

Knowledge regarding Hypothyroidism among Community People of Kavre

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ABSTRACT

Background: Hypothyroidism is a condition in which the thyroid gland is unable to produce enough thyroid hormone. Thyroid dysfunction is one of the concern public health problem among the Nepalese population. It has been estimated that 0.2% of the deaths in Nepal result from endocrine disorders, among which Iodine deficiency has been a major cause. Therefore, this study helps to assess knowledge level regarding hypothyroidism among community people of Banepa-8, Kavre.

Objectives: To assess the knowledge regarding hypothyroidism.

: To identify the association of knowledge with the selected demographic variables.

Methodology: A descriptive cross-sectional study was conducted among 140 respondents of Banepa-8, Kavre district on April 2021. All the adult people of age 25-55 years were included in the study. Structured knowledge questionnaire was used after validity and reliability. Data was collected by interview

Result: Among the 140 participants, statistical analysis showed that more than half of the respondents 46(37.9%) had low knowledge, majority 87(62.1%) of respondents had average knowledge and 7 (5%) had high knowledge regarding Hypothyroidism. Age, Gender, education, ethnicity, occupation, family history and marital status had no significant effect on the knowledge level of the respondents at ($p > 0.05$).

Conclusion: Knowledge regarding hypothyroidism was found to be average among majority of people in Banepa-8, Kavre. There was no significant association with the knowledge and selected demographic variables.

KEYWORDS

Hypothyroidism, Iodine deficiency, Knowledge

INTRODUCTION

Background of the Study

Non-communicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally. Each year, more than 15 million people die from a NCD between ages of 30-69 years; 85% of these “premature” deaths occur in low and middle income countries (WHO, 2018).

Hypothyroidism is a common endocrinological disorder. It is a clinical state resulting from an insufficient amount of circulating thyroid hormone to support normal body function. It may exist in uterus or develop in infancy, childhood or even in adult life. It is characterized by a generalized reduction in metabolic function that most often manifests as a slowing of physical and mental activity. The spectrum extends from sub-clinical to overt hypothyroidism to myxedema coma. Common symptoms such as fatigue, lethargy and constipation have limited diagnostic value, while weakness, insomnia and loss of memory are usually attributed to old age (Poudel et al., 2013).

Thyroid dysfunction is a concern public health problem among the Nepalese population. It has been estimated that 0.2% of the deaths in Nepal result from endocrine disorders, among which Iodine deficiency has been a major cause. According to the WHO as cited by Yadav et al, (2015) more than 190 million population suffer from iodine deficiency disorders. The thyroid disorders may be due to congenital factors, a genetic predisposition, inadequate levels of dietary iodine intake, pregnancy, radiotherapy, viral infections, surgery, underlying diseases such as infiltrative disorders, or even autoimmunity. Nepal is an endemic area with regards to iodine deficiency, as well as a nutritional iodine deficiency is thought to be prevalent in all the Himalayan, Sub-Himalayan and the Terai regions of Nepal.

Various studies conducted in Nepal showed the higher prevalence of Thyroid disorders and majority of cases are females. Although there are, many studies related to prevalence of hypothyroidism limited study on public knowledge, awareness regarding hypothyroidism was noted. This study will help to analyze community people knowledge regarding hypothyroidism in selected area. Therefore, it is necessary to create awareness in the community through research studies.

Rationale of the Study

Epidemiological studies for thyroid disorders in Nepal are unavailable but there are some studies based on hospital or screening-based studies. In one study from seven places in five districts of Nepal found the prevalence of thyroid disorders in general population to be 4.32%; twice more common in females and among them, 72.41% had subclinical hypothyroidism, 13.7% primary hypothyroidism and 13.7% hyperthyroidism (Joshi A. & Yonjan P. 2019). Similarly, Mahato., et al., (2015) stated that the prevalence of thyroid dysfunction was found to be 29.0% in a tertiary level hospital in Kathmandu, among which subclinical hypothyroidism was seen in 17%, hypothyroidism in 8%. Another hospital based study showed 35.3% people with thyroid dysfunction with the prevalence of overt hyperthyroidism, subclinical hyperthyroidism, overt hypothyroidism and subclinical hypothyroidism to be 2.5%, 2.4%, 5.6% and 24.8% respectively (Risal et al., 2013). A hospital in eastern Nepal also revealed the prevalence of thyroid disorder

at 39.3% among which 4.04% had overt hyperthyroidism, 16.49% overt hypothyroidism, 2.9% subclinical hyperthyroidism and 16.06% subclinical hypothyroidism (Khan et al.,2018). The prevalence of severe iodine deficiency among the Sherpas of Khumbu reduced significantly from 1960s; total goiter prevalence having decreased from 90% to 31% and more than 90% of households used iodized salt with appropriate storage too (Heydon et al., 2009).

Similarly, in Nepal, hospital-based study conducted in Charak Hospital, Pokhara from 1 January 2011 to 30 December 2012 among 1504 patients, the prevalence of thyroid dysfunction was 17.42%. Female had more thyroid dysfunction than males (Yadav et al., 2015).

Nepal is an endemic area with regards to iodine deficiency, as well as a nutritional iodine deficiency is thought to be prevalent in all the Himalayan, Sub-Himalayan and the Terai regions of Nepal (Yadav, et al, 2015). Hence, it is concern area to explore and create knowledge and awareness by identifying its need through research activities.

Objectives of the Study

General Objective:

The general objective is to assess the knowledge regarding hypothyroidism among people of selected community.

Specific Objectives:

The specific objectives are:

1. To assess the level of knowledge regarding Hypothyroidism.
2. To assess the association of knowledge with the selected demographic variables.

RESEARCH METHODOLOGY

A descriptive cross-sectional research design was conducted among community people of Banepa-8, Kavre between the ages of 25-55 years. The sample size was 140 respondents. Non-probability purposive sampling technique was used to select the sample in the study. Interview method was used for data collection. Structured knowledge questionnaire was used for data collection. Instrument was prepared both in English & Nepali language; divided into two parts: Part I: Demographic information of the respondent. Part II: Knowledge related question. Validity of the study was established and maintained by developing instrument based on literature review and consultation with research advisor, subject experts and teachers. Consistency of the instrument was maintained by pre testing formulated questionnaire in 10% of the sample population at community of Banepa-8. The data was collected through interview technique. Formal permission was taken from research committee of Hope International College. Formal permission was also taken from ward office of Banepa-8. Written informed consent was obtained from each participant. Confidentiality and privacy was maintained during and after data collection. All data was rechecked, edited, compiled, coded and entered in SPSS software version 20. The data was analyzed by using descriptive and inferential statistics. Descriptive statistics was used to compute the demographic characteristics for frequency and percentage. Inferential statistics was used to compute the association of knowledge with the selected demographic variables.

RESULTS

Table 1: Socio-demographic Characteristics of the Respondents

n=140

Variables	Frequency	Percentage
Age interval		
25-35	79	56.4
35-45	32	22.9
45-55	29	20.7
Gender		
Male	52	3.1
Female	28	62.9
Marital Status		
Married	98	70
Unmarried	42	30
Education		
Literate	116	82.9
Illiterate	24	17.1
Ethnicity		
Brahmin	18	12.9
Chhetri	16	11.4
Janjati	92	65.7
Dalit	12	8.6
Others	2	1.4
Occupation		
Agriculture	5	3.6
Business	34	24.3
Service	51	36.4
Others	50	35.7
Family History		
Yes	25	17.9
No	115	82.1

Table 1 represents that half of the respondents i.e. 56.4% were between 25-35 years of age group, 22.9% were between 35-45 years of age and remaining 20.7% were between 45-55 years of age group. 70% of the participants were married and 30% were unmarried. Marital Status Married 98 Unmarried 42 30. Similarly, majority of them i.e. 62.9% were female and remaining 37.1% were male. Likewise, 82.9% of participants were literate and 17.1% were illiterate. Majority of population i.e. 65.7% were Janjati, 12.9% were Brahmin, 11.4% were Chhetri, 8.6% were Dalit and remaining 1.45% belong to other Ethnic group. Most of the respondents i.e. 36.4% were engaged in service, 24.3% had business, 3.6% were engaged in agriculture and 35.7% were in others. 17.9% participants had family history of hypothyroidism while 82.1% do not have family history.

Table 2: Knowledge Related Response of Participants

n=140

Hypothyroidism is a condition due to		
Low growth hormone	19	13.6
Low iodine level	25	17.9
Low thyroid level	96	68.6
Risk Factor EXCEPT		
Genetic	24	17.1
Iodine deficiency	46	32.9
Infection	70	50
Greater risk		
Male	18	12.9
Female	113	80.7
Children	9	6.4
Cause		
Metabolism disorder	18	12.9
Autoimmune thyroiditis	88	62.9
Stress	34	24.3
Hypothyroidism may lead to		
Depression	32	22.9
Mood Disturbance	47	33.6
Abnormal Menstruation	61	43.6
Symptoms		
Constipation	37	26.4
Sore throat	65	46.4
Goitre	38	27.1
Diagnosis		
TSH level	110	78.6
Calcium	20	14.3
Vitamin D	10	7.1
Prevention		
Diet control	32	22.9
Regular exercise	29	20.7
Routine screening	79	56.4
Treatment		
Hormone Replacement	54	38.6
Regular exercise	59	42.1
Screening and early detection	27	19.3
Complication EXCEPT		
Infertility	20	14.3
Heart disease	41	29.3

Malnutrition	79	56
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Table 2 represents the respondents knowledge about hypothyroidism; 95% of respondents mentioned about thyroid location. 54.3% knows about thyroid gland shape. 37.9% knows thyroid as endocrine gland. 68.6% knows hypothyroidism as condition due to low thyroid hormone. 56.4% mentioned hypothyroidism as autoimmune disorder. 50% mentioned that risk factor of hypothyroidism as except infection. 22.9% knows hypothyroidism leads to depression. 80.7% mentioned that women are at greater risk, 62.9% mentioned cause of hypothyroid as autoimmune, 26.4% mentioned symptom of hypothyroidism as constipation. Majority of respondents,78.6% have information regarding hypothyroid is diagnosed by TSH level, 38.6% mentioned hormone replacement as treatment. More than half of the respondents , 56.4% answered that it is prevented through routine screening test, 56.4% mentioned malnutrition is not the complication.

Table 3: Knowledge Level of the Respondents

n=140

Variables	Frequency	Percentage
Knowledge level		
Low Knowledge	46	32.9
Average Knowledge	87	62.1
High Knowledge	7	5

Table 3 represents the overall knowledge level of the 140 respondents; 32.9% of the respondents have low knowledge, 62.1% have average knowledge and 5 % have high knowledge about hypothyroidism.

Table 4: Association of Knowledge with the Selected Demographic Variables

n=140

Variables	Knowledge level			Chi square	P-Value
	Low	Average	Good		
Age Interval					
35-45	27(34.2%)	46(58.2%)	6(7.6%)	5.700 ^a	>0.05
45-55	7(21.9%)	2(75%)	1(3.1%)		
45-55	12(41.4%)	17(58.6%)	-		
Gender					
Male	17(32.7%)	32(61.5%)	3(5.8%)	0.103 ^a	>0.05
Female	29(33%)	55(62.5%)	4(4.5%)		
Education					
Literate	33(28.4%)	76(65.5%)	7(6%)	6.691 ^a	>0.05
Illiterate	13(54.2%)	11(45.8%)	-		
Occupation					
Agriculture	4(80%)	1(20%)	-	9.794 ^a	>0.05
Business	12(35.3%)	22(64.7%)	4(7.8%)		
Service	18(35.3%)	29(56.9%)	3(6%)		
Others	12(24%)	35(70%)	-		

Table 4 represents the association between dependent and independent variables; Significant at (p-value >0.05). While checking the association between age, gender, education, ethnicity, occupation, family history, marital status and knowledge; p value >0.05, which signifies that there is no association between knowledge those variables.

DISCUSSION

A cross-sectional descriptive study was conducted among 140 respondents. Statistical analysis showed that majority 87(62.1%) of respondents had average knowledge, 7(5%) had good knowledge, whereas 46(37.9%) had poor knowledge, of Hypothyroidism.

The study was supported by the cross sectional descriptive study, conducted in mid-Western region of Nepal, among 105 subjects attending Neuro and Allied Clinic, More than half 37 (53%) of the respondents had inadequate awareness on thyroid disorders whereas 33 (47%) had adequate awareness(Ghimire et al., 2019)

In contrast to this study an observational cross-sectional study was conducted among 250 patients on knowledge and awareness related to hypothyroidism, was poor in majority of participants. 51.2% knew correct meaning of the terms hypothyroidism and 40% had false dietary beliefs in the context of hypothyroidism. 10% participants felt T4 can be stopped once laboratory reports return to normal (Kumar, et al; 2017)

CONCLUSIONS

The present cross-sectional descriptive study among 140 respondents on statistical analysis showed that majority 87(62.1%) of respondents had average knowledge, 7(5%) had good knowledge, whereas 46(37.9%) had poor knowledge, of Hypothyroidism Age, Gender,

education, ethnicity, occupation, family history and marital status had no significant effect on the knowledge level of the respondents ($p > 0.05$). This study was supported by an online survey conducted among 367 adult residents in Saudi Arabia. Statistical analysis showed that 140 (57.32%) of respondents had good knowledge, whereas 188 of them (42.68%) had poor knowledge of thyroid disorder diseases. Age, Sex, education, and occupation had no significant effect on the knowledge level of the respondent's $p > 0.05$ (Almuzaini et al., 2019).

RECOMMENDATIONS

The study can be replicated on the large-scale sample, which helps to better generalization of the findings. Comparative study can be done in different community on the same topic. Similar study on knowledge, attitude and practice can be done and their relationship can be analyzed. Awareness campaign can be held after interpreting the result from the study.

CONFLICT OF INTEREST

The researcher has no any conflict of interest in conducting the study.

AUTHOR CONTRIBUTION

Riya Pote (PI), Bhawana Bhandari (Co-PI), Jyanendra Jha (Co Author), Rupesh Mishra (Co-author), Bhim Maya Yakha (Co-author), Anamika Dangol (Co-author), Moushami Giri (Co-author), Anil Babu Ojha (Co-author)

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