Impact Assessment of Effectiveness, Acceptance and Usage of AYUSH Advisories and Measures in Prevention of COVID-19 through AYUSH Sanjivani Mobile Application

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ABSTRACT

Background: Ministry of AYUSH deals with developing education, research, and propagation of indigenous traditional medicine systems in India, and in view of public health challenge posed by COVID-19, the ministry had issued preventive and prophylactic advisories.

Results and discussion: The advisories issued by Ministry comprises interventions from different AYUSH systems of medicine for preventive health measures and also for boosting immunity during COVID-19 crisis. Further, the Ministry has undertaken study through AYUSH Sanjivani mobile app for generating data of large population with a target of 5 million people. Generation of data on effectiveness, acceptance, and usage of AYUSH advocacies and measures among the population and its impact in the prevention of COVID-19 are the core expected outcomes.

Conclusion: The present short communication is related to the prophylactic advisories issued by Ministry of AYUSH and details of objectives and expected outcomes of AYUSH Sanjivani mobile application developed by AYUSH Ministry.

Keywords: AYUSH advocacies, AYUSH Sanjivani, COVID-19, Immune boosting measures, Mobile application.

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INTRODUCTION

Coronavirus disease (COVID-19) is a viral infection caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2).[1] After assessing its global spread, the World Health Organization (WHO) has declared it a pandemic and a Public Health Emergency of International Concern.[2,3] It is a profound condition that primarily threatens the preparedness and biosecurity conditions of all countries on this planet.[4]

Diagnosis of COVID-19 is chiefly based on epidemiological history, clinical picture, and some secondary examinations, such as nucleic acid detection, computed tomography (CT) scan, immune identification technology (point-of-care testing of IgM/IgG, enzyme-linked immune-sorbent assay) and blood culture.

The most common symptoms of COVID-19 reported are pyrexia, dry cough, and tiredness. Aches and pains, nasal congestion, runny nose, sore throat, or diarrhea are also reported in some patients. Some people may test positive but are asymptomatic and do not feel unwell. Nearly every one among six patients with COVID-19 regresses to serious condition and develops difficulty in breathing. Older people and those with comorbidities, such as hypertension, cardiac problems, or diabetes, are more prone to serious illness.[5]

Apart from the preventive measures, that is respiratory etiquettes, good sanitizing practices, and social distancing, there is currently no clinically proven specific antiviral agent available for SARS-CoV-2 infection, although there are many ongoing clinical trials evaluating potential treatments. At present, the most important management strategy for COVID-19 is supportive treatment like oxygen therapy, conservative fluid management, and use of broad-spectrum antibiotics as prophylaxis against secondary bacterial infection, apart from various antivirals and other drug being tried.[6]

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The WHO is welcoming innovations for treatment from around the world with various approaches such as repurposing drugs, traditional medicines, and developing new therapies in the search for potential treatments for COVID-19. Further, the support to countries will be continued as they explore the role of traditional health practitioners in prevention, control, and early detection of the virus as well as case referral to health facilities. However, it had cautioned against misinformation, especially on social media platforms, about the effectiveness of certain remedies, as many plants and substances are being proposed without the minimum requirements and evidence of quality, safety, and efficacy.[7]

The Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homoeopathy (MoA) deals with developing education, research, and propagation of indigenous traditional medicine

systems in India. In view of public health challenge posed by COVID-19, the ministry had issued preventive and prophylactic advisories.

RESULTS AND DISCUSSION

COVID-19 and AYUSH Advisories

The MoA, with the recommendation from its Research Councils, vide its letter dated March 06, 2020, had issued advisory that includes interventions from different AYUSH systems of medicine for promotion of immunity and help in improving the respiratory symptoms in diseases similar to COVID-19.[8] The AYUSH approach to manage the outbreak is broadly comprised of preventive and prophylactic symptom management of COVID-19-like illnesses and add-on interventions to the conventional care. The details of preventive and prophylactic advisory are given below (Table 1).

The MoA also recommended Ayurveda's immunity boosting measures for self-care during COVID-19 crisis which includes guidelines for preventive health measures and boosting immunity with special reference to respiratory health. The details are given below (Table 2).[9]

AYUSH Sanjivani Mobile Application

The Hon'ble Prime Minister of India Sh Narendra Modi in his address to the nation on April 14, 2020, had said to follow the advisory issued by AYUSH Ministry to enhance immunity and also to regularly consume warm water and "*Kadha*" as suggested in the advisory.

Apart from Ministry of AYUSH advocacies for COVID-19, various state governments have also released their advocacies for prevention of COVID-19. Health-seeking behavior toward AYUSH system has also been practiced across India, and studies have reported that public seek AYUSH healthcare for immunity and preventive measures.[10]

To assess the effectiveness, acceptance, and usage of AYUSH advisories and measures in prevention of COVID-19, the Ministry of AYUSH has planned for an impact assessment study through a mobile application "AYUSH Sanjivani" with the primary objective to assess acceptance and usage of AYUSH advocacies and measures among the population and its impact in prevention of COVID-19 through a set of predefined questions. The objective will be measured based on the percentage of population who agreed to be benefitted from AYUSH practices after using it.

Accordingly, the MoA had developed the AYUSH Sanjivani mobile app[11] for generating data of large population with a target of 5 million people. The core expected outcomes include generating data on effectiveness, acceptance, and usage of AYUSH advocacies and measures among the population and its impact in prevention of COVID-19. The predefined questions are to capture the data relating to advisories issued by MoA and also records information other than advisories of MoA for AYUSH practitioners as well as for general public. Apart from capturing data the mobile application also has information on AYUSH for health, Need for self-care, General measures, Ayurvedic Immunity, and AYUSH healthcare. The mobile app can be downloaded using the link https://play.google.com/store/apps/details?id=com.negd.ayushfeedback

Table 1: AYUSH preventive and prophylactic advisory

Stream	Medicine	Dosage
Ayurveda	*Samshamani Vati* (aqueous extract of *Tinospora cordifolia* (Willd.) Miers	500 mg twice a day with warm water for 15 days
Siddha	*Nilavembu Kudineer* (aqueous extract of *Andrographis paniculata* (Burm.f.) Nees	60 mL twice a day for 14 days
Unani	*Behidana* (*Cydonia oblonga* Mill.) 3 g, *Unnab* (*Zizyphus jujuba* Mill.) 5 in number and *Sapistan* (*Cordia myxa* L.) 9 in number	Boil these herbs in 250 mL water till it remains half. Filter, store in a glass bottle and use it when lukewarm. This decoction may be taken twice a day for 14 days.
Homoeopathy	Arsenicum album 30	Daily once on empty stomach for three days. The dose should be repeated after one month by following the same schedule till coronavirus infection is prevalent in the community.

Table 2: Ayurveda immunity-boosting measures

General measures	1. Drink warm water throughout the day.
	2. Daily practice of *Yogasana*, *Pranayama* and meditation for at least 30 minutes
	3. Spices like *Haldi* (turmeric), *Jeera* (cumin), *Dhaniya* (coriandar) and *Lahsun* (garlic) are recommended in cooking.
Ayurvedic immunity-promoting measures	1. Take *Chyavanprash* 10 g in the morning. Diabetics should take sugar-free *Chyavanprash*.
	2. Drink herbal tea/decoction (*Kadha*) made up of *Tulasi* (basil), *Dalchini* (cinnamon), *Kalimirch* (black pepper), *Shunthi* (dry ginger) and *Munakka* (raisin)–once or twice a day. Add jaggery (natural sugar) and/or fresh lemon juice to taste, if needed.
	3. Golden Milk—Half tea spoon *Haldi* powder in 150 mL hot milk–once or twice a day.
Simple *Ayurvedic* procedures	1. Nasal application—Apply sesame oil/coconut oil or *ghee* in both the nostrils (*Pratimarsha Nasya*) in morning and evening.
	2. Oil pulling—Take one tablespoon of sesame or coconut oil in mouth. Do not drink, Swish in the mouth for 2–3 minutes and spit it off followed by warm water rinse. This can be done once or twice a day.
During dry cough/sore throat	1. Steam inhalation with fresh *Pudina* (mint) leaves or *Ajwain* (caraway seeds) can be practiced once in a day.
	2. *Lavang* (clove) powder mixed with natural sugar/honey can be taken 2–3 times a day in case of cough or throat irritation.

CONCLUSION

The present short communication is related to the advisories released by the MoA and AYUSH Sanjivani mobile application developed by Ministry of AYUSH to assess the effectiveness, acceptance, and usage of AYUSH advisories and measures in prevention of COVID 19.

REFERENCES

1. Naming the corona virus disease (COVID-19) and the virus that causes it. World Health Organization. https://www.who.int/emergencies/diseases/novel-coronavirus 2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it. Accessed May 19th, 2020.
2. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel corona virus (2019-nCoV). World Health Organization. https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee regarding-the-outbreak-of-novel-coronavirus-(2019-ncov). Accessed May 19th, 2020.
3. WHO Director-General's opening remarks at the media briefing on COVID-19-11 March 2020.World Health Organization. https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020. Accessed May 19th, 2020.
4. Wu F, Zhao S, Yu B, et al. A new coronavirus associated with human respiratory disease in China. Nature 2020;579:265–269. DOI: 10.1073/pnas.1822035117.
5. https://www.who.int/news-room/q-a-detail/q-a-coronaviruses. Accessed May 19th, 2020.
6. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. Lancet 2020(10223). DOI: 10.1016/S0140-6736(20)30183-5.
7. https://www.afro.who.int/news/who-supports-scientifically-proven-traditional-medicine. Accessed May 19th, 2020.
8. https://www.ayush.gov.in/docs/125.pdf. Accessed May 19th, 2020.
9. https://www.ayush.gov.in/docs/123.pdf. Accessed May 19th, 2020.
10. Srikantha N, Bhat S, Singh A, et al. Healthcare seeking attitude and utilization of traditional medicine in india- an overview. World J PharmaCeut Res 2015;4(7):722–738.
11. https://pib.gov.in/PressReleasePage.aspx?PRID=1621787 Accessed May 19th, 2020.

हिंदी सारांश

आयुष संजीवनी मोबाइल एप्लिकेशन के माध्यम से कोविड-19 की रोकथाम में आयुष एडवायजरी और उपायों के उपयोग एवं प्रभावशीलता स्वीकृति का प्रभाव आकलन : एक लघु संचार

परिचय: आयुष मंत्रालय भारत में स्वदेशी पारंपरिक चिकित्सा पद्धतियों की विकासशील शिक्षा, अनुसंधान और प्रसार से संबंधित है और कोविड-19 द्वारा सार्वजनिक स्वास्थ्य चुनौती के मद्देनजर मंत्रालय ने निवारक और रोगनिरोधी एडवायजरी जारी की थी।

परिणाम और चर्चा: कोविड-19 संकट के दौरान निवारक स्वास्थ्य उपायों के लिए और रोगप्रतिरोधक क्षमता भी बढ़ाने के लिए विभिन्न आयुष पद्धतियों द्वारा चिकित्साओं को शामिल करते हुए मंत्रालय ने एडवायजरी जारी की थी। इसके अतिरिक्त, मंत्रालय ने 5 मिलियन लोगों के लक्ष्य के साथ बड़ी आबादी का डाटा तैयार करने के लिए आयुष *संजीवनी* मोबाइल ऐप भी विकसित किया। मुख्य अपेक्षित परिणामों में प्रभावशीलता, स्वीकृति और आयुष दिशानिर्देशों के उपयोग और आबादी के बीच उपायों और कोविड-19 की रोकथाम में इसके प्रभाव के बारे में डाटा सम्मिलित हैं।

निष्कर्ष: वर्तमान लघु संचार आयुष मंत्रालय द्वारा जारी की गई रोगनिरोधी एडवायजरी से संबंधित है और आयुष मंत्रालय द्वारा विकसित आयुष *संजीवनी* मोबाइल एप्लिकेशन के उद्देश्यों और अपेक्षित परिणामों का विवरण है।

मुख्य शब्द: आयुष *संजीवनी*, मोबाइल एप्लिकेशन, आयुष दिशानिर्देश, कोविड-19, रोगप्रतिरोधक क्षमता बढ़ाने के उपाय।