STM JOURNALS

International Journal of
Community Health Nursing and Practices

ISSN: 2583-9136
Volume 3, Issue 1, 2025
January–June
DOI (Journal): 10.37591/IJCHNP

https://journals.stmjournals.com/ijchnp

Research IJCHNP

Assessing Thyroid Disorder Awareness Among Pregnant Women: A Hospital-based Study in Kottayam

Anila C. Eapen[1], Nisha George[1], Adilamol K.M.[2], Alphonsa Joy[2], Cicy George F.C.C.[2], Gopika P.G.[2], Manjusha S.[2], Swapna S.[2], Theresa Mathew S.H.[2]

Abstract

The current study was carried out at Caritas Hospital to evaluate the knowledge of pregnant women regarding thyroid disorders. The study aimed to assess the level of knowledge about thyroid disorders among pregnant women and to explore the relationship between knowledge levels and selected demographic factors. A total of 194 pregnant women attending the obstetrics and gynecology outpatient department at Caritas Hospital in Kottayam were included using a convenience sampling method. Structured questionnaires were utilized to assess their knowledge of thyroid disorders, and the data were analyzed using both descriptive and inferential statistical methods. The results indicated that among the 194 participants, 8.8% had poor knowledge, 86.6% had average knowledge, and 4.6% had good knowledge regarding thyroid disorders. The analysis revealed no significant association between the knowledge of pregnant women and demographic variables such as age, religion, occupation, family income, history of abortion, gravida status, and prior information. However, significant associations were found between knowledge levels and educational status, personal experiences with thyroid disorders, and a history of thyroid issues ($p<0.05$). The findings underscore important implications for nursing practice, education, administration, and future research. Nurses working in the Obstetrics & Gynecology department have a unique role in assessing the knowledge of pregnant women regarding thyroid disorders, and facilitating timely health education.

Keywords: Knowledge, pregnant women, thyroid disorders, health education, demographic factors

INTRODUCTION

Pregnancy is the symphony of love, growth, and anticipation. In this period, a woman's body and spirit unite to bring forth a new life. The radiance emanating from an expectant mother is a reflection of the joy, hope, and love that fills her heart. As she prepares to embark on the journey of motherhood, she holds the promise of a brighter tomorrow and a future full of possibilities [1].

***Author for Correspondence**
Anila C Eapen
E-mail: anilaceapen@gmail.com

[1]Assistant Professor, Department of Nursing, Caritas College of Nursing, Kottayam, Kerala, India
[2]Student, Department of Nursing, Caritas College of Nursing, Kottayam, Kerala, India

Received Date: September 29, 2024
Accepted Date: December 28, 2024
Published Date: January 12, 2025

Citation: Anila C. Eapen, Nisha George, Adilamol K.M., Alphonsa Joy, Cicy George F.C.C., Gopika P.G., Manjusha S., Swapna S., Theresa Mathew S.H. Assessing Thyroid Disorder Awareness Among Pregnant Women: A Hospital-based Study in Kottayam. International Journal of Community Health Nursing and Practices. 2025; 3(1): 16–22p.

Hormonal imbalances during pregnancy can affect both the mother and the developing fetus in various ways. There is a strong connection between pregnancy and thyroid disorders, as hormonal fluctuations that occur during this time can influence the operation of the thyroid gland. Thyroid disorders can significantly affect the health of both mothers and unborn children.

Pregnancy can cause a number of thyroid conditions, each with unique consequences for the developing fetus as well as the mother. Thyroid

nodules and goiter, postpartum thyroiditis, hyperthyroidism, hypothyroidism, and gestational thyroid dysfunction are among the various thyroid problems that can affect expectant mothers [2].

Thyroid disease is prevalent in women of reproductive age. The incidence of thyroid disease during pregnancy varies. Hyperthyroidism occurs in approximately two per 1,000 pregnancies, whereas hypothyroidism affects approximately nine per 1,000 pregnancies. Thyroid disease during pregnancy can have adverse effects on the fetus, with untreated women facing fetal morbidity and mortality rates as high as 50% [3].

Undiagnosed and untreated thyroid disorders during pregnancy may increase the risk of miscarriage, premature delivery, stillbirth, or babies born with low I.Q. thyroid disorders may also put pregnant women at risk for preeclampsia, postpartum hemorrhage, and anemia [4].

Need For Study

Pregnancy is a cherished experience that many women aspire to have, and is characterized by a mix of joy and anticipation. However, this crucial period in a woman's life involves numerous challenges and significant hormonal changes, with thyroid-related issues being particularly prevalent. Thyroid disorders represent a significant health concern in pregnant women and are ranked as the second most common endocrine condition affecting women of reproductive age. If not addressed during pregnancy, these disorders can increase the risk of serious complications, including placental abruption, miscarriage, growth restrictions, and hypertensive disorders [5–10].

In India, approximately 108 million individuals are affected by endocrine and metabolic disorders, with environmental factors contributing to their higher prevalence. Thyroid disorders are the most widespread endocrine issues, particularly hypothyroidism and hyperthyroidism, which are more common in women. A total of 42 million people in India have thyroid disease. According to the latest data from the Union Health and Family Welfare Ministry, Kerala reports 8,696 women per lakh population with thyroid disorders. In Kochi, the prevalence of hypothyroidism stands at 3.9%, while subclinical hypothyroidism is notably higher at 9.4%, affecting approximately 11.4% of women [11–17].

Objectives

1. Assess the level of knowledge among pregnant women regarding thyroid-related disorders.
2. Examine the relationship between knowledge levels and various demographic variables.

Operational Definition

1. *Knowledge:* In this study, knowledge referred to the awareness or understanding of women regarding thyroid disorders, which was measured using a knowledge questionnaire.
2. *Thyroid disorders:* Thyroid disorders disrupt normal operations of the thyroid gland.
3. *Pregnancy*: Pregnancy is the state of carrying a developing embryo or fetus within the body following fertilization of a female egg with a male sperm [18].

Assumptions of the Study

- Pregnant Women may have basic knowledge about thyroid disorders during the entire pregnancy.

Hypothesis

All the hypothesis is tested at a 0.05 level of significance.

- *H1*: There is a significant relationship between antenatal mothers' knowledge regarding thyroid disorders during pregnancy and various demographic variables.

METHODOLOGY

Research Approach

This research approach pertains to the methodology chosen to conduct the study. It encompasses the selection of research questions, the conceptual framework to be utilized, and appropriate research

methods. Given the nature of the problem and the objectives to be achieved, a quantitative approach was employed in this study [19].

Research Design

The research design is "a plan that describes how, when, and where data are to be collected and analyzed." The research design used in this study is descriptive [20].

Variables

A variable is a concept or an abstract notion that can be defined in quantifiable terms. In research, variables represent measurable characteristics, qualities, traits, or attributes of a specific individual, object, or situation under investigation. The variable included in this study was knowledge of thyroid disorders. Selected socio-demographic variables included age, religion, education, occupation, type of family, income, abortion, gestation, family history, personal history, and general information [21].

Setting of the Study

The setting is the location of the research activity. This refers to the environment in which the research activity was conducted. In the present study, we referred patients to the obstetrics and gynecology outpatient department of Caritas Hospital. Caritas Hospital is a 635-bed super specialty hospital, and the obstetrics and gynecology department constitute one of the major departments of the institution. On average, approximately 1500 antenatal mothers attend the antenatal outpatient department of Caritas Hospital every month [22].

Population

The complete group of individuals or objects sharing certain common characteristics was chosen for this research study. The study population consisted of pregnant women who attended an antenatal clinic at the time of the study [23].

Sample

A sample is defined as a representative subset of the target population that researchers focus on during their study. The study sample consisted of 194 antenatal mothers who visited the obstetrics and gynecology outpatient department of Caritas Hospital, Thellakom [24].

Sampling Technique

Sampling refers to the process of selecting a portion that represents the entire population. Purposive sampling techniques were used in the present study [25].

Tool and Instruments

A structured questionnaire was used in this study. It consists of two sections.

1. *Tool 1:* This includes socio-demographic variables of antenatal mothers such as age in years, religion, education, occupation, type of family income, abortion, gestation, family history, personal history, and general information.
2. *Tool 2:* This includes a structured questionnaire designed to assess knowledge about thyroid disorders in pregnant women.

RESULTS

Section 1: Frequency and Percentage Distribution of Subjects According to Socio-demographic Variable

Among the 194 samples, 56.7% belonged to the age group of 20–30, 47.9% belonged to the Christian religion, 78.40% were graduates, 49.5% were private employees, 67% belonged to nuclear family, 83% had above poverty line (APL), 73.7% had no abortions, 55.2% were to primigravida, 88.7% had no family history of thyroid disorders, 83% have no personal history of thyroid disorders, and 42% had general information about thyroid disorders was from media (Table 1).

Table 1. Frequency and percentage distribution of subjects according to socio-demographic variables.

Variable	Frequency	Percentage
Age	20–30	56.7%
	31–40	41.8%
	41–50	1.5%
Religion	Hindu	46.9%
	Christian	47.9%
	Muslim	4.10%
	Others	1.00%
Education	High school	1%
	Higher secondary school	3.10%
	Diploma	17.50%
	Graduate	78.40%
Occupation	Government	16%
	Private	49.50%
	Self-employee	3.6%
	Homemaker	30.9%
Type of family	Nuclear family	67%
	Joint family	33%
Income	Above poverty line (APL)	83%
	Below poverty line (BPL)	17%
Abortion	Yes	26.3%
	No	73.7%
Gestation	Primigravida	55.20%
	Multigravida	44.80%
Family History	Yes	11.30%
	No	88.70%
History	Yes	17%
	No	83%
General information	Media	42%
	Friends	5%
	Health worker	40%
	Unknown	13%

Section 2: Level of Knowledge Among Pregnant Women Regarding Thyroid Disorders

This section deals with the distribution of the level of knowledge regarding thyroid disorders among pregnant women. The knowledge level was categorized as follows:

- 1–8 = poor
- 9–17 = average
- 18–25 = good

The data in Figure 1 indicates that more than half of the sample 86.6% had average knowledge, 8.8% had poor knowledge, and 4.6% had good knowledge regarding thyroid disorders [26].

Section 3: Association Between Knowledge Level of Pregnant Women Regarding Thyroid Disorders and Selected Demographic Variables

This section presents the association between the knowledge level of pregnant women and selected variables such as age, religion, education, occupation, type of family, income, abortion, gestation, family history, personal history, and general information. Chi-square values were computed between the knowledge level of the pregnant women and selected variables [27].

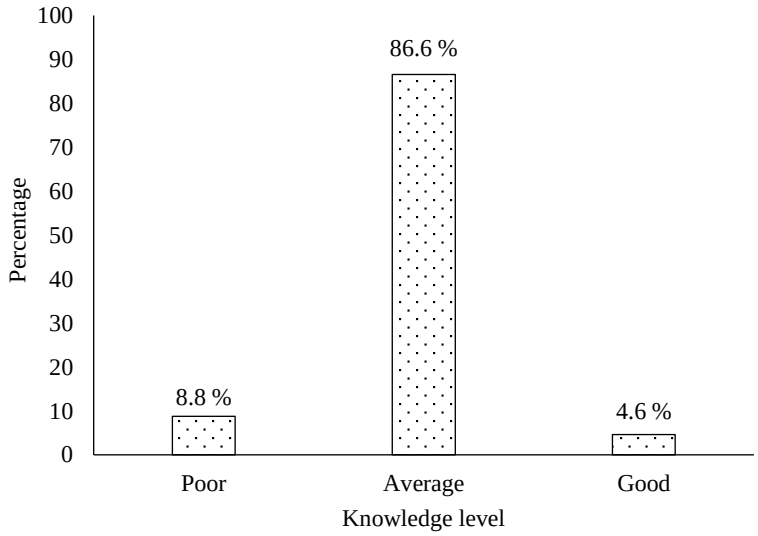

Figure 1. The bar diagram shows the percentage distribution of subjects based on level of knowledge.

DISCUSSION

Major Findings of the Study

1. Demographic characteristics of subjects.
2. Knowledge level among antenatal mothers regarding thyroid disorders.
3. Association between the level of knowledge and selected socio-demographic variables [28].

Demographic Characteristics of Subjects

- Out of the 194 antenatal mothers selected for the study; the majority (56.7%) belonged to the age group of 20 to 30 years.
- In this study, 46.9% identified as Hindus.
- Regarding education status, 78.4% of the mothers were graduates.
- Half of the sample (49.5%) was employed in the private sector.
- The majority of the sample (67%) belonged to nuclear families.
- Most antenatal mothers (83%) belonged to the above poverty line (APL) category.
- The majority of subjects (73.7%) had no previous abortions, while 26.3% had a history of abortions.
- More than half of the samples (55.2%) were primigravida mothers.
- 11.3% of the samples had a family history of thyroid disorders.
- The majority of the patients (83%) had no history of thyroid disorders.
- 0.9% of pregnant women did not receive information from any sources [29].

Knowledge Level Among Antenatal Mothers Regarding Thyroid Disorders

- Among 194 antenatal mothers, 86.6% had average knowledge.

Association Between the Level of Knowledge and Selected Socio-demographic Variables

- There is an association between the knowledge level of pregnant women and socio-demographic variables, such as education, personal history, and family history [30].

CONCLUSION

This study examined 194 pregnant women, showing details about their age, religion, education, and family. Many had a first pregnancy, and most did not have a history of thyroid issues. It is essential to create healthcare plans that fit the needs of these women, considering their unique characteristics and where they obtain their information, to ensure that both mothers and babies stay healthy.

REFERENCES

1. Fraser DM. Myles' Textbook for Midwives. 14th ed. London, United Kingdom: Churchill Livingstone; 2003.
2. Jacob AA. Comprehensive Textbook of Midwifery. 4th ed. New Delhi: Jaypee Brothers Medical Publishers; 2015. p. 366.
3. Subasree S. Prevalence of thyroid disorders in India: An overview. Res J Pharm Technol. 2014;7:1165-8.
4. Ramprasad M, Bhattacharyya SS, Bhattacharyya A. Thyroid disorders in pregnancy. Indian J Endocrinol Metab. 2012;16(Suppl 2):S167-70. DOI: 10.4103/2230-8210.104031.
5. The Times of India. TNN (2022). Thyroid disorders on the rise among women in Telangana. [online] The Times of India. Available from: https://timesofindia.indiatimes.com/city/hyderabad/thyroid-disorders-on-the-rise-among-women-in-telangana/articleshow/89838065.cms.
6. Bhaskar N. Midwifery and Obstetrical Nursing. 3rd ed. Bangalore: EMMESS Medical Publisher Private Limited; 2019.
7. Basavanthappa BT. Narsingh Research and Statistics. 3rd ed. New Delhi: Jaypee Brothers Medical Publishers; 2014. p. 106-11.
8. Konwar G, Deori U. Assessment of knowledge and awareness on thyroid disorders and impact of thyroid disorders during pregnancy among women in Assam. Int J Health Sci Res. 2019 Sep;9(9):99-102.
9. Alotaibi EA, AlHaidar AM, Alotaibi SA, Alshehri NA, Alotaibi RA, Bashumeel YY, Nassar R, Batais MA. Assessment of thyroid dysfunction among pregnant women with pre-existing diabetes mellitus or gestational diabetes mellitus. Cureus. 2023;15:e44390. DOI: 10.7759/cureus.44390.
10. Rani U, Paladi R, Anjum M. Prevalence of thyroid disorders in first trimester of pregnancy. Int J Reprod Contracept Obstet Gynecol. 2022;11:3018-22. DOI: 10.18203/2320-1770.ijrcog20222788.
11. Khakurel G, Karki C, Chalise S. Prevalence of thyroid disorder in pregnant women visiting a tertiary care teaching hospital: A descriptive cross-sectional study. JNMA J Nepal Med Assoc. 2021;59:51-4. DOI: 10.31729/jnma.5529.
12. Gupta P, Jain M, Verma V, Gupta NK. The study of prevalence and pattern of thyroid disorder in pregnant women: A prospective study. Cureus. 2021;13:e16457. DOI: 10.7759/cureus.16457.
13. Korde VR, Barse SP, Barla JS. Prevalence of thyroid dysfunctions in pregnant women: A prospective study in a tertiary care hospital in Maharashtra, India. Int J Reprod Contracept Obstet Gynecol. 2018;7:3211-5. DOI: 10.18203/2320-1770.ijrcog20183319.
14. Sharma S, Sharma DC. Prevalence of thyroid disorders in pregnancy. Int J Res Rev. 2019 Aug;6(8):424-7. Available from: https://www.ijrrjournal.com/IJRR_Vol.6_Issue.8_Aug2019/IJRR0054.pdf.
15. Dhanwal DK, Bajaj S, Rajput R, Subramaniam KA, Chowdhury S, Bhandari R, et al. Prevalence of hypothyroidism in pregnancy: An epidemiological study from 11 cities in 9 states of India. Indian J Endocrinol Metab. 2016;20:387-90. DOI: 10.4103/2230-8210.179992.
16. Rajput R, Goel V, Nanda S, Rajput M, Seth S. Prevalence of thyroid dysfunction among women during the first trimester of pregnancy at a tertiary care hospital in Haryana. Indian J Endocrinol Metab. 2015;19:416-9. DOI: 10.4103/2230-8210.152791.
17. Ramachandran R, Mohan L, Jose MS. Prevalence of thyroid disorders in antenatal women and its impact on maternal and foetal outcome. Indian J Forensic Community Med. 2020;7:29-32. DOI: 10.18231/j.ijfcm.2020.008.
18. Kuvarji VA, Fathima T, Shetty SS, Jakkannavar CV, Sangeetha K, Nair R, et al. Thyroid disorders in pregnancy and their maternal and foetal outcome in tertiary care center. J Evid Med Dent Sci. 2023;12:15-8.
19. Mahadik K, Choudhary P, Roy PK. Study of thyroid function in pregnancy, its feto-maternal outcome; a prospective observational study. BMC Pregnancy Childbirth. 2020;20:769. DOI: 10.1186/s12884-020-03448-z.
20. Maurya P, Chaudhary N, Tyagi N, Kural MR, Bhatnagar K. The study of maternal and foetal outcome in pregnant women with thyroid disorder. Int J Reprod Contracept Obstet Gynecol. 2019;8:1802-9. DOI: 10.18203/2320-1770.ijrcog20191504.

21. Sreelatha S, Nadagoudar S, Devi LA. The study of maternal and fetal outcome in pregnant women with thyroid disorders. Int J Reprod Contracept Obstet Gynecol. 2017;6:3507–13. DOI: 10.18203/2320-1770.ijrcog20173473.
22. Vinodhini S, Vilvapriya S, Veeraragavan K. An analytical cross sectional study on hypothyroidism in pregnancy, its maternal and fetal outcome. Int J Reprod Contracept Obstet Gynecol. 2020;9:1060–8. DOI: 10.18203/2320-1770.ijrcog20200875.
23. Sreelakshmy K. A cross sectional study on the frequency of thyroid disorders in pregnancy and the associated obstetric complications. Int J Reprod Contracept Obstet Gynecol. 2023;12:1759–62. DOI: 10.18203/2320-1770.ijrcog20231550.
24. Rentala S. Basics in Nursing Research and Biostatistics. New Delhi: Jaypee Brothers Medical Publishers; 2018.
25. Sharma S. Nursing Research and Statistics. 2nd ed. New Delhi: Elsevier India; 2010.
26. Clement N. Textbook on Nursing Research and Statistics. 2nd ed. Bengaluru: EMMESS Medical Publisher Private Limited. 2019.
27. Houser J. Nursing Research: Reading, Using and Creating Evidence. Burlington, Massachusetts, United States: Jones and Bartlett Publishers; 2010.
28. Polit DF, Hungler PB. Nursing Research: Principles and Methods. 6th ed. Philadelphia, Pennsylvania, United States: Lippincott Williams & Wilkins; 1999.
29. Yadhav MK. Textbook of Nursing Research and Statistics. 2nd ed. Jalandhar City, Punjab: Lotus Publications; 2020.
30. Treki MM, Ruhi S, Saleh K, Balasubramaniam P, Ishaka A, Khan J, Baber S, Hasan S, Kaleemullah M, Attalla SM. Knowledge and awareness of thyroid disorder among women in Selangor 2019. Pharm Biosci J. 2020;8(2):7–11. DOI: 10.20510/ukjpb/8/i2/15855378271.

