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Editorial

Epidemics, quarantine and mental health



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Introduction

The separation of humans or animals to prevent the spread of disease, is called Quarantine.¹ It involves the confinement and restriction of those exposed to contagious disease and their observation for emergence of sickness. Isolation merely indicates separation of those sick with a contagion from the people who are not.² Quarantine began in 14th century Venice, when ships from infected ports waited at anchor for 40 days before sailors were allowed ashore. The Italian phrase ‘quaranta giorni’ meaning 40 days explains the etymology of the word. Subsequently quarantine laws were made in 1878 during a Yellow Fever outbreak and later modified in 1892 following a Cholera outbreak.³ Even today quarantine ships are required to hoist the yellow flag.

The recent Corona virus (COVID-19) pandemic has caused all nations to revisit an apparently medieval concept of quarantine. China placed many cities like Wuhan under effective mass quarantine or lock down. Thousands across the world have been asked to self-isolate at home or kept in ad hoc quarantine hospitals. It has happened across countries like Iran, UK, Germany, South Korea and Italy. India is no exception. Mass quarantine was effective in containing the Severe Acute Respiratory Syndrome (SARS) epidemic in 2003 and

Ebola outbreak in 2014.⁴ In India, currently we have more than 500 positive cases that are mostly travel-linked. India's self-quarantine is a bold step. But it has to ensure that the disease is not spreading undetected.

Those who were quarantined, described it as an unpleasant experience. It results in separation, isolation, boredom and sense of uncertainty. In previous outbreaks, even suicides have been reported.⁶ One study also reported lawsuits following the imposition of quarantine.⁷ Benefits that are likely to accrue from state-imposed mass quarantine need to be weighed against possible negative psychological outcomes.⁸ In such situations typically, teleological ethics apply- ‘Greatest good of the greatest number’. The psychological effects need to be addressed to make quarantine an effective public health measure and to prevent negative outcomes.

Psychological effects of quarantine

Hawryluck et al. studied 129 quarantined persons during SARS epidemic in 2003 who responded to a web survey. It revealed high prevalence of psychological distress. Symptoms of Post-Traumatic Stress Disorder (PTSD) and depression were found in 28.9% and 31.2% respectively. Longer duration of quarantine was more associated with PTSD symptoms. PTSD and depressive symptoms were found to be associated with either acquaintance or direct exposure to a person with SARS.⁵ In a study by Bai Y et al., the mental effects of quarantine extended to health care workers as well. These included “exhaustion, detachment from others, anxiety, irritability, insomnia, poor concentration, indecisiveness, deteriorating work performance, and reluctance to work or consideration of resignation”.⁶

Vigilant hand-washing, avoiding crowds and delayed return to normalcy by many months after the quarantine period, were the behavioural changes that was described by a

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long term qualitative study.⁷ A study of quarantined following an outbreak of equine influenza identified lower age (16–24 years), female gender and lower formal educational qualification as factors associated with negative psychological impact.⁸ Another study though found that factors such as age, education, marital status, living with other adults and having children did not impact psychological outcomes.⁵ History of previous psychiatric illness was associated with the experience of anger and anxiety 4–6 months following quarantine.⁹

When quarantined the general public showed less severe symptoms of post-traumatic stress than health care workers. Health-care workers scored significantly higher on all dimensions. They experienced greater stigma, exhibited more avoidance after quarantine, reported greater loss of income and greater psychological impact. Taylor et al. also reported “increased anger, annoyance, fear, frustration, guilt, helplessness, isolation, loneliness, nervousness, sadness, worry, and were less happy”. Health-care workers were more likely to believe that they had contagious disease and were concerned about infecting others.¹⁰

Psycho-social impact of mass quarantine

Implementation of mass quarantine indicates that the situation has become severe and is liable to worsen in future.² There is a sense of being trapped and perception of loss of control. Imposing mass quarantine mainly for benefit of those outside the affected cities causes a reduction in trust and reassurance for those within the cordon. Impact of rumours must never be underestimated.¹²

Government of India has issued an advisory on social distancing to prevent the spread of SARS CoV 2.¹¹ However, the psychological effects of the same are yet to be observed. As recently reported in a media interview by Psychologist Holt-Lunstad at Brigham Young University “Social contacts can buffer the negative effects of stress”. People of all ages are susceptible to the ill effects of social isolation like depression, anxiety, heart disease. Older people may be more susceptible. Increased awareness of these issues will prompt people to stay connected and take positive action.¹²

Experiences from the Taipei Municipal Hospital during the SARS outbreak are illuminating. All staff, patients and visitors were suddenly and forcibly restricted for a two-week quarantine within the hospital after SARS was identified there. Chaos ensued and the confinement “caused a sense of collective hysteria, driving the staff to desperate measures.”¹³ Voluntary quarantine is associated with better compliance and less psychological impact, when communicated comprehensively by trusted authorities and promoted as altruistic.¹⁴ On 22 Mar 2020 at 1700 h, all over India, people applauded health care workers and other service providers recognising their contribution by applause and ringing of bells.

Conclusion

World Health Organisation (WHO) has published a note on Mental Health and Psycho-Social Support (MHPSS) especially for Old Age, Children and Persons with disabilities during

isolation/quarantine for COVID-19.¹⁵ All, especially medical professionals, are encouraged to follow guidelines issued by reliable sources like WHO and National Authorities, rather than rely on breaking news. Quarantine time is recommended to be filled with physical, cognitive, relaxation exercises, reading and entertainment. Acknowledgement by the community of health care workers role in saving lives, has a salutary effect on their morale. Health care workers need to use adaptive coping strategies for maintaining optimum mental health. Technology today permits people in quarantine to stay connected and maintain their social networks.¹⁶

Disclosure of competing interest

The authors have none to declare.

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