## Study of awareness about immunity and immunity boosters against Covid-19 in the general population of various age groups

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## **Abstract**

**Background:** The whole world is under a crisis due to coronavirus disease (Covid-19) since Dec 2019. Various preventive tools have been adopted worldwide due to the lack of strong preventive measures (such as vaccines) and treating drugs. One of the major tools which attracted global consciousness is immunity boosting. It was observed that most of the population is conscious about their health, and they tend to follow various methods to increase their immunity during the Covid-19 pandemic. It has been globally suggested that strong immunity is the best way to protect ourselves from the virus. However, the general perception suffers from a lack of knowledge in immunity-boosting techniques and timelines. It has been observed that a general perception has built that immunity can be developed instantly by adopting boosting measures. Hence immunity becomes one of the trending topics, and lots of commercials have been launched which falsely promise to be immunityboosting. As well there are reports of over usage of immunity boosters by masses without expert consultation. With this motivation, we have conducted a questionnaire-based study to evaluate the actual awareness of people about immunity and immunity-boosting mechanisms. We examined 606 Indian participants of different age groups for their conception and adoption-related to immunity boosters.

**Results:** We used a methodical-iterative technique to figure out the main themes in the recorded examined data. A qualitative analysis of the examined data reveals that 87.9 % of participants were using boosters, and 26.8 % think that immunity can be developed instantly. The majority of the participants seek ancient Indian techniques to boost immunity like herbs, spices, yoga, etc.

Conclusion: The data examination emphasized the idiographic convolutions in understanding the extensive range of essential factors on these examined people on immunity perception. The lack of knowledge about immunity leads to overconsumption of supplements and generates a false hope of protection against Covid-19 among the population. People nowadays are a lot more enthusiastic about increasing their immunity to protect themselves and their loved ones. Stress-related problems have plagued a significant chunk of the participants, which has been one of the major reasons for deteriorating immunity. People have been looking for quick fixes for their stress-related issues in medicines instead of correcting their unhealthy lifestyle.

**Opinion and Prospect:** To verify our findings, we have verified the findings with experts in different immunity-boosting fields. Our results are in accordance with expert's opinions, which verify the authenticity of our examination. It reveals that the general public is aware that strong immunity is a key to fight any disease. However, more emphasis is required on fake immunity-boosting promises and careful adoption of immunity-boosting tools with the consultation of experts. A general protocol with dedicated guidelines has to be made to monitor the immunity booster market.

Keywords: COVID-19, Immunity, Healthcare, False-marketing, Awareness.

## References

- 1. Chaudhary V, Royal A, Chavali M, Yadav SK, Advancements in research and development to combat COVID-19 using nanotechnology. Nanotechnol. Environ. Eng. 6, 8 (2021). https://link.springer.com/article/10.1007/s41204-021-00102-7.
- 2. Cassa Macedo A, Oliveira Vilela de Faria A, Ghezzi P. Boosting the Immune System, From Science to Myth: Analysis the Infosphere With Google. Front Med (Lausanne). 2019;6:165. <a href="https://www.frontiersin.org/articles/10.3389/fmed.2019.00165/full">https://www.frontiersin.org/articles/10.3389/fmed.2019.00165/full</a>.
- 3. Grand View Research Dietary Supplements Market Size, Share & Trend Analysis Report By Ingredient (Botanicals, Vitamins, Minerals, Amino Acids, Enzymes), By Product, By Application, By End-use, And Segment Forecasts, 2018 202. (2018). at: <a href="http://www.grandviewresearch.com/industry-analysis/dietary-supplements-market">http://www.grandviewresearch.com/industry-analysis/dietary-supplements-market</a>.
- 4. Jamwal S, Gautam A, Elsworth J, Kumar M, Chawla R, Kumar P. An updated insight into the molecular pathogenesis, secondary complications and potential therapeutics of COVID-19 pandemic. Life sciences. 2020 Jul 17:118. <a href="https://www.sciencedirect.com/science/article/abs/pii/S0024320520308560?via%3Dihub">https://www.sciencedirect.com/science/article/abs/pii/S0024320520308560?via%3Dihub</a>.
- 5. Turner, J.S., Kim, W., Kalaidina, E. et al. SARS-CoV-2 infection induces long-lived bone marrow plasma cells in humans. Nature 595, 421–425 (2021). <a href="https://www.nature.com/articles/s41586-021-03647-4?fbclid=IwAR2GF-IEFchpxhol6roJ6jDoSPFo7S5uXGJ6-LliSb4PtmY4C1U7E5AKxxc#citeas">https://www.nature.com/articles/s41586-021-03647-4?fbclid=IwAR2GF-IEFchpxhol6roJ6jDoSPFo7S5uXGJ6-LliSb4PtmY4C1U7E5AKxxc#citeas</a>.