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Forecasting Suicide Trends in Japan: Data-Driven Insights for Targeted Mental Health Interventions

Japan faces unique societal pressures that elevate mental health struggles. High societal standards and strict expectations put a toll on Japan's citizens, especially the working class. Unfortunately, this mental toll can increase greatly to the point where an individual contemplates taking their own life. The number of people who are living with mental health struggles in Japan is estimated to be in the millions. Unfortunately, the government has not been the best in addressing this ongoing and pressing issue.

By studying historical suicide rates across age groups, we can uncover the most vulnerable populations and assess how external factors—like societal downturns or natural disasters—affect these rates. This knowledge is crucial for creating targeted interventions to reduce suicides and improve mental health outcomes.

Imagine you are a data scientist in Japan during a period of crisis—an economic downturn or a natural disaster. Suicide rates are rising, especially among adults. You are worried about these increasing rates and wish something could change. Good news is, you work for a policymaker who has considerable influence among other policymakers in the country. Unfortunately, the government is unable to allocate resources to all age groups in Japan. There aren't enough funds to support millions of people. On top of this, some policymakers are apathetic to the mental wellbeing of their citizens, and they believe resources should not be allocated to mental health resources at all and should be invested into other industries instead.

You are tasked with analyzing historical suicide data to identify the age groups most affected during periods of societal stress. Your are to use predictive models to analyze trends and pinpoint potential causes behind spikes in suicide rates. Based on your findings, you will create actionable recommendations to allocate mental health resources strategically. These recommendations will empower your boss to advocate for prioritizing mental wellbeing in policy discussions with government leaders and stakeholders.

Reference Materials

[1] S. Clements, "Japan's Suicidal Salarymen Are Dying for Work," VICE, Dec. 18, 2012.
<https://www.vice.com/en/article/the-japanese-are-dying-for-work/> (accessed Dec. 13, 2024).

[2] S. D. Targum and J. Kitanaka, "Overwork Suicide in Japan: A National Crisis," Innovations in Clinical Neuroscience, vol. 9, no. 2, p. 35, Feb. 2012, Available:
<https://pmc.ncbi.nlm.nih.gov/articles/PMC3312902/>