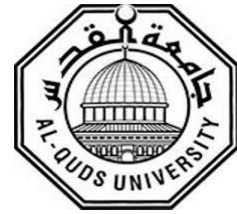


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**Risk Factors of Hypothyroidism among Palestinian in
Gaza Strip: Case Control Study**

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Risk Factors of Hypothyroidism among Palestinian in Gaza Strip: Case Control Study

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Thesis Approval

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Jerusalem – Palestine

1440 / 2018

Dedication

To the loving memory of my father, God bless his soul

To my precious mother

To my brother; Mr. Mohammad, Dr. Abdellrahman, and Mr. Ahmad

To my sister

To my wife

To my son Ibrahim

To my daughters Shtha, Basma, and Raghad

To my relative and friends

Declaration

I certify that this thesis submitted for the degree of master, is the result of my own research, except where otherwise acknowledged, and that this study (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signed

Khalil Ibrahim Hamad

Date: / /

Acknowledgment

First of all, all praise to ALLAH for giving me the blessing, the strength, the chance and endurance to complete this thesis.

I would like to express my sincere gratitude to my supervisor Prof. Dr. Maged Yassin for his time, generous guidance, patience, encouragement and support throughout the whole study period.

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I hope this study could be helpful for the practice and for knowledge seekers.

Abstract

Hypothyroidism is a clinical syndrome resulting from a deficiency of thyroid hormones and it is considered as one of the most common endocrinological disorders in the world. The aim of this study is to assess the risk factors for hypothyroidism among people attending the Governmental hospitals in Gaza Strip. Case control study was carried out in four governmental hospitals namely European Gaza hospital, Naser hospital, Shohda Al-aqsa hospital and Al-shifa hospital in Gaza strip. The sample was selected by convenient sampling method with total sample size of 300 (150 cases and 150 controls). The cases were adult clients already diagnosed with hypothyroidism who attended the selected governmental hospitals and the controls were adults without hypothyroidism from people who attended the Governmental hospitals. The matching was done in term of the same Governorate. Pilot study was carried out and resulted with no any modification in the instrument. P-value ≤ 0.05 and/or confidence interval of 95% are considered statistically significant. Bivariate analysis showed that there were statistically significant association ($p < 0.05$) between hypothyroidism and the under mentioned risk factors; the Socio-demographic factors including age (t: 3.625, p: 0.000), being female OR: 3.18 (1.63 – 6.17), educational level ($p < 0.05$ for all categories less than diploma), unemployment OR: 2 (1.25 – 3.18), family history of thyroid diseases OR: 6.658 (3.38 – 13.10), present medical history of hypertension OR: 1.98 (1.16 – 3.39), present medical history of diabetes mellitus OR: 2.74 (1.39 – 5.36), presence of goiter OR: 29 (11.24 – 74.77), among reproductive factors postpartum thyroiditis (F: 25.34, p: 0.000), for drugs antiacid intake (t: 2.153, p: 0.043), iron intake (t: 2.19, p: 0.033), and for Dietary factors eating red meat 3 times and more weekly OR: 0.184 (0.065 – 0.517) and eating red meat 1-2 times weekly OR: 0.247 (0.099 – 0.616), taking milk 3 times and more weekly OR: 0.395 (0.231 – 0.677) and taking milk less than once weekly OR: 0.38 (0.194 – 0.764), eating peanuts 1-2 times weekly OR: 0.472 (0.232 – 0.862) and eating peanuts Less than once weekly OR: 0.472 (0.272 – 0.819), eating pineapple (F: 11.30, P: 0.008), eating raisin 1-2 times weekly OR: 0.23 (0.085 – 0.645) and eating raisin less than once weekly OR: 0.447 (0.273 – 0.734), eating sesame less than once weekly OR: 0.468 (0.275 – 0.799) and eating walnuts 3 or more weekly, 1-2 times weekly and less than once weekly (OR: 0.294, 0.199 and 0.498 respectively, C.I: 0.097 – 0.892, 0.062 – 0.642 and 0.305 – 0.811 respectively). The study recommended that well adopted surveillance system for hypothyroidism and screening program for population at risk for hypothyroidism should be taken in place specially among female diabetic and/or hypertensive patients aged 40 years and above. In addition health education program should be adopted to increase awareness on hypothyroidism as one of the common endocrine disorders and to work on modifiable risk factors for hypothyroidism like drugs intake.

Table of Contents

| | |
|---|-----------|
| Declaration..... | i |
| Acknowledgment..... | ii |
| Abstract..... | iii |
| Table of Contents..... | iv |
| List of Tables..... | vii |
| List of Figures..... | ix |
| List of Annexes..... | x |
| List of Abbreviations..... | xi |
| Chapter One..... | 1 |
| 1.1 Background..... | 1 |
| 1.2 Research problem..... | 2 |
| 1.3 Justification | 3 |
| 1.4 Study objectives | 3 |
| 1.4.1 General objective..... | 3 |
| 1.4.2 Specific objective..... | 3 |
| 1.5 Research questions..... | 3 |
| 1.6 Context of the study | 4 |
| 1.6.1 Socio-demographic context | 4 |
| 1.6.2 Palestinian health care system | 5 |
| 1.6.3 Non-communicable diseases | 8 |
| 1.7 Operational definition..... | 9 |
| 1.7.1. Hypothyroidism..... | 9 |
| 1.7.2 Iatrogenic hypothyroidism..... | 10 |
| 1.7.3 Risk factor | 10 |
| Chapter Two..... | 11 |
| 2.1 Conceptual framework | 11 |
| 2.1.1: Socio-demographic domain..... | 12 |
| 2.1.2 Chronic medical diseases domain..... | 12 |
| 2.1.3 Family history of chronic medical diseases domain | 12 |
| 2.1.4 Dietary domain | 12 |
| 2.1.5 Iatrogenic domain..... | 12 |
| 2.1.6 Reproductive domain..... | 12 |
| 2.2. Literature review | 13 |

| | |
|---|-----------|
| 2.2.1 Definition of hypothyroidism | 13 |
| 2.2.2 Classification of hypothyroidism..... | 13 |
| 2.2.3 Prevalence (Magnitude) of hypothyroidism..... | 14 |
| 2.2.4 Etiology of hypothyroidism..... | 15 |
| 2.2.5 Socio-demographic risk factors for hypothyroidism..... | 16 |
| 2.2.6 Chronic medical diseases..... | 19 |
| 2.2.7 Family history of chronic medical diseases | 21 |
| 2.2.8 Dietary risk factors for hypothyroidism..... | 22 |
| 2.2.9 Iatrogenic risk factors for hypothyroidism..... | 24 |
| 2.2.10 Reproductive risk factors for hypothyroidism | 26 |
| 2.2.11 Signs and symptoms | 28 |
| 2.2.12 Diagnosis and treatment | 28 |
| 2.2.13 Complications of hypothyroidism | 29 |
| Chapter Three Methodology..... | 30 |
| 3.1 Study design | 30 |
| 3.2 Study setting..... | 30 |
| 3.3 Period of the study..... | 30 |
| 3.4 Study population | 30 |
| 3.5 Sampling and sample size | 31 |
| 3.6 Eligibility criteria | 31 |
| 3.7 Study instruments..... | 32 |
| 3.8 Ethical and administrative consideration | 32 |
| 3.9 Pilot study | 33 |
| 3.10 Validity and reliability..... | 33 |
| 3.10.1 Validity of questionnaire | 33 |
| 3.10.2 Reliability..... | 33 |
| 3.11 Data collection..... | 33 |
| 3.12 Data entry and Statistical analysis..... | 34 |
| 3.13 Study Limitations..... | 34 |
| Chapter Four..... | 35 |
| 4. Result and Discussion..... | 35 |
| 4.1 Descriptive analysis of socio-demographic characteristics..... | 35 |
| 4.1.1 Distribution of the study population by health facility..... | 35 |
| 4.1.2 Distribution of the study population by the Governorates | 36 |
| 4.1.3 Distribution of the study population by the type of residency | 36 |

| | |
|---|-----------|
| 4.1.4 Mean age of the study population | 37 |
| 4.1.5 Distribution of study the population by gender..... | 38 |
| 4.1.6 Distribution of the study population by family type | 39 |
| 4.1.7 Distribution of the study population by average family size | 40 |
| 4.1.8 Distribution of the study population by educational level..... | 41 |
| 4.1.9 Distribution of the study population by employment status | 42 |
| 4.1.10 Distribution of the study population by monthly family income by Jordanian Dinar ... | 42 |
| 4.1.11 Distribution of the study population by smoking status | 43 |
| 4.1.12 Iatrogenic related factors and hypothyroidism | 44 |
| 4.2 Inferential analysis | 46 |
| 4.2.1 Association between socio-demographic characteristics and hypothyroidism | 46 |
| 4.2.2 Association between gender, marital status, type of family, smoking status and hypothyroidism | 47 |
| 4.2.3 Association between residency area, educational level, employment and hypothyroidism | 49 |
| 4.2.4 Relationship between mean family size, mean monthly family income and hypothyroidism | 51 |
| 4.2.5 Association between family history related factors and hypothyroidism | 52 |
| 4.2.6 Association between medical history related factors and hypothyroidism..... | 54 |
| 4.2.8 Relationship between reproductive history related factors and hypothyroidism | 57 |
| 4.2.9 Relationship between dietary history related factors and hypothyroidism | 59 |
| Chapter Five..... | 66 |
| 5. Conclusion and Recommendations | 66 |
| 5.1 Conclusion | 66 |
| 5.2 Recommendations | 67 |
| 5.3 Recommended further research | 68 |
| References:..... | 69 |
| Annexes..... | 82 |

List of Tables

| No. | Table | Page |
|------------|---|------|
| Table 4.1 | Distribution of the study population by health facility | 35 |
| Table 4.2 | Distribution of the study population by the governorates | 36 |
| Table 4.3 | Distribution of the study population by the type of residency | 36 |
| Table 4.4 | Distribution of the study population by educational level | 41 |
| Table 4.5 | Distribution of the study population by employment status | 42 |
| Table 4.6 | Distribution of study population by smoking status | 43 |
| Table 4.7 | Relationship between participants' age and hypothyroidism | 44 |
| Table 4.8 | Thyroidectomy among population of study | 44 |
| Table 4.9 | causes of thyroidectomy | 45 |
| Table 4.10 | Radioactive iodine exposure among case group | 46 |
| Table 4.11 | Association between gender, marital status, type of family, smoking status and hypothyroidism | 47 |
| Table 4.12 | Association between residency area, educational level, employment and hypothyroidism | 49 |
| Table 4.13 | Relationship between mean family size, mean monthly family income and hypothyroidism | 51 |
| Table 4.14 | Association between family history related factors and hypothyroidism | 52 |
| Table 4.15 | Association between "diabetes mellitus, hypertension and goiter" and hypothyroidism | 54 |
| Table 4.16 | Association between medical history of autoimmune disease and hypothyroidism | 55 |
| Table 4.17 | Association between drug intake and hypothyroidism | 56 |
| Table 4.18 | Association between "gravidity, parity and abortion" and hypothyroidism | 57 |

| | | |
|--------------|--|----|
| Table 4.19 | Association between post-partum thyroiditis and | 58 |
| | hypothyroidism | |
| Table 4.20-A | Relationship between Dietary history related factors and | 59 |
| | hypothyroidism | |
| Table 4.20-B | Relationship between Dietary history related factors and | 61 |
| | hypothyroidism | |
| Table 4.20-C | Relationship between Dietary history related factors and | 62 |
| | hypothyroidism | |
| Table 4.20-D | Relationship between Dietary history related factors and | 64 |
| | hypothyroidism | |

List of Figures

| No. | Figure | Page |
|------------|---|------|
| Figure 2.1 | Conceptual framework | 11 |
| Figure 4.1 | Mean age of the study population | 37 |
| Figure 4.2 | Distribution of study population by gender | 38 |
| Figure 4.3 | Distribution of the study population by family type | 39 |
| Figure 4.4 | Distribution of the study population by average family size | 40 |
| Figure 4.5 | Distribution of study population by average monthly family income by Jordanian Dinar | 42 |

List of Annexes

| No | Annex | Page |
|-----------|---------------------------|-------------|
| Annex 1 | Palestine map | 80 |
| Annex 2 | Sample size calculation | 81 |
| Annex 3 | Helsinki approval | 82 |
| Annex 4 | Managerial approval | 83 |
| Annex 5 | Consent form | 84 |
| Annex 6 | Questionnaire | 85 |
| Annex 7 | Experts' arbitration form | 90 |
| Annex 8 | Control panel | 91 |

List of Abbreviations

| | |
|--------------------|--|
| AITD | Auto immune thyroid disease |
| Anti-Tg | Thyroglobulin antibodies |
| Anti-TPO | Thyroid Peroxidase antibodies |
| EMRO | Eastern Mediterranean Region Office WHO |
| FT3 | Free T3 |
| FT4 | Free T4 |
| GD | Grave's Disease |
| LT4 | Levothyroxine |
| MOH | Ministry of Health |
| NGO | Non-Governmental Organization |
| OCHA | United Nation Office for the Coordination of Humanitarian Affairs |
| PASSIA | Palestinian Academic Society for the Study of International Affairs |
| PCBS | Palestinian Central Bureau of Statistics |
| RAI | Radioactive iodine |
| SCH | Subclinical hypothyroidism |
| TBG | Thyroxin-binding globulin |
| Tg | Thyroglobulin |
| TPO | Thyroid peroxidase |
| TRH | Thyrotropin-releasing hormone |
| TSH | Thyroid stimulating hormone, thyrotropin |
| UI | Urinary iodine |
| UNFPA | United Nations Population Fund |
| UNRWA Near East | United Nations Relief and Works Agency for Palestine Refugees in the |
| WHO | World Health Organization |