

## Knowledge and Attitudes of People in Zanjan about Iodine Disorders

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**Abstract: Introduction:** Iodine is a trace and essential element for human health. Iodine deficiency disorders are a major problem and a health priority in Iran. In order to prevent and combat of this problem, it looks that the promotion of awareness of proper hygiene practices are essential. The most dangerous aspect of personal and social effects of iodine deficiency and the motivation for evaluation the knowledge of women attitudes about these disorders were done in this study in 2011. **Method:** With a multi-stage random selection, 72 women whom referred to health centers household in the winter of 2011 in Zanjan were studied by descriptive methods. After collecting data through face to face discussion and necessary statistical calculations, the knowledge and attitudes were assessed. **Results:** 73.6 percent of units have somewhat favorable awareness and 70.8% of them had the right attitude. Most awareness and increasing the knowledge of population about the disorders were done on the radio and television (29.2 percent). There are a significant relation between consciousness and awareness status, occupation, awareness and education, and education and awareness of spouses in catching a goiter. Also in attitude part except in marital status there wasn't any relationship between other cases. **Conclusions:** Low levels of Iodine Deficiency Disorders Awareness and attitudes are the most important health problems in the community which was studied, thus effectively improving training programs should be designed and implemented.

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### Introduction:

Side effects of a bad diet not only would reduce the manpower but also would increase the number of overhead. Nowadays a group of symptoms that may threaten human health are due to the lack of full and timely supply of minerals which are needed to the body. More than two billion people in the world (mostly women and children) are afoul with one or more nutrient deficiencies (iron, iodine, vitamins A and D). Iodine (IDD) is a trace element that is very minor but it is very essential for humans. (1) Iodine deficiency (IDD) is one of the major public health problems in the world. Due to the creepy and quiet outbreaks of IDD and its pervasive, often severe problem in developing countries has not been considered.

IDD that is created in long-term by a lack of Iodine can cause thyroid function and disrupt Depending on the duration and severity of the deficiency, and might have effects on changes in the body that is called IDD. (2) Years ago it was thought that iodine deficiency would just cause goiter but nowadays goiter and Kritizom Tare known as the peak of iceberg. (3) Individual effects of IDD in fetal period, childhood and adolescence and adults are updated as follows:

Utero (fetus period): abortion, birth of a dead fetus, mother born dissonance, increased infant mortality, movement disorders - mental retardation, hypothyroidism, Bilateral paralysis, deafness, dumbness, mental retardation.(4) Childhood and adolescence: goiter, hypothyroidism, mental and physical growth retardation. Adults: goiter, hypothyroidism, mental disorders (4). All ages: goiter, hypothyroidism, impaired mental function, increased susceptibility to damage caused by nuclear radiation (4)

Iodine deficiency nowadays causes growth retardation and the most common cause of preventable brain damage in the world that nearly 2 billion people (38% of the total world population) of 130 countries in the world are at risk (3). The Social opinion shows that mental and physical defects in a population causes decrease Performance and increase the population of retarded people whom are dependent to others (4).

Overall, 36/5 percent of children in the world (285 million people) do not get enough iodine. 96 million children in Southeast Asia, 50 million children in Africa, 40 million children in Europe, 40 million children in the Eastern Mediterranean and 10 million American children are faced with iodine deficiency.

As a result, iodine deficiency is still a public health problem in 54 countries and a population of

about 2 billion people worldwide is at risk. Only 43 countries have an adequate iodine supply to communities.

So to cover the population which is at risk of iodine deficiency, Continuity of program activities in order to fight against iodine deficiency and intensify iodized salt program is essential to eradicate IDD (2). One of the most effective levers for disease prevention is health education. This method is also introduced to combat IDD. IDD is easily preventable and the use of iodized salt is commonly used for this purpose (5).

Iodized salt and using iodized oil solution are two major methods to Control and Prevention of IDD. Iodized salt is the most convenient and least costly method but in remote areas, especially in areas with severe iodine deficiency, Intramuscular injection of iodized oil solution can be supply 3 to 5 years and oral capsules for a year, the body's enough iodine (3).

Consumption of iodized salt needs informed behavior about the continuation of abuse. Public awareness about the importance of IDD and iodized salt is one of the goals of the national committee with specific strategies (production and distribution of iodized salt and training), thus, increasing public awareness and consumption of iodized salt is more important than it used consciously and continuously. (5) In order to determine the prevalence of goiter and urinary iodine monitoring 10-8 year students in all provinces, endemic or hyper endemic goiter was found (4).

The Zanjan city is also known as endemic goiter that increasing the awareness of the community is essential, because the awareness of community prevention programs will accelerate the effectiveness of prevention programs. Designing a comprehensive training program on IDD calls to collect field data to define problems and formulate goals.

The motivation of the present study was designed to question the women of the household and the state public health authorities and The steps to change their behavior and adopt a conscious behavior, it continuing to ultimate goals of the National Committee (and to prevent the use of iodized salt IDD) lifted And control problem for improving social and economic conditions are effective.

### Materials and Methods

The Zanjan city as it is also named Zanjan Plateau is located in central and northwestern parts of the country. This city is nearby with seven cities such as Ardabil, East Azerbaijan, Hamedan, Kurdistan, West Azerbaijan, Gilan, and Qazvin. Capital of this city is Zanjan which has highland climate (6).

This study is a descriptive study that is done on 72 women referred to health centers in Zanjan in the winter of 1390 through face to face interview. The

sample size was 72 patients that were gathered as stratified and cluster sampling method according to the number of existing centers. In order to collect data the face to face interview is used. Data were collected in the questionnaire. The questionnaire contained 53 questions and was organized in three parts. The first section included questions about socio-demographic characteristics (10 questions), the second part of the study was to determine the awareness of iodine deficiency disorders (28 questions) and the third with 15 units of the regulatory criteria to determine attitudes was associated with the topic.

The purpose of this study, the point is that the units of study designed to answer questions on the knowledge gained. 82 points were assigned for general knowledge questions. The scores of the subjects were divided into three groups:

- 1- Good knowledge (gained 75 to 100% of rated)
- 2- Somewhat favorable awareness (gain 50 to 74.9 percent awareness rating)
- 3 - Knowledge undesirable (earn less than 50% of rated)

The point of view is that the units of the scheme in terms of commenting on the attitude of the subject gained. Overall 15 attitude points was devoted to the study of the attitude scores were divided into three groups:

- 1 - The right attitude (earn 75 to 100 percent rating outlook)
- 2- Somewhat appropriate attitude (win 50 to 74.9 percentage point's attitudes)
- 3 - Bad Attitude (gain of 50 percentages less attitude)

The social demographic issues such as age, marital status, number of children, employment status, mother's education, husband's education, husband's occupation, and source of catching a goiter was logged.

Before starting to do this research, first we received permission of Zanjan University of Medical Sciences. For data analysis, SPSS software version 16 was used. Statistical methods included frequency tables, Pearson chi-square test (CHI-SQUARE). (Frequency, Pearson Chi-square test)

### Results:

The mean age of the subjects was 30 years. 38.9 percent had a diploma degree and 37.5 percent had a high diploma degree. 45.8 percent were single and 45.2 percent were married. 54.2% of the women whom were referred to clinics had no children, 16.7 of them had one child and 15.3 percent had two children. 63.9% of them were employed, and 36.1 percent were housewives.

76.4 percent of those women were pregnant 4.2% of them were lactating and 8.3 percent were in reproductive age.

22.2 percent Spouses had a fixed job and 43.1 percent were self-employed. 95.8% of them didn't mention a history of catching a goiter, and most of the subject's knowledge and disorders of iodine was through radio and television (29.2 percent) (Table 1).

Mean and standard deviation scores of the subjects ( $57.3 \pm 9.3$ ) and the mean and standard deviation of the attitude score ( $27 \pm 3.4$ ), respectively. State of consciousness Subjects were largely favorable (Table 2).

Using the Pearson correlation coefficient between age and knowledge scores ( $p=0.708$ ) and attitude scores ( $p=0.730$ ) haven't observed any correlation. Between awareness and marital status ( $p=0.000$ ) and occupation ( $p=0.000$ ) There is significant relationship. Data analysis revealed that there is no significant relationship between knowledge and the status of women (pregnant, breastfeeding, pregnancy, age, etc.) ( $P=0.064$ ).

But between the awareness and education and spouse's education, there is a significant correlation ( $p=0.000$ ) and also based on Chi-square test, there is no significant relationship between the conscious ( $p=0.692$ ) and the knowledge and resources information ( $p=0.033$ ) and the incidence of goiter ( $p=0.198$ ) there is significant relationship.

Except in attitudes about sex and marital status there is no significantly related to the other.

### Discussion:

This study is a descriptive study that is done on women referred to health centers about Iodine deficiency disorders in Zanjan in the 2011 in descriptive - cross sectional study.

In the study about knowledge and attitude on iodine deficiency disorders the result shows that low levels of awareness and attitude are exists. Thus the need for continuous training and effective community study in the field of iodine deficiency disorders to enhance their awareness and attitude is felt.

Although studies on attitudes and awareness about IDD in Iranian society, went back to some years ago. This study was conducted for the first time in Zanjan. Previous studies show that knowledge of the housewives in Tehran was about 39% in a very low rate and 47% in a moderate rate and only 14% had good knowledge about goiter. The attitude also was about 38 percent in an average rate and 38 percent in a moderate rate and 39 percent in good rate and 23% percent in a very good rate. (7)

In another study which was done by the Department of Health, Ministry of Health and Medical Education of Iran. It was shown that about 91 percent of the urban population and about 71 percent of the rural

population had a good knowledge in the field of IDD and iodized salt (8).

In this study which was done in Tabriz shown that studied mothers had a low knowledge and attitudes (Less than one-third of them have a good knowledge and good attitude) in the field of child feeding with breast milk and supplementary foods that have been identified (9).

In the present study, the major source of information to study was radio and television. The results of this study with the results of other studies in Tehran have been the same and 60 percent of people have received their information via radio and TV (8).

In another study which was conducted in Tehran 20.8 percent of the participants have received information about IDD via radio (9)

Therefore, media is the most effective facility for informing the public from the benefits of iodized salt and complications of iodine deficiency.

This study suggests that increasing the awareness has also changed the people's attitudes. In this context, the results of this study are consistent with results of other studies.

There was a significant dependence between the marital statuses and awareness of subjects about IDD. There was a significant association between the marital statuses and attitudes of subjects about IDD.

It seems that life conflicts and problems such as child education and lack of opportunities and vacancies have prevent our population to keep information and participation in training programs and tracking issues regarding IDD, therefore single people had the opportunity to get more involved.

According to given responsibilities to married person like preparing family meals and also take steps for special education and physiological such as (pregnancy, breastfeeding, parenting) that these stages are more sensitive to iodine deficiency, therefore an ongoing training and raising awareness are really necessary for married people so the Priority of married people are more stressed.

In this study, there are a significant relation between awareness and education and spouse's education. Illiteracy will cause ignorance of the public and this phenomenon regardless of significant critical social aspects; will cause Non-compliance with health problems at the top, in a study about the knowledge of Mothers on infant feeding practice on 120 mothers showed that there is a significant relation between Increasing the level of awareness and their nutritional information among mothers, (10) which is consistent with current research.

In the study of Fesharki Nia and colleagues by increasing the level of education, level of consciousness was significantly preferred (11).

Table1. Relative frequency distribution of subjects according to their source of information about IDD- Zanjan 1390

Relative abundance	Frequency abundance	Abundance
		Source of information
16.7	12	relatives
6.7	7	Poster
29.2	21	Radio/ TV
20.8	15	Doctor
22.2	16	Books and magazines
1.4	1	Unknown
100	72	sum

Table2. Distribution of the subjects according to the knowledge and attitude of abundance - Zanjan 2011

Attitude		attitudes	Knowledge		Status of knowledge
Relative	Absolute		Relative	Absolute	
11.1	8	Inappropriate	2.8	2	Inappropriate
70.8	51	Somewhat favorable	73.6	53	Somewhat favorable
18.1	13	Proportional	23.6	17	Proportional
100	72	sum	100	72	sum

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