

Assessment of Thyroid Disease in Females of Reproductive Age: Goiter

Mr. Yash Sunil Pol and Ms. Darshana Laxman Sogal

M.Sc.II, Department of Zoology, M.M. College of Arts, N.M Institute of Science & H.R.J. College of Commerce, Bhavan's College (Autonomous), Andheri West, Mumbai

Abstract: Iodine is the micronutrient and inadequacy of iodine is one of the most crucial issues going worldwide. Female's during the reproductive age group are prone to undergo iodine inadequacy as there is a high requirement for iodine specifically during pregnancy. The intention is to analyze and summarize the goiter and its relationship with the iodine status and salt utility practices among the female of the sexual period group. The survey was done on the females with the help of questionnaire and circulated. Area was randomly covered to the population size of the different age groups. The grades given for the goiter disease was according to criteria given by the WHO. 23% women are suffering from goiter disease. They have a myth of curing the disease with supplements and medication as they are going into a wrong pathway. Females are 24 × 7 working the stress level lack of nutrient intake can lead to goiter. Survey is to spread awareness about the goiter disease and draw their attention to observe any of the changes that have been occurring in them so that they can give some attention to themselves.

Keywords: Goiter, Females, Reproductive Age, Awareness.

I. INTRODUCTION

Iodine deficiency is an important health disorder that has been noticed in the people of Mumbai and is drastically increasing day by day. In very minute quantities, iodine is found in the soil and is an important element of thyroid hormone related to integrating important processes in the body called metabolic processes similar to those for the betterment of bodily function, specifically in the cranial region. It is a basic compound that a human body can't generate by itself. Iodine in the body should be provided by a normal diet. The disadvantage of consuming iodine is that it doesn't last in the body for a longer period of time as it is supplied from the surroundings to the system. The intake of iodine should be taken in a balanced amount on a regular basis. Deficiency of iodine before and during pregnancy can lead to permanent damage in the brain of new-borns.

The goiter can be noticed. Such children, after growing up, will not be able to progress academically. Due to hypothyroidism, it has been observed that the infants are not able to hear anything and that it also affects their voice box, because of which they are not able to speak. Other complications include abortion, stillbirth, congenital defects that are noticed during pregnancy, and the kids seem to be mentally retarded, even the child dies in some of the cases. In the world, deficiency of iodine is the only remarkable cause of avoidable and permanent damage to the cranial region. The long term. Iodine deficiency is indicated when the lobes present on the lateral side of the thyroid gland are much larger than the pharynx present in the terminal region of the thumb of the person examined. The goiter is a visible effect of iodine deficiency. The guideline of a site's iodine status is helpful because of goiter, and for the success of the goiter program, the dedicated long-duration indicator. Because of iodine deficiency, the symptoms appear, which are measured with the help of indicators having urinary iodine concentration (UIC) and utilizing rate of adequately increasing in iodized salt (>16ppm) in households.

The increase of goiter has been noticed in the college students and the pregnant women. In India, more than 166 million people are at the risk of having iodine deficiency. Out of which 55 million are suffering from goiter. In the country it seems to be the major problem. In Maharashtra 2126 people are suffering from goiter disease. In year 2015-2016. Which creates stress worldwide as the cases of iodine deficiency patient are increasing day by day. Between the age group of 16-50 there are 2.5% of females having goiter and less than 1% of male having goiter. Because of consuming less amount of iodized salt.

According to the studies the IDD is the serious health issues not only in the country but worldwide as this. Issue have been rectified in females than in males there are many studies going on for the issue of having iodine deficiency. In pregnant women. As the studies are based only on assessments, intimidating and scrutinizing of having goiter in child bearing women, school going kids and primary school girls. Past studies are also incompatible and do not demonstrate this problem in all women in the reproductive age in a onetime study. The aspect of studying about the assessment of goiter among the population. Moreover, the study area, Mumbai is indigenous area of goiter assessing in the country. The main aim is to analyze the assessment of aspects aligned with goiter in women of reproductive age in Mumbai region.

II. METHODOLOGY

The random sampling survey, a method which is proper for glancing at the connection between mutable at a single point in time, was utilized. The standardized collection of the data on the title under calibration while engrossing on a single group of the community of interest. This a random sampling study design was elected to analyze the assessment of goiter (thyroid disease) among 15–49-year-old women 's in Mumbai and to disclose feasible risk factors of thyroid disease in this community. However, during random sampling analysis, it was not possible for each hazardous aspects' relationship with the consequences with the consequences. The study assessed university, college-based students, and also by one-on-one interaction to collect the data by using questionnaire and for participants. The random sampling qualitative and quantitative study design was selected to proper collection of data and forming a graph, statistical data that would provide an analayzation of the requirement for IDD - related educational programs in the entire scale of population. The collected data will be used by controlling and hygiene in Mumbai to design and achieve such course.

III. STUDY POPULATION

The purpose populace of the learn about included female aged 18-20 from one of a variety governorate of Mumbai presently studying at state and private universities and schools of Mumbai as it used to be impossible to interview all female college students who meet the criteria, a pattern of the goal population was once chosen. Eligibility requirements for the decision of research about individuals have been the following: • Females (college and college students) aged 18 to 20), residency of Mumbai.

Do you know where is the thyroid located?	
Do you know about thyroid diseases - Goiter?	Yes / No
Are you suffering from goiter disease?	Yes / No / maybe
or anyone from your relatives or friends suffering from goiter?	Yes / No
If yes then at what age they came to know about they have goiter?	0 -3 yrs. 4 - 5 yrs. 6 - 13 yrs. 14 -18 yrs. 19 - 40 yrs. 41 - 60 yrs. 60 + yrs.
What is most common cause of goiter?	
What deficiency causes goiter?	
Which are the Symptoms of goiter-	Swelling on neck Feeling tightness in throat area Coughing Scratchy voice Difficulty in swallowing Difficulty in breathing Other

Do you think our diet effects on thyroid and can cause and cure goiter?	Yes / No
Is goiter curable by medication or surgery is only option?	Cures naturally Medication is needed Surgery is only option

Table no. 1 Questionnaire

IV. OBSERVATIONS AND RESULTS

Where is the throat located?	Number	Percentage
Throat	98	98
Neck region	1	1
Under the chin	1	1

Table no. 2 Number of people aware about location of thyroid

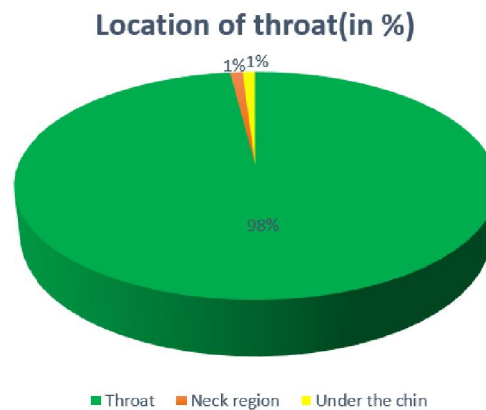


Fig no. 1 Number of people aware about location of thyroid

Most of the population is aware of the thyroid disease but few people are having knowledge about the goiter. When they actually go through the treatment to get rid of it. Through the method of survey based 100 responses have been collected. Specifically ladies have been instructed to fill up the questionnaire., The incidence of goiter was once found in the household or the buddies' having goiter is about 60% of the respondents. Prevalence of palpable and seen goiter was once extensively high amongst females (24%) when in contrast to that of absence of goiter in female (76%). It has said that females are more prone for goiter disease as compare to male because aromatase enzymes as well as estrogen receptors gets excited in thyroid tissue (Dalla valle et.al).

According to the study the among 100 females 93.3% are aware about the location of the people I.e throat and 3.3% are still not aware about the location itself.

Are you suffering from goiter?	Yes	No
Number	76	24
Percentage	76	24

Table no. 3 Number of people suffering from goiter

People suffering from goiter(in %)

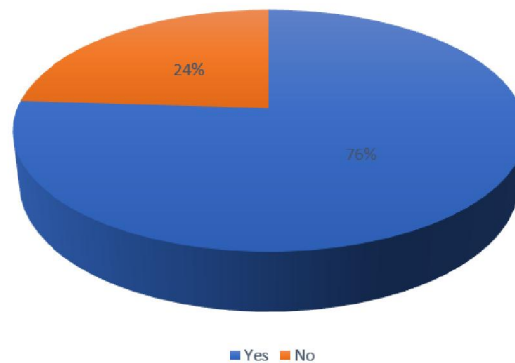


Fig no. 2 Number of people suffering from goiter

Prevalence of palpable and seen goiter was once extensively high amongst females (24%) when in contrast to that of absence of goiter in female(76%). It has said that females are more prone for goiter disease as compare to male because aromatase enzymes as well as estrogen receptors gets excited in thyroid tissue (Dalla valle et.al).

Any relative or friend suffering from goiters?	Yes	No
Number	60	60
Percentage	40	40

Table no. 4 Number of respondents relatives suffering from goiter

Relatives/Friend suffering from goiter (in %)

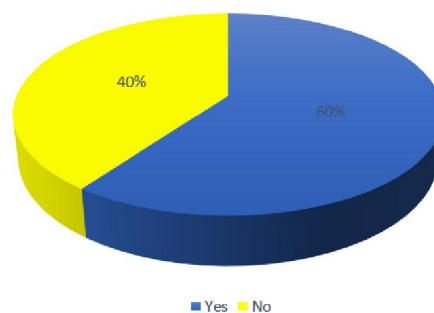


Fig no. 3 Number of respondents relatives suffering from goiter

The incidence of goiter was once found in the household or the buddies' having goiter is about 60% of the respondents.

At what age did they come to know about having a goiter?	Age	Number	Percentage
1.)	14-18	5	5
2.)	19-40	35	35
3.)	41-60	55	55
4.)	60 & above	5	5

Table no. 5 Age range of people having goiter

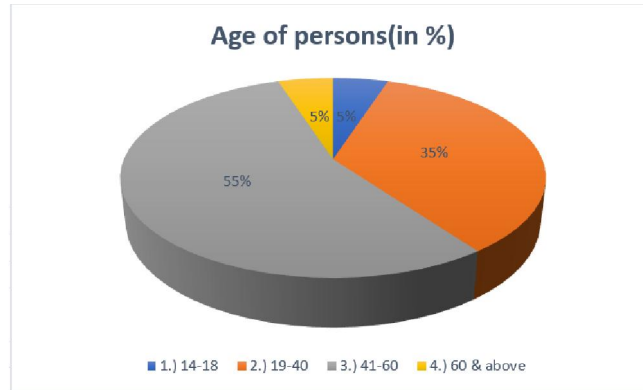


Fig no. 4 Age range of people having goiter

Analysis was once located to be higher among 41-60 years age crew (55%) and it stays low amongst 14-18 years age group (5%). Assessment is 35% amongst (19-40) years age group accompanied through 60 and above age team (5%). There is no massive distinction located in incidence of goiter among those with a range of hazard factors for IDD. Present study also suggests that about 44% of the population had get admission to iodized salt and 52% of the humans used salt with sufficient iodine content material.

What are the symptoms of goiter?	Number	Percentage
Swelling in neck	20	20
Feeling tightness	37	37
Coughing	36	36
Scratchy voice	35	35
Difficulty in swallowing	28	28
Difficulty in breathing	25	25

Table no. 6 Number of people showing symptoms of goiter



Fig no. 5 Number of people showing symptoms of goiter

The 20% of females have swelling in the neck, 37% are experiencing tightness which can later results in shortness of breath, 36% start coughing once they speak., 35% ladies have some scratching 28% & 25% are having difficulty in swallowing & breathing respectively.

Reason	Number	Percentage
Iodine	97	97
Iodine deficiency	1	1
No idea	1	1
Lack of sufficient nutrients	1	1

Table no. 7 Number of people aware about cause of goiter

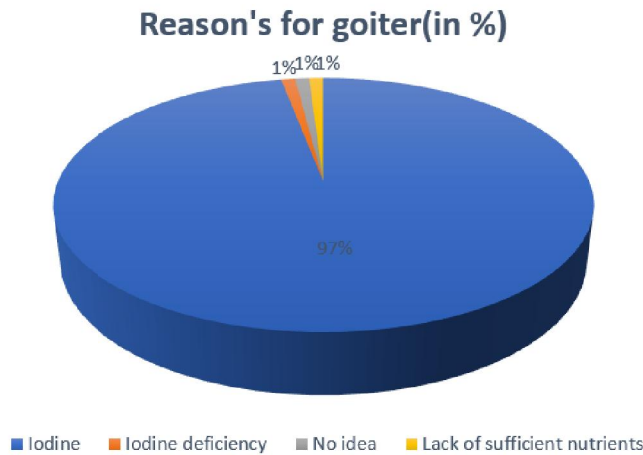


Fig no. 6 Number of people aware about cause of goiter

About 90% people have said that iodine is cause of goiter but 3.3% females say that junk food and lack of sufficient nutrient are also the main cause of having goiter respectively, 3.3% females are still not aware that what us the exact reason for having goiter .as during pregnancy the hormones are at the peak so the chances of having goiter is more.

On the treatment point of view females are scared of going through the surgical process in the threat of losing life so females around 97% says that the diet can affect the on-thyroid disease and also cure goiter and 3% females says that the diet can't help them to get rid of goiter disease and the food is more adulterated and with lack of nutrient food stuff can't help in curing the goiter disease.

It has been studied that olive oil, pumpkin seeds, almonds, hazel nuts, leafy green vegetables. Epic are said to be thyroid friendly food it will not only help in reducing the size but also avoiding growing as due to processed and refined food such as soft drink, chocolates, soy milk, white bread can lead to increase in size of the goiter some of natural products such as cabbage, broccoli and white rice are also suggested to avoid as much as possible

IV. CONCLUSION:

The recent analysis shows that the total goiter prevalence is 24% in a small region of Mumbai. out of 100 respondents, as it is still a ubiquitous area. Where goiter has been a remarkable public health issue, the assessment is an attempt to make people aware of the disease so that they can take care of themselves and reduce the risk of causing cancer. It has been recommended to convey the message of how important iodine is in the diet because the fusion of iodine with other supplements reduces the quality of the iodine. The adulteration rate in food is increasing day by day. So organic

food is not supplied to the common people, and due to household stress, the females don't pay attention to their health, which will not affect them in their early 30s, but as they move towards menopause, the hormones get fluctuated, because of which the risk of goiter as well as osteoporosis also increases. The education of self-care should be given to every female in urban as well as rural areas. The future perspective of the study can be taken as an analysis of the iodine content in the women's bodies from the age group of 15 to 60 and the lack of sufficient nutrients in the female body as well as a perspective towards future studies.

ACKNOWLEDGEMENT

The authors would like to thank Dr. Zarin Bhatina principal of Bhavan's college and also. Dr. Balkrishna Gore, Head of zoology department for guiding and encourage us for the project throughout.

REFERENCES

- [1] Molla Mesele, Getu Degu and Haimanot Gebrehiwot, Prevalence and associated factors of goiter among rural children aged 6-12 years old in Northwest Ethiopia, cross-sectional study (2014), biomedical article. 14(131). pp. 1-8.
- [2] Laszlo Hegedus, Steen J. Bonnema, Finn N. Bennedbaek. Management of simple nodular Goiter: current status and future perspective (2003), Endocrine Reviews, 24(1). pp. 102-132 <https://doi.org/10.1210/er.2002-0016>.
- [3] Andrea Loviselli, Fernanda Velluzzi, P. Mossa, M. Cambosu, G. Secci, F. Atzeni, A. Taberlet, A. Balestrieri, E. Martino, L. Grasso, M. Songini, G. F. Bottazzo, S. Mariotti. Studies on circulating antithyroid antibodies in Sardinian school children: relationship to goiter prevalence and thyroid function (2001). 11 (9), 849-854
- [4] Venna. G. Kamath, George. P. Jacob, Ayushi Agarwal, Asha kamath, Revathi P. Shenoy. Prevalence of goiter and associated factors in coastal district of Karnataka (2015), Indian journal of community health, 27.
- [5] Humaira Rasheed, Shah Elahi, Zulqurnausyed & Naiad Batool Rizvi. Trend of thyroid dysfunction associated with visible goiter (2009), journal of science Researcher, 39
- [6] Valentina Virani, Anita Radman, Katarina kajic, Ana Bronic. knowledge and awareness of iodine survey among Croatia women of reproductive age (2019) Biochemia Medica 30(1) pp. 1-6, DOI: 10.11613/BM.2020.010705
- [7] Befikadwazekarias, Frehiwot mesfin, Bezatu, Mengiste, Adane Tesfaye and lemma Getacher. Prevalence of goiter and association factors among women of reproductive age group in Dembagofa woreda, GamoGofe zone, southwest Ethiopia; A community based cross-section study (2020), journal of nutrition and metabolism, pp. 1-9, <https://doi.org/10.1155/2020/5102329>.
- [8] Sharia Rashu Masoodi, Altaf Ali, Arshad Iqbal Wan, Mir Ilfikhar Bashir, Javaid Ahmad Bhat, Syed Mudassart and Abdul Hamid Zargar. Urinary iodine excretion survey in school children of Kashmir valley, (2014) Clinico endocrinology, 80 pp. 141-147. DOI: 10.1111/cen.12247.