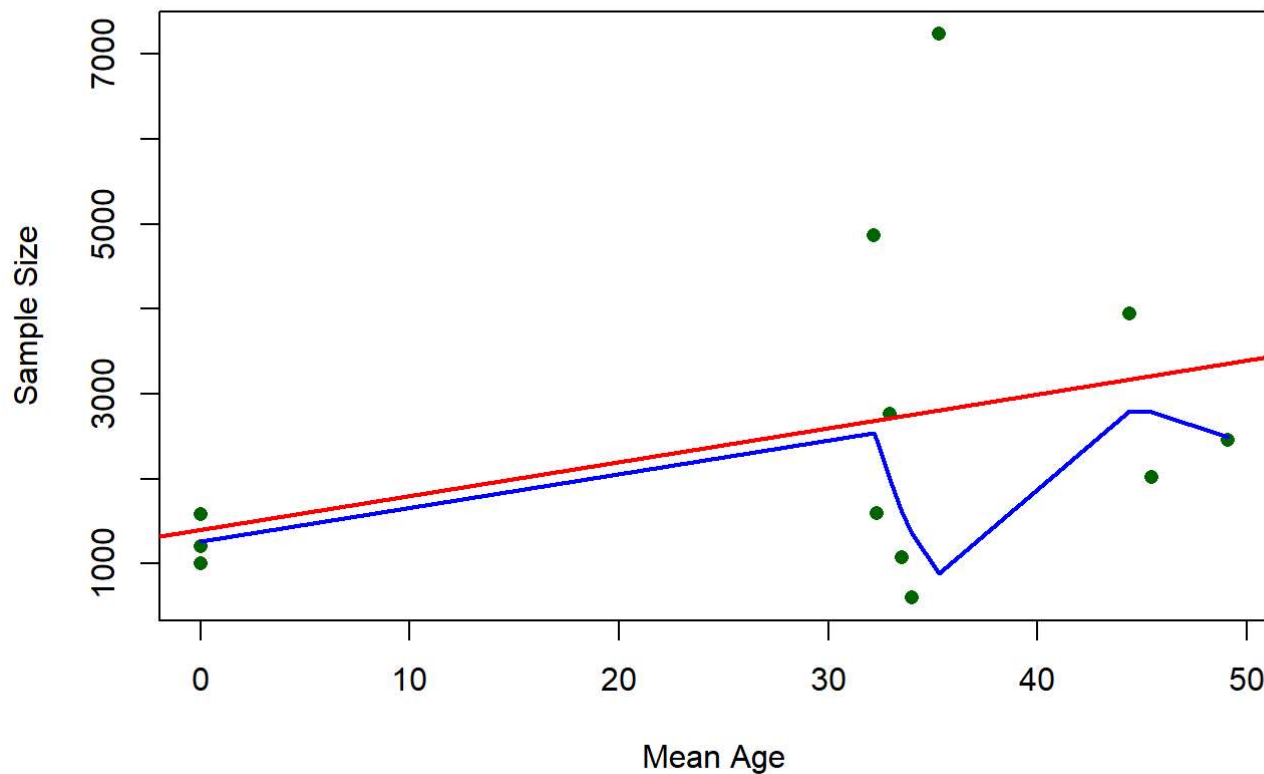
# Attach the dataset to use column names directly
attach(CD)
```

```
# Scatter plot with regression and lowess Lines
plot(mean_age, Sample_size,
     main = "Scatterplot of Sample Size vs Mean Age",
     xlab = "Mean Age",
     ylab = "Sample Size",
     pch = 16, col = "darkgreen")

# Add regression Line
abline(lm(Sample_size ~ mean_age), col = "red", lwd = 2)

# Add LOWESS Line
lines(lowess(mean_age, Sample_size), col = "blue", lwd = 2)
```

Scatterplot of Sample Size vs Mean Age



Part Four: Written Response

Recommendation on Funding Further Research

Based on the data and the visual trends observed, I recommend funding additional research on depression during the Covid-19 pandemic. The pandemic caused widespread disruption to daily life, mental health systems, and economic stability. Understanding how these changes impacted different age groups and population sizes can help develop targeted mental health strategies.

Investing in further research would help uncover long-term effects, identify vulnerable populations, and improve preparedness for future global health crises. The cost of untreated mental health conditions is high, both economically and socially, while early intervention and prevention offer long-term savings and improved public health outcomes.

Impact of Depression and Covid-19 Research

Research on depression and Covid-19 has already revealed major mental health challenges such as increased anxiety, isolation, and suicidal ideation. These studies have influenced public health messaging, expanded telehealth, and increased awareness around mental wellness. However, gaps remain in understanding the effects on different demographics and the long-term consequences.

Continuing this research can influence future health policy, improve access to mental health resources, and reduce disparities in care. The insights gained from analyzing variables like sample size and age also inform future study design and intervention planning.