COMBATING CORONAVIRUS BY ANALYZING PREVAILING DIETARY BEHAVIOUR, PRACTICES AND RELEVANT AWARENESS IN URBAN FAMILIES: A SURVEY

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Abstract:

As it was total lockdown due to corona, for this survey a sample of 200 was chosen. The head of the families were interviewed through pretested questionnaire. Different Social media was used to collect the data. Scoring and ranking method was used to analyze the data along with the statistical analysis.

Corona brought so much uncertainty and fear that everyone was just was running to get all sort of clues to fight against corona, thus most of the households (47%) had updated their knowledge regarding immunity enhancing diet from Newspapers, Social media platform was used by 48% for enhancing their knowledge.

As the cases were increasing so was the increase in precautions taken by the people too, as a result of which 52% of the people modified their routine diet, and increase the use of medicinal condiments and spices which were considered to be building the immunity power, although due to lockdown all shops being closed it was difficult to continue and manage the prescribed diet. People increase the consumption of rainbow diet, along with probiotics, and Vitamin-C rich citrus fruit.

Awareness regarding kitchen hygiene and sanitization of food was increased and respondents adopted safe food consumption with soaking, germination, fermentation on the top priority.

Junk foods and ready to eat foods were eaten less. Pandemic brought a change in the dietary pattern of 46% of the families.

To achieve protection from the virus or to regain health back to normal after catching Covid, the study showed the change in the traditional and dietary behaviors of the respondents along with the adoption of regular hygiene practices.

Keywords: Immunity, Fermentation, Protective food, Sanitization

INTRODUCTION:

Corona virus disease (COVID-19) is an infectious disease caused by the SARS-Cov-2 virus, and it became a challenging in health disaster which later caused pandemic. The best way to prevent and slow down transmission is to be well informed about the disease and how the virus spreads.

The daily increase in number of patients was a threat to the government with only one option of implementing total lockdown till the virus chain had stopped down was left. Govt. along with health policy makers were continuously making effort to make people aware about sanitization and other measures of safety so as to increase the immunity of the people.

Government of India along with panel of doctors, health and authorities, nutritionist are motivating people to adopt AYUSH remedies and takes prescribed Nutritious well balanced diet so as to prevent the spread of this virus. To investigate the effect of these efforts on the dietary behavior and practices of urban families, an empirical attempt has been made in this study to assess the level of adoption of dietary moderation in the urban households (HHs) of Kanpur city.

The traditional Indian food plate represents a balanced meal in our daily diet and is full of medicinal ingredients. This dietary behavior promotes the intake of milk and all food groups in adequate amounts and proportion. Thus a full day of Indian meals is able to provide complete nutrition with protective nutrients and bioactive compounds which are enough to protect the body against the corona virus. The government should make increased efforts at the gross root level to spread awareness regarding dietary practices and physical exercise, thereby achieving a strong public immunity against the virus even after the uplifting of the lockdown.

Wilta et al. (1995) found that runners with greater nutritional knowledge made better food choices compared to their peers with lower nutrition knowledge, indicating that an increase in knowledge leads to better dietary behaviors in the population.

MATERIAL AND METHODOLOGY:

This empirical study has undertaken the objective of selecting the households from different cities of U.P. and assessing their changing dietary pattern as preventive measures against the pandemic. The authors administered an online dietary questionnaire to assess upgraded nutritional knowledge, attitudes and dietary practices of the sample HHs to combat the corona virus.

Sample selection - The households were approached through different social media for responding to our online survey, surveys of 200 HHs was completed under the selection criteria for the study. The head of family (mainly women of HHs) were investigated.

Inclusion criteria - Those who were willing to participate as respondents for investigation.

This questionnaire consists of a set of five questions on dietary knowledge, opinion and practices. It was based on the adoption of prescribed nutrition suggested by the relevant health and nutrition authorities to boost immunity as a preventive measure in this pandemic.

Methods of Data Collection: An on line survey was conducted for data collection. A Structured dietary questionnaire was uploaded on the internet with an explanation of the purpose of the study. The questionnaire poses questions for the demographic data on knowledge, opinion and dietary practice in the present situation.

Data analysis: The Collected questionnaires were coded, tabulated and analyzed statistically for Means, Standard deviation and percentages. The scoring by 5 point rating in answers was used to calculate from the questions of nutritional knowledge and practices. T test, correlation coefficient was used to assess the correlation between nutrition knowledge, the opinion and practices of the HHs with the demographic attributes. The Microsoft Excel was used for Statistical analysis.

RESULTS:

Results were obtained on different attributes, which are as follows.

1. Demographic -

Table no.1.1 (a) shows that 67% families are small (have < 5 members), 21% are medium and 12 % are large.

According to the table no.1.1 (b) the economic status was categorized as per the scale developed by Dr. B. G Prasad (2012),4% of the families were from higher class, 81% from higher middle class, 12 % from middle and 3% from lower middle class,

Table 1.1 (a) Demographic Characteristics

Category	N= 200	Percentage (%)
Family size		
Small (< 5 members)	134	67
Intermediate (> 5 members)	42	21
Large (>6members)	24	12

Table no.1.1 (b) Socioeconomic Status (per capita)

Higher (Rs. >5571)	08	4.0
Higher Middle (Rs. 2786 - 5570)	162	81
Middle (Rs.1671-2785)	24	12
Lower middle (Rs.836 - 1670)	6.0	3.0
Lower (Rs. <836)	0	0
According to scale of Dr. B. G. Prasad (2012)		

Table no. 1.2 occupation wise classification of families

Occupations	N=200	Percentage (%)
Business	68	34
Service	48	24
Retired	64	32
Unemployed	20	10

On the basis of occupation (table no.1.2) maximum respondent were businessmen, 24% belong to service class and 32% were retired and 10% were unemployed.

2. Spectrum of pandemic:

Table no. 2 reveals that 58 % families were affected from COVID- 19 with their one or more members in mild to critical conditions whereas 42 % were safe till the date of this survey. In the category of mild, moderate, severe and critical stages of COVID 19 affected members, maximum had a moderate case. 58 % of the affected members were suffering from any one or more post COVID complications like weakness, body aches, joint pain, inflammation near the throat etc. As post ÇOVID complications most of the patients were affected from gastrointestinal troubles due to excess eating of spices rich hot beverages and had symptoms like sore throat, sore tongue, gastric ulcer, diarrhea and gastric burn etc.

Table no. 2 the prevalence spectrum of COVIĎ- 19

Particular	N=200	Percentage (%)
Families affected from COVID disease with 1 or more members	116	58
Families that were safe from COVD attack till the survey date	84	42

3. Source of dietary information

Families attained nutrition information regarding protection from the Corona virus (through immunity boosting diet, food hygiene and sanitization etc.) from different Sources such as news papers (47%), internet (48%) and other sources 5%.

Table no. 3. Nutrition and dietary information regarding protection from Corona virus

Sources	N=200	Percentage (%)
News paper	94	47
Internet	96	48
Other information	10	5.0

4. Level of Nutritional Knowledge regarding present public health situation

Nutrition knowledge becomes essential for people to achieve enhanced-immunity performance against the Novel Corona virus. Most of the respondents were aware of the general aspects of immunity boosting nutrition, kitchen hygiene and sanitation. The mean values of scores on different aspects of nutrition to combat the pandemic are statistically compared with two groups in table no. 4. It is revealed that both the groups (COVID 19 affected and not affected) had the highest mean scores of knowledge (4.8 and 4.4) in the 3rd aspect i.e. citrus fruits like lemon have preventive quality on a 5 point rating. The non- significant differences (p= < 0.01) were estimated at 5% level. Both the groups had the lowest scores in the 4th aspect of nutrition knowledge i.e. to combat protection against infection as 3.3 and 3.5 respectively and the difference estimated between two scores were non- significant. The significant differences were established in some aspects and the total scores (21.4 and 20.3 respectively) of two groups were at 5% level.

Table 4: Knowledge level of respondents about nutrition for protection against COVID 19 infection.

Knowledge about nutrition for prevention of infection	Mean scores of COVID affected families N=116	Mean score of safe families N=84	P Value
Milk proteins to increase immunity power	3.8	3.6	0.096
Turmeric, black pepper, ginger, cumin, mint are medicinal spice helps to protect from infection	4.5	4.0	0.003*
Citrus fruits included lemon and all dark colorful fruits and vegetables have the constituents to prevent the diseases.	4.8	4.4	0.595
Rainbow diet and diversified diet included different variety in all food groups with oil seeds are best and enhance the immune response.	3.3	3.5	0.751
Hygienic practices in kitchen during food preparation storage and serving are necessary to safe guard against infection and Proper sanitization is equally required to prevent this disease.	5.0	4.8	0.904
Total mean score out of 25	21.4	20.3	0.042*

* Significant at 5% level.

5. General opinions regarding preventive nutrition in our changing situation

Statements framed for the assessment of general opinions regarding preventive nutrition in our changing situation were presented to the respondent's families heads. Generally, opinion is based on widely prevalent beliefs of people (which developed at the pandemic age), regarding adoption of traditional cooking techniques and so on. Table 5 shows the changing opinion of COVID 19 affected and non- affected people (head of selected families) regarding nutrition.

The overall opinions of the respondents were quite commendable and impressive. Most of the respondents (68%) strongly agreed that good nutrition is necessary for immunity power, 60% strongly disagreed with the statement that an expensive diet is good for health and protects from infection. There was a non- significant difference in the opinion scores of COVID 19 affected and non affected family's heads. On the regular consumption of modified diet there were significant differences found on scores (5 and 4 respectively) of two groups at 5% level. The respondents have no idea about the amount and proportions of suggested medicinal foods in a day, therefore, very poor scores were gained from both the groups.

Table 5: Opinions of Respondents Regarding Nutrition to combat protection against infection

Opinion towards nutrition for prevention against infection	Mean score of affected families	Mean score of safe	P Value
	N=116	Families N=84	
Nutritional needs require some modifications which differs from normal condition to the population in Corona disaster.	4.8	4.5	0.751
Good nutrition is as important as exercise, active life style, coping skill, training and motivation/ positive thinking	5.0	5.1	0.595
Expensive foods are better and are important for good preventive factor.	4.8	3.5	0.003*
Peers and role models influence the food choice and consumption for good health.	4.5	3.3	O.042*
It is necessary to add supplements in diet, high consumption of turmeric, almonds and milk enhance preventive mechanism of body.	5.0	3.8	0.003*
Total mean score out of 25	24.1	20.1	0.042*

*   Significant at 5% level.

6. Dietary Practices:

Table no. 6 showed the practice of adopting nutritional activities, dietary modifications and food hygiene to Combat COVID- 19 infection. Similar to the opinions of families food practices were adopted and performed in the daily life. Both the groups showed highest scores in aspect of changing diet with the inclusion of citrus fruits etc. with 5 and 4 scores respectively followed by 4.8 and 4. 5 scores respectively on adopting regular kitchen hygiene and cleaning.

Table 6: Mean responsesfor Dietary Practice

Practice Questions	Mean score N=116	Mean score N=84	P Value
Changing dietary pattern at the time of corona disaster and Consuming medicinal and functional foods regularly as prescribed by health authorities.	4.2	4.0	0.904
Eating all the recently recommended foods in the right quantities and proportions with multi- colored diet.	1.5	1.8	0.096
Avoiding junk foods, excess fried foods, packed and ready to serve foods in daily diet and consuming home made fresh foods with the use of soaking, fermentation, steaming types of healthy cooking with healthy foods including probiotics.	3.4	3.8	0.230
Adopting food and kitchen hygiene with personal hygiene and frequent sanitization.	4.8	4.5	0.514
Regular consuming the modified diet with increased amount of citrus fruits, vegetables, oilseeds, legumes, grains etc. on proper meals in a day.	5.0	4.0	0.003*
Total mean score out of 25	18.9	18.1	0.422*

* Significant at 5% level.

CONCLUSION:

The present study reveals that the overall knowledge of respondents in the selected aspects were found to be satisfactory with good and very good scoring results. But the over consumption of medicinal spices and other suggested foods in practice was noticed due to ignorance regarding quantity recommended for consumption. This indicates that better nutrition education should be implemented in this regard.

The knowledge established the opinion which is correlated well with practices adopted by respondents. It is hypothesized that dietary practices affected and related to the nutrition　knowledge, opinions and subsequently nutrition practices, promotion of knowledge leads to the promotion of their opinions in right manner and subsequent to the improvement of their diet. This research is also focused on the importance of nutrition knowledge and its influence on dietary opinions and practices of people in order to boost the protective mechanism of body against infection.

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