

Physiological and psychological changes in the humans due to prolong Lockdown

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Abstract: *Coronavirus is a silent and deadly viral infection. It spread like fire in human communities and affect all aged individuals. The most reliable treatment against covid-19 is solitude. The government of India has announced lockdown in all states. Lockdown will be situation that directly or indirectly affect both physical and mental health of humans and also develop financial crisis. Social distancing is only weapon to fight against coronavirus infection in which we can protects our children, young ones, adults and old aged person. Social activities like interaction and making relationships with others has immense significant for mental, physical and emotional health of humans. Isolation and prolong dissociation of humans form social communities may develop several complication like nightmare, anxiety, stress, interrupted sleep, depression and dementia etc.*

Key Words: *Coronavirus, lockdown, isolation, anxiety and health.*

1. INTRODUCTION:

Humans are social in behaviour and live in groups. The social isolation is the only physical separation from other individuals not electronic we can communicate via electronic medium where as loneliness is personal distressed condition, in which person feel alone and self separated or isolated from other without making any communication due to some personal problem. At social level isolation can divided into four layers. The fourth layer is community followed by organization third layer which includes work places, malls, cinema hall and school. The second layer includes family, friends and close relative. Finally the primary layer is individual person (Lin, 1986). Due to coronavirus infection Prime minister of India announced one day Janta Curfew on 22 March, 2020 and complete lockdown from 25 March to 14 April, 2020 and 15 April to 3 May, 2020 to stop the spreading of covid-19 infection among people (Paul, 2020).

Social distancing is a physical separation in which person keeping space between yourself and other people in and out of home. The distance should be 6feet (2 meters) between two people with avoiding crowd and mass gathering (CDC, 2020). Physical or social distancing is a need of time due to pandemic disease. The covid-19 is a silent disease, come quietly and stay in the body and appear after some time, in between without knowing anything about infection individual may spreading infection in large number of peoples. This is a main reason that's why government implemented lockdown throughout in all state of India to prevent spread of covid-19 at community level. If someone find with interacted to infection person or unknowing visit or make any physical contact with infected person. In such condition Government has used public health practices like isolation and quarantine to protect the people for infection. The isolation is a separation of sick person from healthy person whereas in quarantine person separates and restricts their movement, in which person may have been exposed to disease without knowing it or person may have the disease but do not show any symptoms (Brooks et.al. 2020).

Dr Nimesh G. Desai, Psychiatrist, Director, Institute of Human Behaviour and Allied Sciences (IHBAS) in Delhi said to IANS that this is an abnormal situation for everybody, in which people feel emotional distress, anxiety and social isolation. The most vulnerable are children, old people and those having some mental complications. Dr. Roma Kumar, Senior Consultant and Clinical Psychologist at Sir Ganga Ram Hospital said to IANS that the emotional and behavioural reaction is very common in this situation with anxiety and panic about future. People are worrying about future. They may face prolonged boredom and loneliness due to lockdown. Everyone should need to practice mental wellness through self love, self expression, building self esteem, accepting, trusting and forgiving oneself, and self empowerment (IANS, 2020).

Human touch in any form will initiate the release of hormone called oxytocin which is responsible for creating bond (between mother and an infant), recognition, sexual arousal (between male and female) and trust in Humans. As per research low level of oxytocin will cause stress and anxiety. The physical activity is important for humans to stay away for disease like heart disease (cardiovascular), maintaining cholesterol levels, increasing circulation of oxygen, blood flow and controlling blood sugar (diabetes) and cancer. Physical activity is also good for mind, reducing

depression and anxiety. During exercise, hormones like endorphins, serotonin and adrenaline release that draw away from negative thoughts, fight stress and improve mood. During lockdown (before and after) there are many behaviour changes occurs in peoples like panic in purchasing any items form market, personal hygiene like washing hands and face frequently, fear of being imprisoned at home and nervous about the future(Keles et.al., 2020).

Behavioural changes

Regular social interaction in families and communities enables the humans to survive in society. Human survival is an evolutionary process and developed by change in behaviour and physiological activities (nervous system, hormonal interaction) that provided basic framework for social interaction (Cacioppo et. al., 2011). The loneliness has a significant adverse effect on human health, prolong exposure in loneliness affect every stage of human lifecycle (children, teenager, adult, especially old aged people) (Hawkey and Capitano, 2014). Human behaviour changes a lot in time of trouble. There is the same condition for humans like animals in captivity in zoo. The animals of the zoo are relaxed as they continue to get food and water, but in case of human, they have to arrange food for them self. Stay in the home for a long time will develop some behavioural changes in all aged persons of society.

- **In Children**

In United Kingdom, during lockdown about 32% parents have noticed negative behavioural changes like tantrums, meltdowns, nightmares, disturbed sleep, stomach aches, fighting and crying in 5 to 18 years old children. Girls become upset and they complain like stomach aches and headaches but boys are become fidgety and fight more (Ellis, 2020). There is a lot of time that children are unable or feel uncomfortable to tell or express their problems to parents. But caring parent come to know that their children hide something from them that is reflected in their behaviour like anxiety, fear tantrums etc. Young children are in a more difficult situation than older children. Children can show their distress like needing attention, becoming irritable and grumpy, wanting to sleep of talking with their parents and expressing fear and worries etc. Traumatic stress in children depends upon age and maturity level. The symptoms are scary or fearful thoughts, anger and crying, frustration, irritation, sleeplessness, anxiety, poor concentration, hopelessness, sadness and stress. Many young children are facing intangible and invisible nature of fear (fear of illness) (Bain, 2020).

- **In Adolescents**

Adolescents are worried about their studies and future. Teenagers in their groups because of not connected physically to their friends facing feeling of lonely. There are some changes in behaviour of teenagers noticed by their parents are physical (feeling alone, fatigue, nausea, vomiting, dizziness, weakness, headaches, increased blood pressure, muscle pain etc.), emotional (Fear, panic, anxiety, irritability, depression, emotional shock etc.) and cognitive (Confusion, nightmares, hyper-vigilance, suspiciousness, decrease in alertness etc.) (Bain, 2020). The World Health Organization (2017) reported in their annual report that 10-20 percentage of children and adolescent in all over the world facing mental health related problems. It was observed that 50% metal problems are reported at age 14 where as 75% at 18 year (Kessler et al., 2007). Among all disorder, the most common and frequent found in adolescent disorders are depression and anxiety (Mental Health Foundation, 2018). Both, depression and anxiety have adverse effect on proper development of adolescent (Hetrick et.al. 2016). Morgan et al. (2017) reported that 68% of girls at aged13-16 have harmed themselves in last 10 years in United Kingdom.

- **In Adults**

Prolong isolation and loneliness can develop chronic illness like irritation, negative thoughts, exhaustion and sleep disorder in both male and female. These chronic illnesses at regular basis can be responsible for depression, diabetes, heart disease and mental and emotional problems etc. Many observation confirm that prolong mental (nervous system) relation problem develop a chance for dementia and Alzheimer's disease in both male and female (Keles et.al., 2020). In comparison to men, women's are more sensitive to any adverse situation. During lockdown it was noticed that cases of violence like misbehaviour, hitting, abusive language, to recite perfectly, sexual harassment etc. increase against women in all part of Indian states.

- **In Old people**

Loneliness is a type of condition found in all ages but mainly affect old people. Loneliness can be associated with several problems like broken relationships in family and friends, poor medical condition and low or no income etc. Valtorta et. al. (2016) was reported cardiovascular mortality risk due to loneliness and social isolation in heart patients. Depression can play an important role in increasing illness through several internal physiological changes. Depression can enhance aggregation of platelet through reducing or minimizing function of serotonin due to which there is chance for myocardial dysfunction and stroke. There may also be risk of heart rate variability due to unstable autonomic nervous system and increased in adrenalin level, both condition cause abnormal cardiac rhythms (Seymour & Benning, 2009). At old age one of the important problems is loneliness, which if prolonged can develop depression and stress (Ercole and Parr, 2020). Social active life is very important for both male and female at old age, social interaction and developing relationships with others help them in maintaining physical and mental health. At old age

social activities reduce risk of heart attack (cardiovascular diseases), blood sugar level (diabetes), cancers, Alzheimer's disease and also enhance immunity level. Prolong loneliness will results in variety of physical and mental condition and Alzheimer's dementia especially in old people both male and female (Ercole and Parr, 2020).

2. CONCLUSION:

It is not yet known when the covid-19 infection will end, till then we should think about our children, relatives and our old parents. We should take care of older people while keeping in touch with children. We should do some creative activities to keep the children busy, in this way we maintain their confidence level. A human remain alive in the race that he will be able to do well in the future, but when he feels that the future is uncertain, he cannot do anything, then it ends. Hope is something that breaks a human being completely and ultimately destroyed it. In this difficult situation while we are living separately in our homes. We need to be connected with each other via electronic medium like phone call, video calling, messages etc. so that we can maintain ourselves from any physiological and psychological changes that occur in our under in this global pandemic infection.

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REFERENCES:

1. Lin, N. (1986). Conceptualizing social support. In N. Lin, A. Dean, & W. Ensel (Eds.), Social support, life events and depression. New York: *Academic Press*.
2. Paul N. (2020). Lockdown: A Time for Nature to Rejuvenate Itself. *Int J Recent Sci Res*. 11(03), pp. 37889-37891. DOI: <http://dx.doi.org/10.24327/ijrsr.2020.1103.5198>
3. Center for Disease Control and Prevention (CDC) (2020). Social Distancing, Quarantine, and Isolation. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/social-distancing.html>
4. Brooks S. K., Webster R.K., Smith L.E., Woodland L., Wessely S., Greenberg N., Rubin G.J. (2020). The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet* ; 395: 912–20
5. Indo-Asian News Service (IANS) (2020). Lockdown to bring in behavioural change in people: Experts; <https://www.outlookindia.com/newscroll/lockdown-to-bring-in-behavioural-change-in-people-experts/1779058>
6. Keles B., McCrae N. and Grealish A. (2020). A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. *International Journal of Adolescence and Youth*, Vol. 25, NO. 1, 79–93 <https://doi.org/10.1080/02673843.2019.1590851>
7. Cacioppo J.T., Hawkley L.C., Norman G.J. and Berntson G.G. (2011). Social isolation. *Ann NY Acad Sci*; 123:11:17-22
8. Hawkley L.C. and Capitanio J.P. (2014). Perceived social isolation, evolutionary fitness and health outcomes: a lifespan approach. *Philos. Trans. Royal Soc. B*
9. Ellis C. (2020). Coronavirus lockdown: UK children are lonely, scared and stressed, survey finds. <https://www.worldvision.org.uk/news-and-views/latest-news/2020-news/april/coronavirus-lockdown-uk-children-are-lonely-scared-and-stressed-survey-finds/>
10. Bain D. (2020). How does COVID-19 anxiety impact children? Strategies for parents, teachers and caregivers to manage hidden stress affecting kids during coronavirus lockdown <https://www.wftv.com/living/family/how-does-covid-19-anxiety-impact-children/bjpfjvkn4fharlaigzmeepg3ji/>
11. World Health Organization (2017). Maternal, newborn, child and adolescent health. Retrieved from http://www.who.int/maternal_child_adolescent/topics/adolescence/mental_health/en/
12. Kessler R. C., Amminger, G. P., Aguilar-Gaxiola, S., Alonso, J., Lee, S., & Üstün, T. B. (2007). Age of onset of mental disorders: A review of recent literature. *Current Opinion in Psychiatry*. doi:10.1109/CCECE.2006.277836
13. Mental Health Foundation (2018). Children and young people. Retrieved from <https://www.mentalhealth.org.uk/a-to-z/c/children-and-young-people>
14. Hetrick, S. E., Cox, G. R., Witt, K. G., Bir, J. J., & Merry, S. N. (2016). Cognitive behavioural therapy (CBT), third-wave CBT and interpersonal therapy (IPT) based interventions for preventing depression in children and adolescents. *Cochrane Database of Systematic Reviews* (Online), 9, 8

15. Ercole V. and Parr J. (2020). Problems of Loneliness and Its Impact on Health and Well- Being. Springer Nature Switzerland AG, W.Leal Filho et al. (eds.), Good Health and Well-Being, https://doi.org/10.1007/978-3-319-69627-0_127-1
16. Morgan, C., Webb, R. T., Carr, M. J., Kontopantelis, E., Green, J., Chew-Graham, C. A. and Ashcroft, D. M. (2017). Incidence, clinical management, and mortality risk following self harm among children and adolescents: Cohort study in primary care. *BMJ (Online)*, 359. doi:10.1136/bmj.j4351
17. Valtorta N.K., Kanaan M., Gilbody S., Ronzi S. and Hanratty B. (2016). Loneliness and social isolation as risk factors for coronary heart disease and stroke: systematic review and meta-analysis of longitudinal observational studies. *BMJ Heart* 102:1009-1016
18. Seymour J. and Benning T.B. (2009). Depression, cardiac mortality and all-cause mortality. *Advances in psychiatric treatment*; 15:107-113