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Social Determinants of Mental Health in Tamil Nadu, India

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Abstract
CORD Siruvani is a non-profit organization in Tamil Nadu, India that works towards rural development through the implementation of holistic public health initiatives. CORD’s work is centered around women’s meetings called Mahila Mandals that empower women, promote sustainable self-governance and are led by individuals from the villages. Mental health and substance abuse are significant issues in the villages CORD works in and directly impedes social and economic development. From 1991-2016 Tamil Nadu had the highest rate of disability adjusted life years due to depressive disorders out of all Indian states. Mental health is highly stigmatized and impacted heavily by other social determinants such as crime and poverty. As an intern with CORD Siruvani, I saw the resistance to mental health services and impact of poverty and substance abuse first hand. Data visualization revealed a severe lack of mental health resources and well as districts burdened with both high rates of disability due to mental illness and murder.

Data & Methods
Data was obtained from Healthdata.org, Centre of Public Health, The National Medical Journal of India, Government of Tamil Nadu, and NeighbourhoodInfo. The 2013 datasets were used to collect rates of disability adjusted life years (DALYS) for depressive, mental and substance use disorders at rates per 100,000 people and mental hospitals were plotted on Figure 1 using coordinates from Google Earth. Disability due to mental illness, murder, and poverty were mapped by district. Murder and poverty were chosen as social determinants of health related to mental illness. The datasets were then imported to Arc Map and visualized.

Tamil Nadu ranks #1 in depressive disorders
#5 in mental and substance use disorders

References

Discussion
From 1991-2016 Tamil Nadu had the highest rate of disability adjusted life years due to depressive disorders in India. Trends indicate the incidence of depressive disorders is only rising. Tamil Nadu additionally has a high rate of alcohol abuse which is also increasing but maintain a more stable growth pattern than depressive disorders. Data also suggests that mental health, specifically depressive disorders correlates with rates of substance abuse which should be taken into account during treatment. The visualization of the mental hospitals in India reveals a lack of treatment services available coupled with an impossible rate of mental health clinicians to patients. Within Tamil Nadu, districts that have the highest rates of disability due to mental illness also have the highest rates of murder indicating the presence of violent crime has a detrimental effect on the community’s mental health. The MPI indices measuring acute poverty of the districts overlap with mental health and murder but to a lesser degree.

Conclusions
There is a severe lack of facilities and professionals to treat mental health disorders in India and Tamil Nadu. The intense stigma surrounding mental illness and scarcity of services suggest the majority of mental illness is not being addressed. The presence of violent crimes such as murder correlates with increased disability due to mental illness. The MPI index measures “acute” poverty and indicates Cooimbatore is not among the most impoverished. CORD, however, works with rural and tribal populations who are in need. Poverty levels are relative and districts with a lower MPI index are not necessarily wealthy. Tamil Nadu is improving fast and mental health needs to be addressed as well. Holistic initiatives targeting mental health should focus on educating the public to decrease stigma, increasing access to services and understanding how and why mental health is impacted by other social determinants of health.