Knowledge and Utilization of Iodised and Non-Iodised Salt

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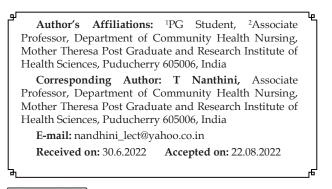
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Abstract

Background: Iodine deficiency disorders (IDDs) are dominant public health problem which can be hinder by consumption of iodized salt. For defendable elimination of IDDs, the goal of universal salt iodization (USI) is to cover more than 90% of household to consume adequately iodized salt. This study was conducted with objectives as to assess the level of knowledge and practices regarding the consumption of salt in selected area Puducherry. Aim: This study aimed to identify the level of knowledge and practice on iodised and non-iodised salt among households. Subjects and methods: A descriptive study were conducted among 93 households, in Puducherry. Sample selected by using convenient sampling technique. The quantitative research approach and descriptive cross sectional survey design was used. Data was collected by using structured questionnaire for socio demographic variables and to assess the level of knowledge and practice Likert scale was used. Result: Out of 93 householders, 40(43%) were aged between 45-55 years, 61(65.6%) were female. The result shows only 6(6.45%) of them had adequate knowledge of iodised and non-iodised salt and 7(7.53%) had positive attitude towards iodised and non-iodised salt among the householders.² most of them 90% using white salt.3 there was positive correlation between knowledge and attitude between iodised and noniodised salt among householders. It was evident that statistically significant p<0.001 level.⁴ There is a significant association between knowledge with socioeconomic status at p<0.05 level and attitude with monthly income at p<0.05 level. It was evident that if knowledge increases attitude also increases. The role of education plays major role in imparting knowledge about IDD and iodine salt to public. Conclusion: These study findings revealed that majority of householders were inadequate knowledge and adequate intake of salt. Researcher play a major role in imparting knowledge about IDD and iodised salt to public and also distributed pamphlets to create awareness to public.

Keywords: knowledge and practice, iodised and non-iodised, householders.



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INTRODUCTION

A normal healthy woman's reproductive phase is usually known by the terms such as menarche which means the age of first menstruation, menstruation denotes the periodic and cyclical shedding of endometrium, puberty is the period of increased general body growth and development of secondary sexual characters and sex organs and girls become capable of reproduction, and menopause is

the cessation of menstruation due to rapid decrease in the production of female sex hormones by the ovaries at the age of about 45-55 years. (Rashid Latif, 2006). The term "women's health is very important in understanding the health issues of the women. The American Academy of Nursing's 1996 expert panel on women health reported that women 's health incudes their entire life span and involves health promotion, maintenance and restoration. The term women health recognizes that the health of the women is related to the biological, social and cultural dimensions of women's lives. Moreover, women's normal life events or rites of passage such as menstruation, child birth and menopause are considered as part of normal female development rather than disease or syndrome. This broad emphasis on women's health is in contrast to the view of women solely in terms of their reproductive health or their role in parenting children.

INTRODUCTION

Iodised salt (also spelled iodized salt) is table salt combined with a very small amount of various salts of the element iodine. The consumption of iodine prevents iodine deficiency. Worldwide, iodine deficiency affects about two billion people and is the major avertible cause of intellectual and developmental disabilities. Deficiency also causes thyroid related diseases, which include endemic goitre. In several countries, iodine deficiency is a major public health problem that can be economically addressed by purposely adding small amounts of iodine to the sodium chloride salt.1 Where natural levels of iodine in the soil are low and the iodine is not taken up by vegetables, iodine added to salt provides the small but essential amount of iodine needed by humans.² An opened package of table salt with iodide may quickly lose its iodine c

ontent in high temperature and high relative humidity conditions through the process of oxidation and iodine sublimation.³ India and all of its states ban the sale of non-iodized salt for human consumption. However, implementation and enforcement of this policy are imperfect; a 2009 survey found that 9% of households used noniodized salt and that another 20% used insufficiently iodized salt.⁴ Iodised salt was introduced to India in the late 1950s. Public awareness was increased by special programs and initiatives, both governmental and non-governmental. In India, some people use Himalayan rock salt. Rock salt however is low in iodine and should be consumed only when there are other iodine-rich foods in diet.⁵ Mild to moderate iodine deficiency disorders (IDDs) remains a substantial public health crisis, particularly in the least developed and developing countries. Iodine deficiency is one of the world's most common causes of mental delays. Every year, in developing countries, almost 38 million new-borns suffer from the enduring impacts of neurological disorders associated with IDDs.6 Universal salt iodination program is an effective measure to maintain the jodine status, with the recommended threshold for household level is between 20 to 40 ppm depending on typical use and availability of iodine from other dietary sources.7 Households with low economic status have a higher tendency to consume under-iodized salt.8 Only the presence of iodine in salt is not enough for preventing IDDs. Proper utilization of iodized salt is necessary as iodine can be lost due to different types of cooking practices such as pressure cooking, boiling, deepfrying, and shallow frying we could identify the reason behind not using iodized salt or loss of iodine due to malpractice in rural households, it will help us maximize the use of iodized salt in mass people and play a role in reducing the incidence of goitre and cretinism.9 Therefore, this study aimed to determine iodine concentration in salt at household levels, knowledge, attitude, and practice (KAP) related to iodized salt and IDDs and the effects of KAP on the utilization of iodized salt. The findings of this study will open new doors for future research in this field.

NEED FOR STUDY

Iodine is one of the most common causes of preventable brain damage in the world. It is recommended that iodine intake for adults should be 150 micrograms a day; 220 micrograms per day in pregnant women and 290 micrograms a day in a lactating woman. The disorder caused due to iodine deficiency is a prominent health problem in India. Past surveys have shown that there is no state in India which is free from iodine deficiency disorder (IDD).¹⁰ Out of the 167 million people at risk of IDD, 54 million suffer from goiter and two million from cretinism. IDD is associated with many thyroid-related diseases like hypothyroidism, hyperthyroidism, goiter and cretinism.¹¹ Nearly

90% of the global population is consuming salt with iodine, even though just 23 countries with recent data had a coverage of 90%. Studies conducted in Puducherry among school children. The total goitre prevalence (TGP) was 27.5% (moderately endemic) among the children examined. The median urinary iodine concentration (MUI) was 142.9µg/L (normal 100-199µg/L). Only 7% of children (target <20%) showed low MUI (<100µg/L). Iodine content was found to be adequate (> 15ppm) in over 60% (target > 90%) of the salt samples.¹² Even through the peoples were consuming the iodine salt still there is iodine deficiency disorders so the Researcher wish to know about the level of knowledge and usage of iodised salt among householders in lawspet area Puducherry.

PROBLEM STATEMENT

A descriptive study to assess the knowledge, and utilization of iodised and non-iodised salt among households selected urban area in Puducherry.

OBJECTIVES

- To assess the level of knowledge of iodised salt and non-iodised salt among households.
- To assess the level of practice iodised and non-iodised salt among households.
- To find the Correlation between level of knowledge and level of attitude on iodised and non-iodised salt among the households.
- To find an association between level of knowledge on iodised salt and non-iodised salt among households with selected demographic variables.
- To find out the association between level of

usage and level of attitude on iodised salt and non-iodised salt among households with selected demographic variables

RESEARCH METHODOLGY

Quantitative research approach was used for this study. Descriptive cross sectional research design was used for this study. The study was comprised of 93 households at lawspet urban area in Puducherry. Convenience sampling technique was adopted for this study. After a substantial search of review of literature, the researcher developed a revalidated self-administered tool for the assessment of knowledge and practice on iodised or non -iodised salt. It has three sections. **Section A:** Socio Demographic Variables of householders. **Section B:** self-administered questionnaire to assess the level of knowledge among householders. **Section C:** Likert rating Scale used to assess of utilization on iodised and non-iodised salt among householders.

RESULTS

The result shows that most of the householders, 77(82.8%) were using TATA salt at home, 84(90.3%) were using white colour salt at home, 44(47.3%) were using the particular salt for more than 5 years, 35(37.6%) had stored the salt far from sunlight and fire, 70(75.3%) had used the salt in container with lid, 55(59.1%) were adding the salt in the middle during food separation, 31(33.3%) were using one tea spoon of salt daily, 36(38.6%) had used spoon for adding the salt in their food, 74(79.6%) were using the salt in powdered form and 41(44.1%) had preserved food and pickles, chips and other fried items and lemon with salt juices as sources of salt consumption other than cooked items.

| Table 1: Frequency and percentage distribution of level of knowledge of iodised and non-iodised salt among the hou | 1seholders. |
|--|-------------|
| | N = 93 |

| Level of Knowledge | No. | 0/0 |
|-------------------------------|-----|-------|
| Inadequate Knowledge (≤50%) | 33 | 35.48 |
| Moderate Knowledge (51 – 75%) | 54 | 58.06 |
| Adequate Knowledge (>75%) | 6 | 6.45 |

The above table 1 shows that 54 (58.06%) had moderate knowledge, 33 (35.48%) had inadequate knowledge and 6 (6.45%) had adequate knowledge of iodised and non-iodised salt among the householders.

| Level of Attitude | No. | 0/0 |
|--------------------|-----|------|
| negative (≤50-75%) | 81 | 92. |
| Positive (>75%) | 7 | 7.53 |

Table 2: Frequency and percentage distribution of level of attitude towards iodised and non-iodised salt among the householders.

The above table 2 shows that 81 (92%) had negative attitude and 7 (7.53%) had positive attitude towards iodised and non-iodised salt among the householders.

Table 3: Frequency and percentage distribution of level of practice of iodised and non-iodised salt among the householders.

| Variables | No. | % |
|---|-----|------|
| Name of the salt which you use in home | | |
| TATA salt | 77 | 82.8 |
| Ashirvad Salt | 7 | 7.5 |
| Himalayam pink salt | 4 | 4.3 |
| Others | 5 | 5.4 |
| What is the colour of salt which you use at home? | | |
| White | 84 | 90.3 |
| Pink | 6 | 6.5 |
| Grey | 3 | 3.2 |
| Black | - | - |
| How long you are using this particular salt | | |
| 1 year | 17 | 18.3 |
| Less than 1 year | 25 | 26.9 |
| Less than 5 years | 7 | 7.5 |
| More than 5 years | 44 | 47.3 |
| Place where salt is store | | |
| Exposed to sunlight | 10 | 10.8 |
| Near to fire in the kitchen | 31 | 33.3 |
| Far from sunlight and fire | 35 | 37.6 |
| Others | 17 | 18.3 |
| Type of container usually store your salt | | |
| In an open package | 3 | 3.2 |
| In container with lid | 70 | 75.3 |
| In container with closed lid | 3 | 3.2 |
| Others | 17 | 18.3 |
| Timing of adding the salt during food separation | | |
| At the beginning | 17 | 18.3 |
| In the middle | 55 | 59.1 |
| At the end | 19 | 20.4 |
| While eating | 2 | 2.2 |
| How much amount of salt which you use daily is | | |
| One tea spoon | 31 | 33.3 |
| One table spoon | 27 | 29.0 |
| Two table spoons | 27 | 29.0 |
| More than 2 table spoons | 8 | 8.6 |
| How you add the salt to your food? | | |
| By using spoon | 36 | 38.6 |

| Variables | No. | % |
|--|-----|------|
| By using bare hands | 22 | 23.7 |
| By measuring spoons | 14 | 15.1 |
| For adequate amount | 21 | 22.6 |
| How you use the salt | | |
| By powdered form | 74 | 79.6 |
| By dilution with water | 9 | 9.7 |
| By rock salt forms | 7 | 7.5 |
| Others | 3 | 3.2 |
| The sources of salt consumption other than cooked food | | |
| Preserved food and pickles | 38 | 40.9 |
| Chips and other fried items | 6 | 6.5 |
| Lemon with salt juices | 8 | 8.6 |
| All the above | 41 | 44.1 |

Table 4: Correlation between knowledge and attitude on iodised and non-iodised salt among the householders.

| Variables | Mean | S.D | Karl Pearson's Correlation Value |
|-----------|-------|------|-------------------------------------|
| Knowledge | 5.31 | 1.89 | r = 0.352 |
| Attitude | 23.48 | 4.15 | p = 0.001, S*** |

***p<0.001, S - Significant

The table 4 shows that the mean score of knowledge was 5.31 ± 1.89 and the mean score of attitude was 23.48 ± 4.15 . The calculated Karl Pearson's Correlation value of r = 0.352 between knowledge and attitude shows a moderate positive correlation which was found to be statistically significant at p<0.001 level. This clearly infers that when knowledge of iodised and non-iodised salt increases their attitude level also increases.

Discussion, summary, conclusion, implications, limitation and recommendations.

DISCUSSION

This chapter deals with the discussion of the study findings and comparing with appropriate review of literature, statistical analysis based on the objectives of the study. The aim of the present study was to correlate the level of knowledge and level of practice of iodised and non-iodised salt among households in lawspet area, Puducherry. The descriptive research design was conducted with 93 householders were selected by using convenience sampling technique. Self-structured Questionnaire and Likert rating scale were used in this study. The data was analysed by using descriptive statistics (Frequency, percentage wise distribution, mean and standard deviation), Karl

Pearson's Correlation Coefficient (Correlation) and inferential statistics (Chi-square value test). The data was analysed based on the objectives of the study. Distribution of Demographic variables of the study With respect to distribution of the subjects based on their age group out of 93 majority of the house holders, 40 (43%) were aged between 45–55 years. Sample distribution with reference to Gender shows that most of participants (65.6%) were female and (34.4%) were male. With respect to religion (95.7%) were Hindu, (2.2%) were Christian and others (2.2%).

Sample distribution with reference to their educational level (8.6%) were post graduate, (45%) graduate, 10.8% were higher secondary and (32.2%) were 10th qualified. With respect to their monthly income 11.8% earns & gt; 25000, 23.7% earns 25000, 55.9% earns 10000, and 8.6% were earns 5000. Sample distribution with reference to their type of family 74.2% were belongs to nuclear family and 25.8% were belongs to joint family. With respect to their socio economic status 10.7% were upper class, 84.9% were middle class, 4.4% were lower class. Sample distribution with reference to their types of house 7.5% were staying kaccha house, 92.5% were staying pucca house. With respect of occupation 43.0% were unemployed. 6.4% were doing business. 14% were govt. employees, and 36.6%

were working private sector. With distribution with reference to their place of residence 89.2% were from urban area, 10.8% were rural area. The data was analysed as per objectives stated: The first objective of the study was to assess the level of knowledge of iodised salt and non-iodised salt among households in lawspet area Puducherry. 54 (58.06%) had moderate knowledge, 33 (35.48%) had inadequate knowledge and 6 (6.45%) had adequate knowledge of iodised and non-iodised salt among the householders.

The second objective of the study to assess the level of usage of iodised salt and non-iodised households. Frequency and percentage distribution of level of attitude towards iodised and noniodised salt among the householders. Most of the householders, 77 (82.8%) were using TATA salt at home, 84 (90.3%) were using white colour salt at home, 44 (47.3%) were using the particular salt for more than 5 years, 35 (37.6%) had stored the salt far from sunlight and fire, 70 (75.3%) had used the salt in container with lid, 55 (59.1%) were adding the salt in the middle during food separation, 31 (33.3%) were using one tea spoon of salt daily, 36 (38.6%) had used spoon for adding the salt in their food, 74 (79.6%) were using the salt in powdered form and 41 (44.1%) had preserved food and pickles, chips and other fried items and lemon with salt juices as sources of salt consumption other than cooked items. The present study was supported Anbissa Muleta Senbeta, Firew Tafesse Mamo, Beruk Berhanu Desalegn & amp; Alemneh Kabita Daba (2021) conducted a study on "Knowledge and practices of iodized salt utilization, health consequences, and iodine concentration on dietary salts at retailer and households in Jigjiga town, Somali, Ethiopia". Total number of samples were 120 selected by using Two stage systematic random sampling technique. The data collected by using pre-tested and interviewer administered questionnaire. The data analysed by inferential and descriptive statistics. the study result discloses that Nearly 88% of households and 80% of retailers had iodized salt. However, only 31.1% and 30% of the households and retailer shops had adequately iodized salt, respectively. Three-fourth (75%) of the participants ever heard about iodized salt. Study concluded that, consistent and regular monitoring of iodized salt along the value chain should consider the availability and affordability The third objective of the study was relationship between knowledge and attitude on iodised and non-iodised salt among the householders.

The mean score of knowledge was 5.31 ± 1.89

and the mean score of attitude was 23.48 ± 4.15 . The calculated Karl Pearson's Correlation value of r = 0.352 between knowledge and attitude shows a moderate positive correlation which was found to be statistically significant at p & lt; 0.001 level. This clearly infers that when knowledge of iodised and non-iodised salt increases their attitude level also increases

The fourth objective of the study was to find an association of level of knowledge and attitude on iodised and non-iodised salt among the householders with selected demographic variables. The demographic variable socio economic status had shown statistically significant association with level of knowledge of iodised and non-iodised salt among householders at p & lt; 0.05 level and the other demographic variables had not shown statistically significant association with level of knowledge of iodised and non-iodised salt among householders.

The fifth objective of the study association of level of attitude on iodised and non-iodised salt among the householders with their selected demographic variables. The demographic variable income had shown statistically significant association with level of attitude of iodised and non-iodised salt among householders at p & lt; 0.05 level and the other demographic variables had not shown statistically significant association with level of attitude of iodised and non-iodised salt among householders.

SUMMARY

The objectives of the study were:

- To assess the level of knowledge of iodised salt and non-iodised salt among households.
- To assess the level of usage of iodised salt and non-iodised households.
- To find an association between level of knowledge of iodised salt and non-iodised salt among.
- households with selected demographic variables.
- To find an association between level of usage of iodised salt and non-iodised salt among households with selected demographic variables.

The review of literature and previous studies helped the researcher to develop the, tools, methodology of the study, literature review was done for the present study and presented under their following headings:

Section A: Reviews related to knowledge and practice on alternative medicine

The research approach adopted for the study was Quantitative in nature, the present study was conducted in selected area in Puducherry with 93 sample. A descriptive research design was used with convenience sampling technique to select the householders. Setting selected to conduct the study was lawspet area at Puducherry.

The target population in the study was all the householders in lawspet area, Puducherry. 93 samples were selected through convenience sampling technique. The tool used for this study was self-structured questionnaire and Likert rating scale.

Section A: Socio Demographic variable of householders: It included such as Age in years, Gender, Residence, Religion, Educational level, name the working hospital, quarantine details.

Section B: self-administered questionnaire for assessment of knowledge among householders. This tool was used to assess the level of knowledge on iodised and non-iodised salt among householders. Each question has four options and the correct answer carries one mark and wrong answer 0 mark. The total marks 10.

Section C: Likert rating Scale used to assessment of practice on alternative medicine among covid 19

positive nurses. The original Likert scale was introduced in 1932 by Rensis Likert, a psychologist who was interested in measuring people & #39; s opinions or attitudes on a variety of ideas. He developed a 7-point, bipolar agreement scale. It consists of 10 items related to practice of iodised and non-iodised salt. each item is answered on a five point Likert scale ranging from "Strongly Disagree" to "Strongly Agree". Each item assigned a value from 1 to 5, and sum of all questions varies from 1 to 50 points. Higher score indicates high satisfaction in use of iodised salt. Collected data are tabulated and analysed by using descriptive correlational and inferential statics.

MAJOR FINDINGS OF THE STUDY

Regarding demographic variables

- With respect to distribution of the subjects based on their age group out of 93 majority of the house holders, 40 (43%) were aged between 45-55 years.
- Sample distribution with reference to Gender shows that most of participants (65.6%) were female and (34.4%) were male. With respect

to religion (95.7%) were Hindu, (2.2%) were Christian and others (2.2%).

- Sample distribution with reference to their educational level (8.6%) were post graduate, (45%) graduate, 10.8% were higher secondary and (32.2%) were 10th qualified.
- With respect to their monthly income 11.8% earns & gt; 25000, 23.7% earns 25000, 55.9% earns 10000, and 8.6% were earns 5000.
- Sample distribution with reference to their type of family 74.2% were belongs to nuclear family and 25.8% were belongs to joint family. With respect to their Socio economic status 10.7% were upper class, 84.9% were middle class, 4.4% were lower class.
- Sample distribution with reference to their types of house 7.5% were staying kaccha house, 92.5% were staying pucca house.
- With respect of occupation 43.0% were unemployed. 6.4% were doing business. 14% were govt. employees, and 36.6% were working private sector.
- With distribution with reference to their place of residence 89.2% were from urban area,10.8% were rural area.

Regarding level of knowledge of iodised salt and non-iodised salt among households in lawspet areaPuducherry. 54 (58.06%) had moderate knowledge, 33 (35.48%) had inadequate knowledge and 6 (6.45%) had adequate knowledge of iodised and non-iodised salt among the householders.

Regarding the level of usage of iodised salt and non-iodised households in laws pet area Puducherry. 77(82.8%) were using TATA salt at home, 84(90.3%) were using white colour salt at home, 44(47.3%) were using the particular salt for more than 5 years, 35(37.6%) had stored the salt far from sunlight and fire, 70(75.3%) had used the salt in container with lid, 55(59.1%) were adding the salt in the middle during food separation, 31(33.3%) were using one tea spoon of salt daily, 36(38.6%) had used spoon for adding the salt in their food, 74(79.6%) were using the salt in powdered form and 41(44.1%) had preserved food and pickles, chips and other fried items and lemon with salt juices as sources of salt consumption other than cooked items.

Regarding Correlation between knowledge and attitude on iodised and non-iodised salt among the householders. The mean score of knowledge was 5.31±1.89 and the mean score of attitude was 23.48±4.15. The calculated Karl Pearson's Correlation value of r=0.352 between knowledge and attitude shows a moderate positive correlation which was found to be statistically significant at p & lt; 0.001 level. This clearly infers that when knowledge of iodised and non-iodised salt increases their attitude level also increases regarding Association of level of knowledge and attitude on iodised and non-iodised salt among the householders with selected demographic variables. The demographic variable socio economic status had shown statistically significant association with level of knowledge of iodised and non-iodised salt among householders at p & lt; 0.05 level and the other demographic variables had not shown statistically significant association with level of knowledge of iodised and non-iodised salt among householders.

Regarding Association of level of practice and level of attitude on iodised and non-iodised salt among the householders with their selected demographic variables. The demographic variable income had shown statistically significant association with level of attitude of iodised and non-iodised salt among householders at p & lt; 0.05 level and the other demographic variables had not shown statistically significant association with level of attitude of iodised and non-iodised salt among householders.

CONCLUSION

The study concludes that overall householders had moderate to inadequate knowledge on iodised and non-iodised salt. This clearly describe that when knowledge about iodised and non-iodised salt increases their attitude level also increases. So as a nurse we can improve the knowledge level on iodised and non-iodised salt and help them to increases the practice of iodised salt. Researcher recommends more studies can be conducted in different population. The different studies can be conducted in healthcare professionals who is proclaim care to the patients.

IMPLICATIONS

The findings of the study had presumption, proposal and recommendation for different branches of nursing profession

- Nursing practice
- Nursing education
- Nursing research

NURSING PRACTICE

- In the areas of nursing practice, nurses need to update their knowledge on nutritional importance of iodised salt.
- As nursing practice, nurses have to promote the general public for using iodised salt.
- Nurses can able to identify the needs of the patients and they can render the services to needy people.

NURSING EDUCATION

- Nursing curriculum needs to get more focus on importance of iodised salt.
- Nursing students should be skilled with identification of iodised salt.
- Students should be encouraged to care the patients on iodine deficiency disorders.

NURSING ADMINISTRATION

- All nursing organizations should conduct iodine programmes to promote the alternative system of medicine.
- Nursing administration can motivate the staffs who are working in community area to advance practice of alternative system of medicine.
- Nursing administration should organize some in-service educational programme to upgrade knowledge on importance of iodised salt.

NURSING RESEARCH

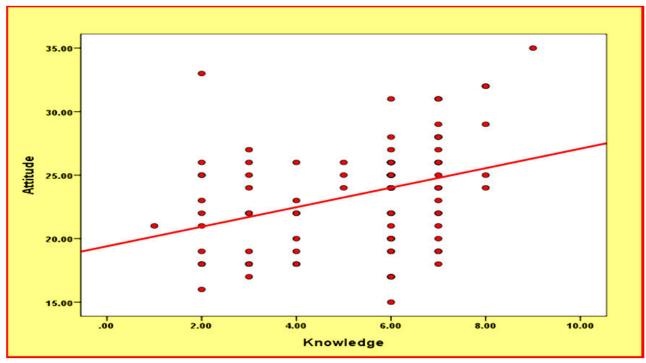
- Need to conduct more research on impact of the usage of iodised salt.
- Generalized of study result by conducting large number of samples.
- The findings of the study can be useful for new concept of further research
- The study can be conducted to compare with different age group of people.

LIMITATION

During the data collection, due to pandemic lack of personalisation with the households.

RECOMMENDATIONS

A similar study can be conducted in other regions of country. Justification of the study may be done with large sample in different setting to generalize findings.



Scatter Dot diagram showing the correlation between knowledge and attitude on iodised and non-iodised salt among the householders (r=0.352)

Table 5: Association of level of knowledge on iodised and non-iodised salt among the householders with their selected demographic variables. N = 93

| Domographic Variables | Inadequate | | Moderate | | Adequate | | Chi-Square |
|-------------------------------|------------|------|----------|------|----------|-----|------------------------|
| Demographic Variables - | No. | 0⁄0 | No. | % | No. | % | Value |
| Type of socio economic status | | | | | | | χ ² =14.752 |
| Upper class | 2 | 2.2 | 7 | 7.5 | 1 | 1.1 | d.f=4 |
| Middle class | 30 | 32.3 | 46 | 49.5 | 3 | 3.2 | p=0.005 |
| Lower class | 1 | 1.1 | 1 | 1.1 | 2 | 2.2 | S** |

*p<0.05, S - Significant, N.S - Not Significant

The table 5 shows that the demographic variable socio-economic status had shown statistically significant association with level of knowledge of iodised and non-iodised salt among householders at p<0.05 level.

Table 6: Association of level of attitude on iodised and non-iodised salt among the householders with their selected demographic variables.

| | | | | | | | N = 93 |
|--------------------------|--------------|------|-------------------------|------|-------|------------|------------------------|
| Demographic Variables – | Unfavourable | | e Moderately Favourable | | Favor | Favourable | |
| | No. | 0⁄0 | No. | 0/0 | No. | 0⁄0 | Value |
| Monthly income of family | | | | | | | χ ² =17.180 |
| 5000 | 3 | 3.2 | 4 | 4.3 | 1 | 1.1 | d.f=6 |
| 10000 | 15 | 16.1 | 36 | 38.7 | 1 | 1.1 | p=0.009 |
| 25000 | 6 | 6.5 | 15 | 16.1 | 1 | 1.1 | S* |
| >25000 | 1 | 1.1 | 6 | 6.5 | 4 | 4.3 | |

*p<0.05, S - Significant, N.S - Not Significant

The table 6 shows that the demographic variable income had shown statistically significant association with level of attitude of iodised and non-iodised salt among householders at p<0.05 level and the other demographic variables had not shown statistically significant association with level of attitude of iodised and non-iodised salt among householders.

CONCLUSION

These study findings revealed that majority of householders were inadequate knowledge and adequate intake of salt. Researcher play a major role in imparting knowledge about IDD and iodised salt to public and also distributed pamphlets to create awareness to public the importance of Iodized salt and prevention and management of Iodine deficiency disorders.

REFERENCES

- The Lancet (12 July 2008). "Iodine deficiency way to go yet". The Lancet. 372(9633): 88. doi:10.1016/ S0140-6736(08)61009.
- Institute of Medicine, Food and Nutrition Board. Dietary Reference Intakes for Vitamin A, Vitamin K, Arsenic, Boron, Chromium, Copper, Iodine, Iron, Manganese, Molybdenum, Nickel, Silicon, Vanadium, and Zinc Washington, DC: National Academy Press, 2001.
- Diosady, L. L., and M. G. Venkatesh Manner. "Stability of iodine in iodized salt". 8th World Salt Symposium. Amsterdam: Elsevier. 2000.
- 4. UNICEF. Coverage Evaluation Survey 2009, All India Report. Ministry of Health and Family Welfare, Government of India, New Delhi. 2010.

[Last accessed on 2015 Sep 27]. Available from: http://www.unicef.org/india/health.html.

- 5. https://timesofindia.indiatimes.com.
- Mohammad Asadul Habib , Mohammad Rahanur Alam, Susmita Ghosh, Tanjina Rahman, Sompa Reza, Sumaiya Mamun "Impact of knowledge, attitude, and practice on iodized salt consumption at the household level in selected coastal regions of Bangladesh.DOI: 10.1016/j.heliyon.2021.e06747.
- 7. Organization, WHO. 2007. Assessment of Iodine Deficiency Disorders and Monitoring Their Elimination: a Guide for Programme Managers. [Google Scholar]
- Jooste P.L., Weight M.J., Lombard C.J. Iodine concentration in household salt in South Africa. Bull. World Health Organ. 2001;79:534–540. [PMC free article] [PubMed] [Google Scholar]
- Ritu Rana, Rita Singh Raghuvanshi "Effect of different cooking methods on iodine losses. DOI:10.1007/s13197-011-0436-7.
- World Health Organization. United Nations Children's Fund & International Council for the Control of Iodine Deficiency Disorders. Assessment of iodine deficiency disorders and monitoring their elimination. 3rd ed. Geneva, Switzerland: WHO, 2007.
- 11. National family health survey.2020.
- 12. Kapil U, Ramachandran S, Tandon M.Assessment of Iodine Deficiency in Pondicherry.Indian Journal of Paediatrics 1998; 35:357-59.
- 13. Anbissa Muleta Senbeta, Firew Tafesse Mamo, Beruk Berhanu Desalegn & Alemneh Kabita Daba(2021)conducted a study on "Knowledge and practices of iodized salt utilization, health consequences, and iodine concentration on dietary salts at retailer and households in Jigjiga town, Somali, Ethiopia