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Assess the Knowledge, Attitude and Practice on Iodine Rich Nutrition and Iodine Deficiency Disorder among the Adults

Varalakshmi E*¹, Jeevarathinam M*²

Associate Professor, Dept. of Medical Surgical Nursing, Saveetha College of Nursing, Tamil Nadu, India¹

UG Student, Saveetha College of Nursing, Thandalam, Chennai, Tamil Nadu, India²

ABSTRACT: Iodine deficiency is a major public health problem worldwide and it affects all the age groups. Previously, Iodine deficiency was equated with goitre. In recent years, it has become increasingly clear that iodine deficiency lead to a much wider spectrum of disorders commencing with the intrauterine life and extending through childhood to adult life with serious health and social implication. The adult human body contains about 50mg of iodine, and the blood level is about 8-12 micrograms/dl. The best source of iodine are sea foods (e.g., sea fish, sea salt) and cod liver oil. The Study was conducted to assess the knowledge, attitude and practice on iodine nutrition and iodine deficiency disorders among the adults living in the village of kuthambakkam. Quantitative approach with descriptive study was conduct among 100 adults. Convenient sampling technique was used to select samples. Structured interview was used to collect demographic data, attitude and assessment of practice and knowledge questions. The data were analyses using descriptive and inferential statistics. The result shows Pearson's co-relation coefficient was used to assess the effectiveness of attitude and knowledge $r=0.839$ $r= 0.662$. It shows a positive correlation which was found to be statistically significant $p<0.001$. Chi square test was used to test the association between categorical variables. $P < 0.05$ was taken as statistically significant.

KEYWORDS: Iodine deficiency disorder, attitude, practice and knowledge.

I. INTRODUCTION

Iodine deficiency is a major public health problem worldwide and it affects all the age groups. Iodine deficiency disorders (IDDs) impact refers the ill-effects caused by iodine deficiency in population which can be prevented by ensuring adequate intake of iodine. Iodine deficiency poses a threat to health, well being and economic product of the community at large.¹

The world health organization (WHO) – ICCIDD^[2] states iodine is present in the body in minute amounts, mainly in the thyroid glands. Its main role is in the synthesis of thyroid hormones. Iodine is a trace mineral required for optimal mental and physical development and is a key constituent of thyroid hormones. Iodine deficiency is the single largest cause of preventable brain damage globally.

Laurberg P, Bulow Pederson^[3] ., 2004 When iodine requirements are not met, thyroid hormone synthesis is impaired, resulting in hypothyroidism and a series of functional and developmental abnormalities grouped under the heading of "Iodine Deficiency Disorders.

Previously, Iodine deficiency was equated with goitre. In recent years, it has become increasingly clear that iodine deficiency lead to a much wider spectrum of disorders commencing with the intrauterine life and extending through childhood to adult life with serious health and social implication. The adult human body contains about 50mg of iodine, and the blood level is about 8-12 micrograms/dl.

The best source of iodine are sea foods (e.g., sea fish, sea salt) and cod liver oil. smaller amount occur in other foods, e.g., mil, meat, vegetables, cereals etc. The iodine content of fresh water is small and very variable about 1-50 micrograms/l.⁴

Iodine deficiency disorders (IDDs) include goitre, cretinism, hypothyroidism, abortion, stillbirth, brain damage, learning disabilities, mental retardation, psychomotor defects, hearing and speech impairment. Rapidly changing

environmental conditions leading to melting of glaciers, frequent floods, change of river beds and loss of forest cover have led to depletion of the iodine from the top layers of the soil.⁵⁻⁶

India has made impressive progress in control of IDD with successful adoption and scaling up of USI in the country. According to National Iodine and Salt Intake (NISI) survey, 2014-2015, currently, 78 per cent of households in India are consuming adequately iodized salt. However, still significant percentage of the population continues to consume inadequately iodized salt (14%) or nil iodine salt (8%). There is a need to reach the unreached population and cover the 'last mile' of USI success story of India. This calls for developing and implementing the 'end game strategy' to accelerate, achieve and sustain the elimination of IDD in India.⁷⁻⁸

P. Sai Deepika et.al.^[9] 2019 A Community based cross-sectional study conducted. Factors related to use of iodized salt in the communities like type of salt using in houses, storage practices, practices during cooking, knowledge regarding iodine deficiency disorders were assessed. The data was collected using pre-tested questionnaire and analyzed by using SPSS 22.0 version. Most of households (68.5%) were between 25-50 years age, 68% wives were illiterate and 48.5% wives involved in labor work. Majority (83.6%) of the families were using iodized packed salt, 75% had adequately iodized salt with ≥ 15 ppm and 25% with inadequate iodized salt < 15 ppm. Association between illiterate wives and poor knowledge regarding iodized salt found to be significant ($p < 0.005$).

Senthilvel Vasudevan et.al.^[10] 2018 A community based descriptive study on IDD was conducted in Marakkanam block population. The goitre prevalence was high in female gender when compared with male and higher goiter prevalence rate was found in the lower economic group. Among 1233 individuals, 796 (64.6%) were heard about iodized salt, whereas 437 (35.4%) were not heard about it. Only 294 (23.8%) of the respondents were aware that iodine deficiency caused some disease or health problem. Total of 525 salt sample packets was collected at the traders' level and it that 99% of the salt samples were iodized but most of them weren't adequately iodized. From our present study, we have concluded that nearly one fourth of the study population didn't have enough knowledge about IDD and its consequences.

The purpose of the study was 1.To assess the knowledge, Attitude and practices on iodine nutrition and iodine deficiency disorders among the adults. 2.To correlate knowledge and attitude on iodine deficiency disorders .3. To associate between the selected demographic variables with the level of knowledge regarding iodine nutrition and iodine deficiency disorder.

II.MATERIALS AND METHODS

A quantitative approach with descriptive design was used to conduct the study. The study was conducted in Kudapakkam, Thiruvallur. 100 samples were selected by using a convenient sampling technique. The inclusion criteria for the sampling are who are all between the age group of 21-59 years adults, those who are available at the time of data collection and able to read and write in Tamil. The data collection period was done with prior permission from the head of village panchayat. The purpose of the study was explained to the samples and written informed consent was obtained from them. The demographic data were collected using a structured interview questionnaire, five point likert scales was used to assess the attitude on iodine deficiency disorder and assessment of practice also used to assess the practice of iodine salt. The data were analyzed using descriptive and inferential statistics. The sample characteristics were described using frequency and percentage. Pearson's co-relation coefficient was used to assess the effectiveness of attitude and knowledge. Chi square test was used to test the association between categorical variables. $P < 0.05$ was taken as statistically significant.

III. RESULT AND DISCUSSIONS

SECTION A: Frequency and percentage distribution of demographic variables among adults

Among 100 samples out of 19 samples(19%) were single,79 samples (79%) were married, 2 samples (2%) were widow/widower, 26 samples (26%) were no formal education, 40 samples (40%) were primary,22 samples (22%) were high school, 12 samples (12%) were graduate, 17 samples (17%) daily wages, 3 samples (3%) were business, 57 samples (57%) were house wife , 19 samples(19%) were labourer, 4 samples (4%) were profession, 7samples (7%) were $< ₹ 5,000$,27 samples (27%) were ₹ 5,000-10,000,37 samples (37%) were ₹ 10,000-15,000,29 samples (29%) were $> ₹ 15,000$,14 samples (14%) were vegetarian, 86 samples(86%) were non-vegetarian, 30 samples (30%) were got information from mass media, 3 samples (3%) were got information from relatives/friends, 11 samples (11%) were got information from health personnel, 56 samples (56%) were didn't get information from any sources.

SECTION B: Assess the attitude regarding iodine nutrition and iodine deficiency disorder among adults



It Shows 36 samples (36%) were favourable attitude and 64 samples (64%) were unfavourable attitude regarding iodine nutrition and iodine deficiency disorder.

SECTION C: Assessment of practice regarding iodine nutrition and iodine deficiency disorder

Among 100 samples out of 78 samples (78%) were using Powdered iodized salt, 4 samples (4%) were using Powdered non iodized salt, 15 samples (15%) were using Rock salt iodized salt, 3 samples (3%) were using Rock non salt iodized salt, 70 samples (70%) were purchase at Grocery shop, 24 samples (24%) were purchase at Street vendors, 6 samples (6%) were purchase at Unprocessed salt from local markets, 47 samples (47%) were store at Plastic bag in which the salt was brought from shop, 10 samples (10%) were store at Container with holes at the top, 14 samples (14%) were store at Containers without a lid, 29 samples (29%) were store at any airtight container, 10 samples (10%) were using Less than 5 years, 24 samples (24%) were using From 6-10 years, 29 samples (29%) were using From 11-15 years, 37 samples (37%) were using 6 years above, 7 samples (7%) were consumed Half to one packet, 87 samples (87%) were consumed One to two packet , 6 samples (6%) were consumed One to three packets.

SECTION D

TABLE 2: Assess the frequency and percentage distribution of knowledge regarding iodine nutrition and iodine deficiency disorder

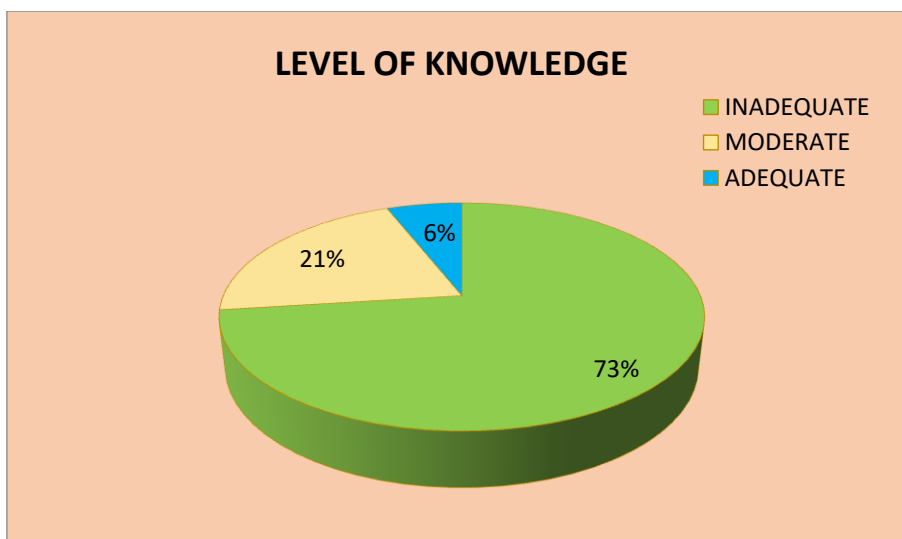


Table 1: It shows Among 100 samples out of 73 samples (73%) have inadequate knowledge, 21 samples (21%) have moderate knowledge and 6 samples (6%) have adequate knowledge.

SECTION E: Comparison of mean score and standard deviation score of knowledge based on inadequate, moderate and adequate. Among 100 sample shows the mean score of knowledge for inadequate (3.698), moderate (13.523) and adequate (19.33) and standard deviation score for inadequate (1.58), moderate (0.81) and for inadequate (0.51)

SECTION F

TABLE 2: Correlation of between attitude and knowledge on iodine nutrition and iodine deficiency disorder among adults

	ATTITUDE AND TEST KNOWLEDGE	
CORELATION AND COEFFICIENT	r=0.839	P=< 0.05 (S)

Table 2 predicts that the positive co-efficient of co-relation (0.839) between attitude and knowledge score obtained by adults regarding iodine nutrition and iodine deficiency disorder. The co-relation which was found to be significant at <0.05 level of significance.



SECTION G: Association of selected demographic variables between knowledge among adults regarding iodine nutrition and iodine deficiency disorder

It shows that is association between the demographic variables of adults regarding iodine nutrition and iodine deficiency disorder. There was statistically significant found in significant marital status, significant education, significant occupation, significant family income, significant dietary pattern and significant source of information.

IV.CONCLUSION

The study revealed that still people have inadequate knowledge and improper practices in relation to the iodine deficiency disorders. More frequent health education has been given to minimize the incidences of people suffering from iodine deficiency disorders especially in rural communities.

REFERENCES

1. Umesh Kapil.“Health consequences of iodine deficiency”, Sultan Qaboos University Medical Journal,volume 7-No.3,2007.
2. ICCIDD,“Assessment of iodine deficiency disorders and monitoring their elimination”, UNICEF, World Health Organization, 3ed:98, 2007.
3. Laurberg P,Bulow Pederson.“Environmental iodine intake affectsthe type of non-malignancy thyroid diseases, Thyroid.Vol 11-No-5, 2004.
4. K.Park. “Text book of preventive and social medicine. 23rd ed. published by Banarsidas Bhanot, pp.624, 2015.
5. Hetzel B. “International Council for the Control of Iodine Deficiency Disorders”. A global program for human development with a model applicable to a variety of health, social and environmental problems.2004.
6. Zimmermann MB, Jooste PL, Pandav CS. “National library of medicine Iodine-deficiency disorders,pp- 1251-62,2008.
7. Chandrakant Pandav CS, kapil Yadav K, Salve HR, Kumar R, Goel AD, Chakrabarty A,. “2018 Public Health Nutrition High national and sub-national coverage of iodised salt in India”- Evidence from the first national iodine and salt intake survey (NISI) Vol 21-No 6,pp.3027-3036,2018.
8. Department of Health and Family Welfare. Annual report 2016-2017. New Delhi: Ministry of Health and Family Welfare, Government of India; 2017
9. Sai Deepika P, Thirumalo Rao, Vamsi A, Valleswary M, Chandra sekar, International journal of community medicine and public health,Vol6No-3,pp-1083-1089.2019.
10. Senthilvel Vasudevan, Sumathi senthilvel, Jayanthi suresh babu.Iodine deficiency disorder in rural population, Indian journal of public health research and development. Vol 9No-2pp-100-105.2018.



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