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### REVIEW ARTICLE

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## The Concept and Attitude of Goiter Patients Regarding the Goiter, at Al Mesiktab Community, Sudan, August-2016

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### ABSTRACT

*This study is descriptive cross-sectional study, was conducted in Al Mesiktab area, north of Shendi city, Sudan, august, 2016, to know the concept and attitude of Goiter patients regarding Goiter. This study took the entire available patients (65) sample, during the time of data collection. The information was collected through the questionnaire and then analyzed by (Spss) program, and results presented in table and graphs.*

*The findings of this study were the lack of knowledge about important of nutrition, iodine salt and sea foods in occurrence of goiter and its complications, as find in the following:*

*Majority of patients have local neck symptom of goiter and diffuse goiter. Regarding the goiter is so large as to cause symptom by stretching or compressing adjacent structure in two thirds of patient. About the size of goiter 52% of the patients consider this size is constant. This study shows that 71% of patients have signs and symptoms of hypothyroidism, and about 62% of patients done hormonal test. Regarding the type of treatment patients taken 72% of patients take medications, and 63% of patients have family history of goiter. Regarding the use of diet with supplements or iodized salt 83% of patients does not use it, and about taken of sea foods 78% of patients take it.*

*This study recommended that, the establishment of lectures that give more information about goiter to the local community in Al Mesiktab area, Shendi locality, from the health workers (doctors, nurses, and health officers) through the mass media such as describes the provision of the means of etiology and prevention of goiter and provide information about important of treatment of goiter.*

**Keywords:** Goiter Patients, Medications, Hypothyroidism and Prevention.

## INTRODUCTION

The term "goiter" simply refers to the abnormal enlargement of the thyroid gland. It is important to know that the presence of the goiter does not necessarily that the thyroid gland is malfunctioning. A goiter can occur in a gland that is producing too much hormone (hyperthyroidism), to little hormone (hypothyroidism), or the correct amount of hormone (euthyroidism). A goiter indicates there is a condition present which is causing the thyroid to grow abnormally.

A goiter is the swelling of the neck or larynx resulting from enlargement of the thyroid gland (thyromegaly), associated with a thyroid gland that is not functioning properly. Worldwide, over 90% of goiter cases are caused by iodine deficiency. Enlargement of the thyroid (goiter) is relatively common.

Goiter refers to enlargement of the thyroid gland, it can enlarge when it is inefficient in making thyroid hormones, inflamed, or occupied by tumors. Thyroid gland enlargement can be generalized and smooth, so called diffuse goiter; or it can become larger due to growth of one or more discrete lumps (nodules) within the gland, a nodular goiter.

Most goiters are caused by not enough iodine in the diet. Iodine is a substance found in shellfish and iodine salt. Enlargement of the thyroid gland that may increase from about 20 grams to hundreds of grams in human adult.

Goiters can affect anyone. They may be present at birth and occur at any time throughout life, although they're more common after age 40. Some common risk factors for goiter include: 'a lack of dietary iodine, being female, your age, medical history, pregnancy and menopause, certain medications, and radiation exposure.

A goiter may be associated with a hyperthyroid, hypothyroid, or euthyroid state. Goiter that occurs with hyperthyroidism is sometimes called a toxic goiter. Once the cause of the goiter is removed, the gland usually returns to normal size.

Some foods and medications are goitrogens. These substances interfere with the body's use of iodine and include such foods as turnips, cabbage, broccoli, horseradish, cauliflower, and carrots. Some goitrogenic medications include propylthiouracil, sulfonamides, lithium, and salicylates (aspirin). There is not very much that you can do to prevent goiter other than to pay attention to your diet.

### **Objective of the study**

To identify the concept and attitude of Goiter patients regarding the Goiter, at Al Mesiktab Community.

## MATERIAL AND METHODS

**Study Design:** This is descriptive cross-sectional community based study, conduct from August to December 2016.

**Study Area:** Al Mesiktab Area which is located northern Shendi city, in the river Nile State, Sudan, most of its population are farmers.

**Study Population:** This study includes the patients of Goiter in Al Mesiktab Area.

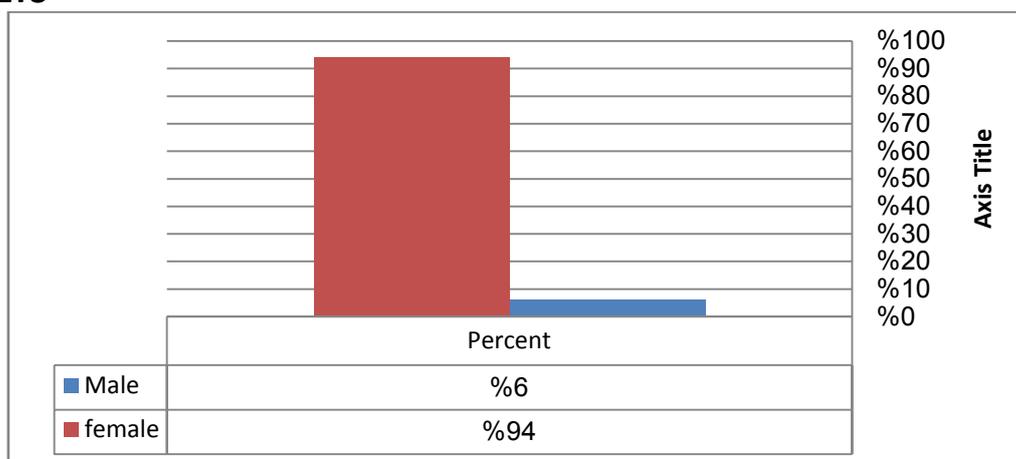
**Study Sampling:** All available patients of Goiter, during the time of data collection were included in the study, (65) patients, 61 of them were female and 4 were male. Patients were not found at that time in the area were excluded.

**Data Collection Tools:** Data was collected by questionnaire which contains 25 questions, which was included closed and open questions.

**Data Analysis:** Data was analyzed by using Statistical Package for Social Science (SPSS), and the results were presented in forms of tables and figures.

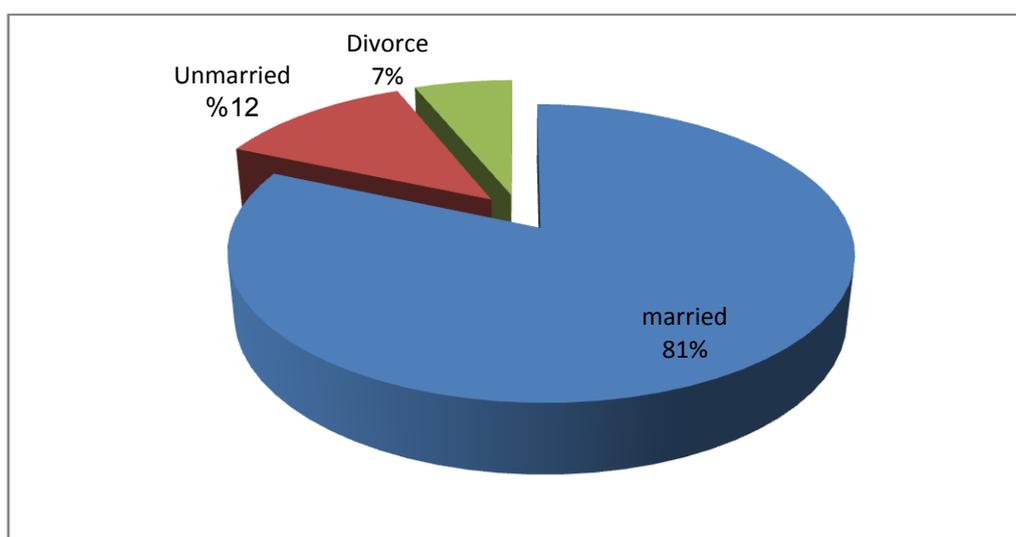
**Ethic Consideration:** The study was approved to be conducted by the research institute board of the faculty. Permission has been taken after explanation clearly and verbally to the responder and the information should be used only for the purpose of the study.

## RESULTS



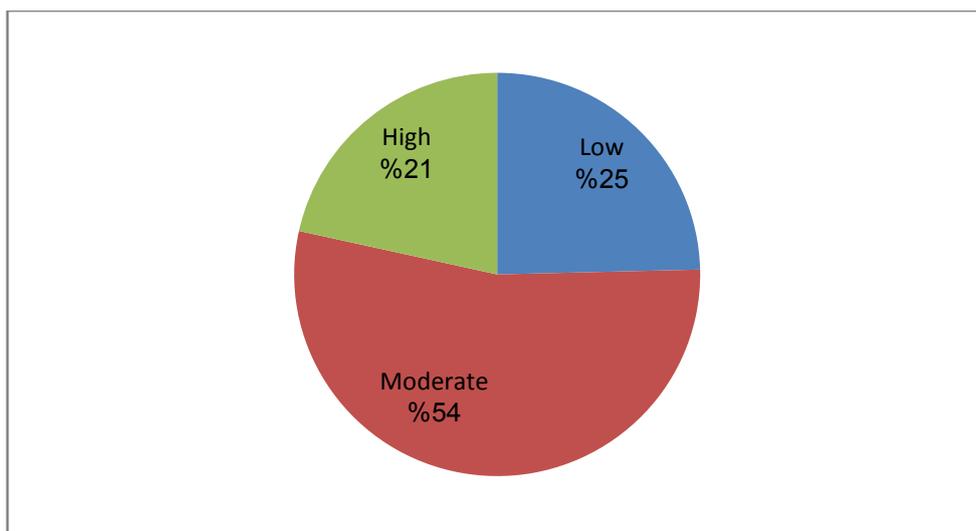
**Figure 1. Distribution of study groups according to gender.**

The above figure showed that 94% of patients are female and 6% male.



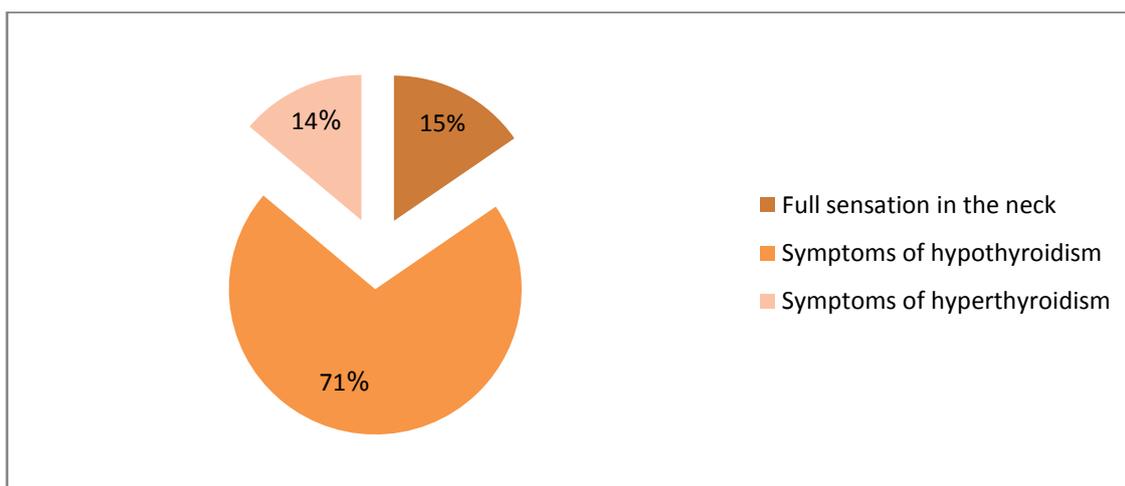
**Figure 2. Distribution of study groups according to marital status.**

The above figure shows that 81% of patients are married, 12% are unmarried and 7% are divorce.



**Figure 3. Distribution of study groups according to income.**

The above figure showed that 53% of patients income is moderate, 25% of patients income is low and 22% of patients income is high.



**Figure 4. Distribution of study group according to the knowledge of signs and symptoms of goiter occurred to patients.**

The above figure shows that 71% of patients have symptoms of hypothyroidism, 15% of patients have full neck sensation and 14% of patients have symptoms of hyperthyroidism.

**Table 1. Distribution of study group according to meet doctor once goiter appearance.**

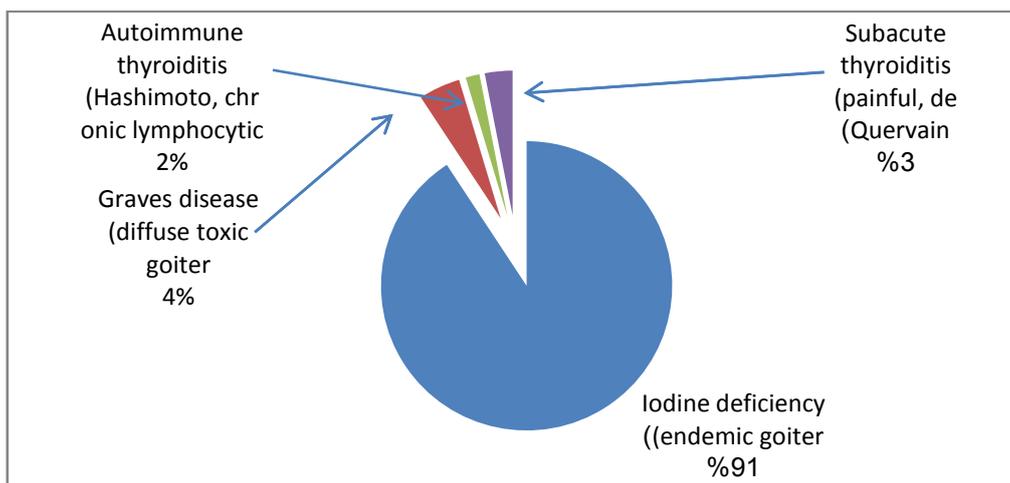
	Frequency	Percent
Yes	64	93%
No	1	7%
Total	65	100%

The above table shows that 93% of patients go to doctor once goiter appearance and 7% of patients do not go to doctor once goiter appearance.

**Table 2. Distribution of study group according to have local neck symptom of goiter**

	Frequency	Percent
Yes	61	94%
No	4	6%
Total	65	100%

The above table shows that 94% of patients have local neck symptom of goiter and 6% of patient's have local neck symptom of goiter

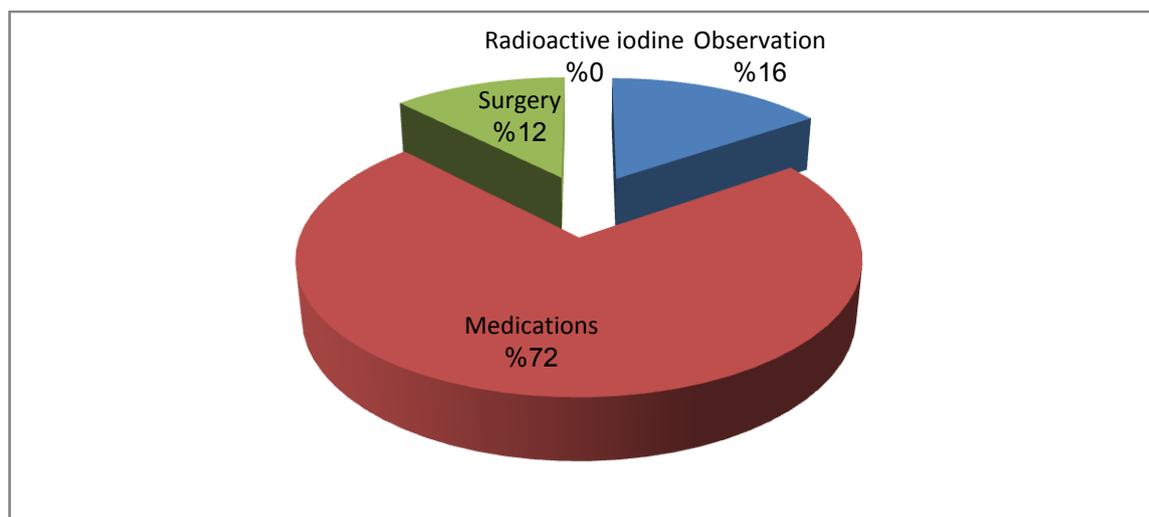
**Figure 5. Distribution of study group according to the types of goiter in patients.**

The above figure showed that 91% of patient's have Iodine deficiency goiter, 4% are graves disease goiter, 3% are subacute thyroiditis goiter and 2% are autoimmune thyroiditis goiter.

**Table 3. Distribution of study group according to sizes of goiter in patients.**

	Frequency	Percent
Class I (palpation goiter): in normal posture of the head, it cannot be seen; it is only found by palpation	2	3%
Class II: the goiter is palpable and can be easily seen	45	69%
Class III: the goiter is very large and is retrosternal; pressure results in compression marks	18	28%
Total	65	100%

The above table shows that 3% of patients have class I goiter size, 69% of patients have class II goiter size and 28% of patients have class III goiter size.



**Figure 6. Distribution of study group according to type of treatment taken by patients.**

The above figure shows that 72% of patients take medications, 16% of patients just under observation, 12% of patients done surgery to remove the goiter and no patient takes radioactive iodine to treat the goiter.

**Table 4. Distribution of study group according to knowledge of patients about the nutrition has relation to occurrence of goiter.**

	Frequency	Percent
Yes	29	45%
No	36	55%
Total	65	100%

The above table show that 45% of patients nutrition has relation to occurrence of goiter and 55% are not.

**Table 5. Distribution of study group according to taken of sea foods.**

	Frequency	Percent
Yes	51	78%
No	14	22%
Total	65	100%

The above table show that 78% of patients take sea foods and 22% are not.

**Table Number 6. Distribution of study group according to use complementary medicine**

	Frequency	Percent
Yes	13	20%
No	52	80%
Total	65	100%

The above table show that 20% of patients use complementary medicine and 80% are not.

**Table Number 7. Distribution of study group according to have family history of goiter**

	Frequency	Percent
Yes	41	63%
No	24	37%
Total	65	100%

The above table show that 63% of patients have family history of goiter and 37% are not.

**Table 8. Shows correlation of education level with patient use of diet with supplements or iodized salt.**

The education level		The patient use of diet with supplements or iodized salt		Total	P value
		Yes	No		
Literacy	Count	0	11	11	.001
	% of Total	0.0%	16.9%	16.9%	
Primary	Count	5	25	30	.001
	% of Total	7.7%	38.5%	46.2%	
Secondary	Count	0	13	13	.006
	% of Total	0.0%	20.0%	20.0%	
University	Count	6	5	11	
	% of Total	9.2%	7.7%	16.9%	
Total	Count	11	54	65	
	% of Total	16.9%	83.1%	100.0%	

P value = .001

## DISCUSSION

This study was conducted in to the patients in Al Mesiktab community from August to December of patients having goiter, the study involves 61 female (94%) and 4 male (6%), this result agrees with <sup>(4)</sup>, "because women are more prone to thyroid disorders, they're also more likely to develop goiters. For reasons that aren't entirely clear, thyroid problems are more likely to occur during pregnancy and menopause".

The cause of goiter is iodine deficiency in (91%) of patients. "Worldwide, over 90% cases of goiter are caused by iodine deficiency", as found in.

Regarding the age of patients have goiter, found that near to half of patient (46%) of goiter between ages 46-60 year, This result goes with "Once you reach your 50s, you are at a higher risk of goiter".

Most of patients (94%) have local neck symptom of goiter. "Thyroid gland is enlarged, and swelling may be apparent at the base of the neck", as found in.

Regarding the goiter is so large as to cause symptom by stretching or compressing adjacent structure more than two thirds of patients (68%) were have, and about one third (32%) does not have, these results go with, "Growth of the goiter would have to be extensive to cause direct tracheal compression".

This study shows that more than half of patients (63%) have family history of goiter and more than one third (37%) does not have family history of goiter, A family history with autoimmune diseases is another significant risk factor, as found in.

Regarding the use of diet with supplements or iodized salt most of patients (83%) does not use and just 17% of patients use it, and this result disagrees with, "If iodine deficiency is a problem, it is added to the diet with supplements or iodized salt". About take of sea foods majority of patients (78%) take it and 22% does not taken. "The sea foods, particularly shellfish and shrimp, are rich in iodine", as found in.

There was high significant between the educational level of patients and use of diet with supplements or iodine salt, because the P value is less than 0.05 ( $P=0.001$ ).

## CONCLUSION

This study show that the patients of both genders have goiter, they can affect anyone and most common in adult patients and extend or long period, but the goiter in this study is more occurs in female (94%) than male (6%). The most common causes of goiter are iodine deficiency.

Majority of patients have local neck symptom of goiter and diffuse goiter. Regarding the goiter is so large as to cause symptom by stretching or compressing adjacent structure two thirds of patient (68%) were have.

About the size of goiter 52% of the patient the size of goiter is constant.

This study shows that 71% of patients have signs and symptoms of hypothyroidism and about 62% of patients done hormonal test.

Regarding the type of treatment patient taken 72% of patients taken medications to treat goiter and 63% of patients have family history of goiter.

Regarding the use of diet with supplements or iodized salt 83% of patients does not use and about take of sea foods 78% of patients take it.

## RECOMMENDATIONS

- This study recommended the following:-
- Establishment of lectures that give more information about goiter to the local community in Al Mesiktab area and Shendi locality, from the health workers (doctors, nurses, health officers) through the mass media such as describes the provision of the means of etiology and prevention of goiter and provide information about important of treatment of goiter to prevent or reduce complications of goiter.
- Patients should know and observe the signs and symptoms of goiter, and refer or follow up with the doctor in the health services to take the suitable treatment.
- The patient should know the important of iodine salt and sea foods to prevent themselves from the development of goiter.

## ACKNOWLEDGMENTS

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