

Immunity promoting measures during Covid-19 pandemic: An interventional study

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Abstract

Background: Covid 19 pandemic caused psychological distress and have the potential to adversely impact immune functioning. Ayush ministry issued guidelines for boosting immunity against infections. The pattern of Ayush practices is not completely known in India.

Aims and objective: Conducted to assess the practice of immunity promoting measures among general public of patna, Bihar.

Materials and methods: A cross sectional study was done among 417 participants to analyse immunity boosting practices. The result was analysed using descriptive analysis and chi square test.

Results: 39.8% of participants displayed good immunity boosting practices. Highest immunity boosting practice score was for consumption of Haldi (turmeric Powder)

and Jeera (cumin) 2.83+0.44 and 2.78 +0.5 respectively. The immunity practice was found better in the rural area as compared to urban areas.

Conclusion: Overall, immunity boosting practices were not good in study participants. The more efforts should be made to increase awareness by using multimedia medium.

Keywords: Immunity boosting, COVID 19, ayush guidelines.

Introduction

The COVID-19 pandemic is a global health crisis with an actual or potential impact on citizens of all nations. This outbreak has already had a significant impact on mental health, especially in vulnerable groups such as healthcare workers. Besides causing distress in their own

right, these psychological symptoms have the potential to adversely impact immune functioning.^{1,2}

In response to the COVID-19 crisis, the Indian government released a set of guidelines, developed based on the opinion of 16 eminent vaidyas (traditional doctors), entitled “Ayurveda's immunity boosting measures for self-care during the COVID-19 crisis.” These guidelines listed ten measures that were aimed at boosting immunity against infection, In India, the practice of modern medicine co-exists with practice of AYUSH system.³ However, the pattern of AYUSH practices is not completely known in India.

Therefore, present study is conducted to assess the practice of immunity promoting measures and its determinants among general public of Patna, Bihar, India.

Materials and methods

A cross sectional study was conducted among people of Patna during April to mid of July 2020. The people living in Patna were selected randomly by computer generated numbers. The persons above age 18 years having valid email or WhatsApp number were included in the study.

The individuals who were critically ill or were under COVID-19 treatment were excluded from the study.

Due to non-availability of similar studies on immunity boosting practices in India, the safest choice for anticipated proportion i.e. 0.5 was taken as the 'P' for the computation of largest sample size. For 95% C.I. and 0.05 absolute precision, minimum sample size came out to be: 384 as per Epi Info 2000 software. As The study subjects were asked to fill questionnaire by google forms, therefore nonresponse rate was taken as 20%. Therefore, questionnaire were sent to 460 people. Out of total 460 people, 417 people responded to the questionnaire. To assess the immunity boosting

measures and their determinants among general public, a predesigned, pre-validated close ended questionnaire was used. The questionnaire regarding immunity boosting measures during COVID 19 pandemic was based on Ministry of AYUSH, Govt. of India immunity boosting advisory for self-care during COVID-19 crisis.⁴ The questions were measured on Likert scale (1-3).⁵ For statistical analysis, the data was entered and analyzed using statistical package SPSS Version 20. Results were tabulated in percentages, mean, standard deviation. Chi square test was applied to test the significance.

Results

In this study, the majority of respondents were female 233 (53.5%) while 194 (46.5%) were male. 335 (80.3%) of respondents were belongs to urban living area and the rest from rural living area. The maximum 258 (61.9%) of respondents were in the age group of 21-40 years and 130 (31.2%) were in the age group of 18-20 years. Out of all socio-demographic variables, residential background and occupation was found statistically significant with relation of immune practice of participants. Rest socio-demographic variables were found to be not significant. (Table 1).

Table No. 2 describes that the mean immunity boosting score among study participants was 2.15 + 0.36. Highest immunity boosting practice score was for consumption of Haldi (turmeric Powder) and Jeera (cumin) 2.83+0.44 and 2.78 +0.5 respectively. The practice of oil pulling therapy and consumption of Chyavanprash was found to be lower (mean score 1.37 + 0.64 and 1.54 + 0.74) respectively. The study subjects whose immunity practice score was more than mean score 2.15 were consider as Good Immunity Practice (GIP) whereas people with less than 2.15 were consider as Not Good Immunity Practice

(NGIP).

Table 3 suggested that there was significant association between immunity boosting practices among participants and attending webinar, seminar or training

programmes on immunity. Similarly significant association was found between immunity boosting practices among participants and watching television and listening radio program relating to immunity boosting.

Table 1: The association of socio-demographic variables and immunity practices of the participants.

		NGIP	GIP	Total	P value
Gender wise Distribution	Female	135(32.4%)	88(21.1%)	223(53.5%)	.877 (Not Significant)
	Male	116(27.8%)	78(18.7%)	194(46.5%)	
	Total	251(60.2%)	166(39.8%)	417(100%)	
Background	Rural	39(9.4%)	43(10.3%)	82(19.7%)	.009(Significant)
	Urban	212(50.8%)	123(29.5%)	335(80.3%)	
	Total	251(60.2%)	166(39.8%)	417(100%)	
Educational Status	Up to 8 th	4(0.1%)	3(0.1%)	7(0.16%)	.749 (Not Significant)
	9 th – 12 th	55(13.1%)	39(9.3%)	94(22.6%)	
	Graduate	150(36.0%)	110(24.2%)	251(60.2%)	
	Post graduate	42(10.0%)	23(5.2%)	65(15.4%)	
	Total	215(60.2%)	166(39.8%)	417(100%)	
Occupational Status	Farmer	2(0.5%)	2(0.5%)	4(1%)	.025(Significant)
	Job/Service	34(8.2%)	11(2.6%)	45(10.8%)	
	Self –employed	6(1.4%)	3(0.7%)	9(2.1%)	
	Student	197(47.2%)	138(33.1%)	335(80.3%)	
	Others	12(2.9%)	12(2.9%)	24(5.8%)	
	Total	251(60.2%)	166(39.8%)	417(100%)	
Age in (years)	18 – 20	72(17.3%)	58(13.9%)	130(31.2%)	.166 (Not Significant)
	21 – 40	157(37.6%)	101(24.2%)	258(61.9%)	
	41 – 60	19(4.6%)	7(1.7%)	26(6.2%)	
	>60	3(0.7%)	0	3(0.7%)	
	Total	251(60.2%)	166(39.8%)	417(100%)	

NGIP = Not Good Immunity Practices

GIP = Good Immunity Practices

Table 2: Measurement of immunity boosting practices among participants.

Immunity boosting practice measurements	Mean	S.D.
1. You drink warm water throughout the day.	2.20	0.72
2. You practice of Yoga Sana, Pranayama and meditation for at least 30minutes.	2.00	0.76
3. You pray regularly for good health.	2.5	0.71
4. You consume Haldi (Turmeric) in cooked food.	2.83	0.44
5. You consume Jeera (Cumin) in cooked food.	2.78	0.5
6. You consume Dhaniya (Coriander) in cooked food	2.76	0.45
7. You consume Lahsun (Garlic) in cooked food.	2.50	0.68
8. You take Chyavanprash 10gm (1tsf) in the morning	1.54	0.74
9. You drink any herbal tea.	1.91	0.79
10. You drink Golden Milk (Half tea spoon Haldi (turmeric) powder in 150 ml hot milk) once or twice a day.	1.87	0.75
11. You apply sesame oil / coconut oil or Ghee in both the Nostrils in morning and evening.	1.55	0.75
12. You practice Oil pulling therapy.	1.37	0.64
Overall immunity practice	2.15	0.36

Table 3: The association of use of multimedia resources and immunity boosting practice among participants.

	NGIP	GIP	Total	
Attended any Webinar/Seminar / Training (NO)	168 (40.3%)	77 (18.5%)	245 (58.8%)	.000(Significant)
Attended any Webinar/Seminar / Training (Yes)	83 (19.9%)	89 (21.3%)	172 (41.2%)	
Total	251 (60.2%)	166 (39.8%)	417 (100%)	
Watched TV/ listening radio programme (NO)	94 (22.5%)	31 (7.4%)	125 (29.9%)	.000 (Significant)
Watched TV/ listening radio programmer	157 (37.7%)	135 (32.4%)	292 (70.1%)	

(Yes)				
Total	251 (60.2%)	166 (39.8%)	417 (100%)	

Discussion

Immunity promoting practices as suggested by Ministry of AYUSH, Govt. of India are important for self-healthcare. In our study, 39.8% of participants practiced immunity promoting guidelines of AYUSH ministry. There can be various reason behind poor practice among people like lack of awareness among people regarding benefits of AYUSH products, opposition from scientific community which consider AYUSH products only as placebo, more faith people in allopathic medical system and poor communication between government policies and people.⁶

The immunity practice was found better in the rural area as compared to urban areas because of the better acceptance of rural people towards Ayurveda or traditional Indian medical system.⁷ This might be one of the reasons that there was less spread of Covid 19 in rural India despite migration of large number of workers in villages. The practice of Yoga, meditation, lukewarm water, prayer for better health was found better in our study because of popularity of Yoga at national and international level.⁸

Regarding immunity boosting practices, the acceptance of Haldi (Turmeric), Jeera (Cumin) and Dhaniya (Coriander) was more popular in community as these domestic ingredients are integral part of Indian kitchen. The practice of use of Chyavanprash, application of coconut oil, sesame oil, oil pulling therapy, use of golden milk and herbal tea were comparatively lesser in our study. These might be due to poor awareness level among people regarding benefits of these measures. A study done by R. Jagadheeswari et.al (2018) revealed in their study that poor awareness of people regarding

benefits of oil pulling therapy.⁹ The measures like Chyavanprash had been accepted less because of cost factors and lack of sufficient clinical reports.¹⁰

Our study showed that utilization of multimedia were very beneficially in promotion of immunity boosting practices because these multimedia sources play significant role in creating awareness and bringing attitudinal and behaviour changing among people regarding their health.¹¹

Conclusion

Ministry of AYUSH, Govt. of India guidelines are important measures of health promotion during COVID-19 pandemic. In our study 39.8% of study subjects were practicing good immunity practices. The immunity promoting practices were found to be more popular in rural areas as compared to urban areas. The practice of consumption of spices like Haldi (Turmeric), Jeera (Cumin) and Dhaniya (Coriander) was more among study participants whereas the practice of use of Chyavanprash, application of coconut oil, sesame oil, oil pulling therapy was lower among participants. The people who had watched programme on TV or listening Radio, television or attended Webinar/ Seminar/ trainings were following immunity guidelines in much better manner. However, large sections of society have not adopted these practices. Therefore, we recommend that the more efforts should be made towards promotion of immunity practice by multimedia.

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