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Editorial

Suicide in India: A preventable epidemic

The WHO estimated worldwide suicide rate in 2016 as 10.5/100,000 which accounted for 7.6 in females and 13.5 per 100,000 in males[1]. Seventy nine per cent of global suicides (800,000/yr) occur in low- and middle-income countries[2]. In a meta-analysis of 71 longitudinal studies from 30 different countries, 90 per cent of studies were found to be conducted in North America and Europe. There was under-representation of data from low- and middle-income countries, which account for a large proportion of global suicidal deaths[3].

According to the WHO report of 2016, the suicide rate in India was 16.5/100,000 population, which was higher than the global average of 10.5/100,000 [1]. In India, 15-29 yr is the most vulnerable age group; data also report increased suicidal rate in males (18.5/100,000) compared to females (14.5/100,000)[4]. The National Crime Record Bureau (NCRB) data report 133,623 committed suicides, with a rate of 10.6/100,000 in 2015[5]. NCRB report also shows lesser suicidal rate compared to the WHO report[6]. This discrepancy has led to serious criticism that NCRB data are not true representative of suicidal rates[6]. This is because for NCRB data systematic verbal autopsy is not used, but a passive surveillance is done. The data are mainly gathered from the First Information Report (FIR) from the police. The reporting of suicide faces many challenges such as stigma attached to suicide deaths, post-mortem procedure and legal issues involved in completed suicide[7]. However, the new Mental Healthcare Act 2017, Section 115, has decriminalized suicide[8], facilitating help seeking.

Strategy approach to prevention of suicide

A National Imperative was published by the Institute of Medicine[9], in which the prevention programmes were organized at three different levels; (*i*) universal (addresses the entire population irrespective of the level of risk of the individuals in the population), (*ii*) selective interventions (address at-risk groups with the goal of preventing the onset of suicidal behaviour), and (*iii*) indicated (interventions address individuals deemed high-risk by virtue of a prior suicidal attempt or suicidal ideation)[9]. Based on the similar strategy, we propose a model which could be adopted to our Indian setting.

Universal intervention for general public at large

***Trained mental health human resources*:** It is crucial to improve accessibility and provision of mental health professionals in rural and urban India. There is a gross deficiency of psychiatrists in India. In 2014-2016, the WHO report showed that in India, psychiatrists per 100,000 of the general population was 0.29 when compared to the USA which had 10.5/100,000[10]. Also there was a significant deficiency of mental health nurses (0.796/100,000), social workers (0.065/100,000) and psychologists (0.069/100,000)[10]. In addition to increasing mental health professionals, it is wise to engage grassroot health workers such as accredited social health activist (ASHA), auxiliary nurse midwives (ANM), *Anganwadi* workers, school teachers, volunteers in gatekeeper training to recognize and get help for self-destructive behaviour and common mental health problems among general public. *Anganavadi* workers can be trained in school-based programme involving building self-esteem, increasing communication and problem-solving skills and referral to mental health services. The training by the National Registry of Evidence-based Programmes and Practices (NREPP) of gatekeepers (*e.g.*, parents, friends, neighbours, teachers, *Anganwadi* worker, social worker, caseworkers and police officers) involves three

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important steps: (*i*) question the individual's desire or intent regarding suicide, (*ii*) persuade the person to seek and accept help, and (*iii*) refer the person to appropriate resources[11].

Community-based intervention**:** Policies should target community-based interventions (community education, involving *panchayat* institutions and regular assessment of family burden and stigma) to destigmatize mental illness, increase acceptance, promote connectedness and also teach coping and problem-solving skills[12]. Community engagement activities are needed to reduce excessive alcohol use and regulate drugs and other addictive substances.

Technology-based suicide prevention**:** More research needs to be done to develop technology-based suicide prevention tools. For example, MY3 app created by the National Suicide Prevention Lifeline[13] which helps define your network and your plan to stay safe. It can also be prepared to help person and reach out to others when they are having thoughts of suicide. Developing a technology similar to Uber services to help find the strategically positioned mental health organizations, mental health professionals, suicide gatekeepers to provide support or refer to the nearest mental health services; artificial intelligence and machine learning to detect specific words and phrases or posts or live videos where someone might be expressing thoughts of suicide.

Adolescents and children**:** Identifying and treating childhood psychiatric disorder such as attention deficit hyperactivity disorder, specific learning disabilities, depression and anxiety may help improve self-esteem and academic performance. In general, adolescents experience considerable stress in multiple areas irrespective of their academic ability and performance[14]. It is required to promote school-based mental health programme (*Rashtriya Kishor Swasthya Karyakram*) with the help of counsellors, visiting mental health nurse, psychologists aiming at health-promoting school environments, evaluating psychological problems and providing referral to appropriate service and also fostering life skills of students[15,16]. There is an urgent need to make life skills training mandatory in all schools involving teachers and parents. Involving parents helps to generalize the learnt skills. Young people often express their suicidal feelings on social networking sites and blogs[17]. This makes social media a potential place to identify the high-risk individuals and deliver necessary emotional support to the individuals in need. Young people can be safely engaged in developing suicide prevention messages, which can be disseminated via social media[18].

Psychological first aid**:** There is a need to establish mandatory screening checks for determinants of suicide risk such as suicidal ideas, suicidal thoughts, suicidal intent and suicide plan (similar to checking for vital signs) in routine outpatient clinics and emergency departments. Subsequent identification of the high-risk individuals through screening checks may be referred to the mental health services to get necessary psychopharmacological treatment.

Media reporting**:** Specific legislation should be in place for media in reporting suicide. This will help prevent mainstream social media indirectly glorifying the suicide or reducing copycat act by avoiding dramatic reporting or portrayal of suicide and avoiding specifying means used to commit suicide. Media should emphasize providing accurate facts about the causes of suicide instead of focusing on single social or economic factor and minimizing the role of mental health problems[19].

Selective intervention strategy for high-risk groups

Women at risk of committing suicide**:** In a case-control study conducted at Bengaluru, India, it was found that in 36 per cent of females, the major risk factor for completed suicide was domestic abuse[20]. Empowering women is an important factor to reduce the domestic violence. This could be done through innovative initiatives like microcredit and microfinancing to alleviate the poverty and also mental health interventions such as stress management, peer support, *etc*[21].

Reduce access to lethal means among persons at risk**:** It is an important preventive measure. A national representative study from India reported suicides in 49 per cent of men and 44 per cent of women by pesticide poisoning[22]. Also, farmers suicide is a major public health problem. The overall suicide rate for farmers across India was 15.8/100,000 people[23]. Farmers' suicide is due to both socio-economic factors and also mental health problems[24]. To minimize financial losses from agricultural investment, farmers should be encouraged to use subsidised governmental schemes (National Mission for Sustainable Agriculture); to grow food crops reducing the cash crops; to use government subsidised credit sources rather than private money lenders; and the reduction of trade barriers by access

to electronic National Agriculture Market to have uniformity in agriculture marketing.

Majority of the farmers commit suicide by drinking organophosphorus (pesticide) preparation. Hence, limiting its access through community intervention called 'pesticide banks' or central storage facility[25] at village level can help in the prevention of suicide.

Indicated surveillance

People with severe mental disorders with past history of suicide attempt are at high-risk of committing suicide in the future. Proactive intervention through long-term engagement in treatment and psycho-social intervention can play a crucial role in preventing suicide. Specifically targeting these groups using District Mental Health Programme, the operational wing of the National Mental Health Programme (*https://mohfw.gov.in/sites/default/files/9903463892NMHP%20detail_0_2.pdf*), will be highly rewarding and cost-effective.

A suicidal person may not ask for help, but suicidal attempt is a desperate call for help to escape unbearable pain that the person can see no other option than completing it. Most suicidal individuals give warning signs or signals of their intentions. The best way to prevent suicide is to recognize these warning signs and knowing how to respond to such crisis situation. There should be a coordinated multi-dimensional, multi-agency, multi-phase and multi-departmental approach to bring this epidemic under control. This is not just a health issue, but a social issue, and it is everyone's duty to save the life. Everyone can save life, and it is time to act before it is too late.

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References

1. World Health Organization. *Global Health Observatory (GHO) data*: *Suicide rates* (*per 100 000 population*). Available from: *https://www.who.int/gho/mental_health/suicide_rates/en/*, accessed on September 28, 2019.
2. World Health Organization. *Mental health*; *Preventing suicide: A global imperative*. Available from: *https://www.who.int/mental_health/suicide-prevention/world_report_2014/en/*, accessed on October 10, 2019.
3. Guzmán EM, Cha CB, Ribeiro JD, Franklin JC. Suicide risk around the world: A meta-analysis of longitudinal studies. *Soc Psychiatry Psychiatr Epidemiol* 2019; doi: 10.1007/s00127-019-01759-x.
4. World Health Organization. *Global Health observatory data repository*: *Suicide rate estimates, age-standardized Estimates by country*. Available from: *http://apps.who.int/gho/data/node.main.MHSUICIDEASDR?lang=en*, accessed on September 28, 2019.
5. National Crime Records Bureau. *Accidental deaths & suicides in India* 2015. Available from *http://ncrb.gov.in/StatPublications/ADSI/ADSI2015/adsi-2015-full-report.pdf*. accessed on October 10, 2019.
6. Dandona R, Bertozzi-Villa A, Kumar GA, Dandona L. Lessons from a decade of suicide surveillance in India: Who, why and how? *Int J Epidemiol* 2017; *46* : 983-93.
7. Behere PB, Sathyanarayana Rao TS, Mulmule AN. Decriminalization of attempted suicide law: Journey of fifteen decades. *Indian J Psychiatry* 2015; *57* : 122-4.
8. Ministry of Law and Justice. The Mental Healthcare Act 2017. Available from: *https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf*, accessed on October 10, 2019.
9. Goldsmith SK, Pellmar TC, Kleinman AM, Bunney WE. *Reducing suicide: A national imperative*. Washington (DC): National Academies Press; 2002.
10. World Health Organization. Global Health Observatory (GHO) data: *Psychiatrists and nurses working in mental health sector* (*per 100 000 population*), 2014-2016. Available from: *https://www.who.int/gho/mental_health/human_resources/psychiatrists_nurses/en/,* accessed on October 10, 2019.
11. Suicide Prevention Resource Center. *QPR gatekeeper training for suicide prevention*. Available from: *https://www.sprc.org/resources-programs/qpr-gatekeeper-training-suicide-prevention*, accessed on October 10, 2019.
12. John S, Muralidhar R, Janaki Raman K, Gangadhar BN. Addressing stigma and discrimination towards mental illness: A community based intervention programme from India. *J Psychosoc Rehabil Ment Health* 2015; *2* : 79-85.
13. National Suicide Prevention Lifeline; MY3. Available from: *https://my3app.org/*, accessed on October 10, 2019.
14. Arun P, Garg R, Chavan BS. Stress and suicidal ideation among adolescents having academic difficulty. *Ind Psychiatry J* 2017; *26* : 64-70.

15. Srikala B, Kishore KK. Empowering adolescents with life skills education in schools - School mental health program: Does it work? *Indian J Psychiatry* 2010; *52* : 344-9.

16. Shinde S, Weiss HA, Varghese B, Khandeparkar P, Pereira B, Sharma A, *et al.* Promoting school climate and health outcomes with the SEHER multi-component secondary school intervention in Bihar, India: A cluster-randomised controlled trial. *Lancet* 2018; *392* : 2465-77.

17. Robinson J, Rodrigues M, Fisher S, Herrman H. *Suicide and social media study: Report of the literature review*. Melbourne, Australia: Orygen Youth Health Research Centre, Community Works; 2014.

18. Robinson J, Bailey E, Hetrick S, Paix S, O'Donnell M, Cox G, *et al.* Developing social media-based suicide prevention messages in partnership with young people: Exploratory study. *JMIR Ment Health* 2017; *4* : e40.

19. Hawton K, Williams K. Influences of the media on suicide. *BMJ* 2002; *325* : 1374-5.

20. Gururaj G, Isaac MK, Subbakrishna DK, Ranjani R. Risk factors for completed suicides: A case-control study from Bangalore, India. *Inj Control Saf Promot* 2004; *11* : 183-91.

21. Rao K, Vanguri P, Premchander S. Community-based mental health intervention for underprivileged women in rural India: An experiential report. *Int J Family Med* 2011; *2011* : 621426.

22. Patel V, Ramasundarahettige C, Vijayakumar L, Thakur JS, Gajalakshmi V, Gururaj G, *et al.* Suicide mortality in India: A nationally representative survey. *Lancet* 2012; *379* : 2343-51.

23. Nagaraj K, Sainath P, Rukmani R, Gopinath R. Farmers' suicides in India: Magnitudes, trends, and spatial patterns, 1997-2012. *J Rev Agrarian Stud* 2014; *4* : 53-83.

24. Merriott D. Factors associated with the farmer suicide crisis in India. *J Epidemiol Glob Health* 2016; *6* : 217-27.

25. Behere PB, Behere AP. Farmers' suicide in Vidarbha region of Maharashtra state: A myth or reality? *Indian J Psychiatry* 2008; *50* : 124-7.