

Assessment Contributing Factors related to hypothyroidism/hyperthyroidism for adult patient at Bagdad Teaching Hospitals

تقييم العوامل المساهمة المتعلقة بارتفاع /انخفاض افرازات الغدة الدرقية للمرضى
البالغين في مستشفيات بغداد التعليمية

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الخلاصة:

الهدف: تهدف الدراسة لتقييم العوامل المساهمة للمرضى البالغين بارتفاع وإنخفاض افرازات الغدة الدرقية والعلاقة بين الخصائص الديموغرافية (العمر، الجنس، المستوى التعليمي) مع العوامل المساهمة.

المنهجية: أجريت دراسة وصفية لغرض تحديد العوامل المساهمة للمرضى البالغين الذين يعانون من إرتفاع وإنخفاض افرازات الغدة الدرقية الذين يوافدون العيادة الاستشارية في مستشفيات بغداد التعليمية. وقد أجريت الدراسة خلال الفترة الممتدة من ٢٨ تشرين الاول ٢٠١٤ إلى ١٥ أيار ٢٠١٥. وشملت عينة البحث (٥٠) مريضاً من الذين يعانون من ارتفاع افرازات الغدة الدرقية (٥٠) مريضاً من الذين يعانون من انخفاض افرازات الغدة الدرقية واختيرت بطريقة غرضية (غير احتمالية). وصممت استمارة استبانة لغرض الدراسة تضمنت ثلاثة اجزاء (المعلومات الديموغرافية، والتاريخ الطبي للمريض والأسرة، والعوامل المساهمة المتعلقة بالغذاء والعوامل النفسية والاجتماعية والادوية). وتم تحديد صدق الأداة من خلال عرضها على (١٤) خبيراً من ذوي الاختصاص ومن ثم تطبيق (الاختبار - وإعادة الاختبار) لتحديد ثبات الاستمارة من خلال حساب معامل الارتباط بيرسن ($r = 0.861$) للمرضى المصابين بإنخفاض إفرازات الغدة الدرقية. وجمعت المعلومات بواسطة الباحث من خلال استمارة الاستبانة وبطريقة المقابلة. وتم تحليل البيانات من خلال أسلوب الإحصاء الوصفي (التكرار، النسبة المئوية والوسط الحسابي الموزون) والأسلوب الإحصائي الاستنتاجي (الانحراف المعياري ومعامل الارتباط).

النتائج: تشير نتائج الدراسة الى أن هناك فرق كبير جداً بين النساء ورجال حيث أن نسبة الإصابة بالنساء أكثر من الرجال ومن الذين تتراوح اعمارهم بين (٢٨-٣٧) سنة للمرضى المصابين بإنخفاض افرازات الغدة الدرقية ومن (٤٨-٥٧) سنة للمرضى المصابين بارتفاع افرازات الغدة الدرقية ومن خريجي الدراسة الابتدائية ومن سكنة الحضر. وظهرت نتائج الدراسة أيضاً أن هناك فرقاً معنوياً بين المرضى الذين عندهم تاريخ مرضي بارتفاع وإنخفاض افرازات الغدة الدرقية وبين المرضى الذين ليس لديهم تاريخ مرضي بارتفاع وإنخفاض افرازات الغدة الدرقية.

الاستنتاج: استنتجت الدراسة أن التاريخ المرضي للغدة الدرقية يزيد من خطر الإصابة بارتفاع وإنخفاض إفرازات الغدة الدرقية ومن الدخل المحدود بالنسبة للمرضى المصابين بإنخفاض افرازات الغدة الدرقية ومن الدخل الكافي بالنسبة للمرضى المصابين بارتفاع افرازات الغدة الدرقية.

التوصيات: أوصت الدراسة إلى إجراء المزيد من البحوث التي تهدف إلى التشخيص المبكر لأمراض الغدة الدرقية، وبرامج تثقيفية التي تساعد على التعرف عن امراض الغدة الدرقية وإيجاد الطرق لتقليل عوامل الخطورة في المستقبل وتغيير نمط حياتهم.

Abstract

Objective(s): To assess of contributing factors related to hypothyroidism/ hyperthyroidism for adult patients, and to find out the relationship between some demographic characteristic (age, gender, level of education) with contributing factors.

Methodology: A descriptive study was conducted at the outpatient consultation in Bagdad teaching hospitals the period between October 2014 to May 2015 in order to assess the contributing factors related to Hypothyroidism / Hyperthyroidism for adult patient at Bagdad Teaching Hospitals. A random sample consisted of (50) patients from suffering hypothyroidism and (50) patients from suffering hyperthyroidism who were systematically admitted to the outpatient consultation were selected one by one. A questionnaire was constructed for the purpose of the study, which is comprised of three parts that include: (1) Sociodemographic Characteristics data (2) The past medical history for patient and family (3) Assessment of contributing factors related to diet, psychological factors, social factors and medication. Content validity of the questionnaire was determined through a panel of (14) experts. Reliability and validity of questionnaire was determined through test re-test ($r = 0.861$) of pilot study. Data was collected by the researcher who interviewed those patients and filled out the constructed questionnaire form. Data were analyzed by using descriptive statistical approach (frequency, percentage and mean of score) and inferential statistical approach (stander deviation and correlation coefficient).

Results: The study findings indicated that there is highly significant difference between Women and man the incidence of thyroid disease (hypothyroidism and hyperthyroidism) more than female. It is aged between (28-37) years old for hypothyroidism patients and (48-57) years old for hyperthyroidism patients, the most of study sample primary graduates and urban setting. Our results also show that there are significant difference between history of thyroid disease patient and non-history of thyroid disease patients.

Conclusion: Conclusion from the study that past history of thyroid disease raises the risk to develop hypothyroidism and hyperthyroidism disease and barely sufficient income for hypothyroidism and sufficient income for hyperthyroidism patients.

Recommendations: The study recommends that the further research aimed at early detection hypothyroidism and hyperthyroidism and education program to help and understand the thyroid disease and find ways to reduce the risk of future thyroid problems and life style habit.

Keyword: Contributing factors, Hypothyroidism, Hyperthyroidism.

INTRODUCTION:

Worldwide about one billion individuals are estimated to be iodine deficient; however, it is unknown how often this leads to hypothyroidism. In large population-based studies in Western countries with deficiency dietary iodine, 0.3–0.4% of the population have overt hypothyroidism. A larger proportion, 4.3–8.5%, has subclinical hypothyroidism⁽¹⁾. Hypothyroidism and hyperthyroidism are the production of an imbalance of thyroid hormone. Hypothyroidism is simply insufficiency thyroid hormone and hyperthyroidism is too much. Either imbalance affects the metabolism in the body. Guyton (2000) says “hypothyroidism like hyperthyroidism is probably initiated by autoimmunity against the thyroid gland, but immunity that destructs the gland rather than stimulates it. The thyroid gland regulates the body's metabolism, heart rate, blood pressure, and body temperature, among other functions. Thyroid hormone maintains the rate at which your body uses fats and carbohydrates, burn calories, assist regulate body temperature, influence heart rate and helps in controlling the production of protein. Sometimes the thyroid can produce too much hormones or insufficiency⁽²⁾. Women are most probability to develop hypothyroidism than men. In population-based studies, women were seven times more likely than men to have TSH levels over 10 mU/l⁽³⁾. Many risk factors predispose women and man to hypothyroidism and hyperthyroidism, including autoimmune thyroid disease (AITD), type (1) diabetes mellitus, other endocrine deficiencies, Down syndrome, thalassemia major, thyroid ablation and who are treated with pituitary surgery or irradiation, head and neck irradiation, treatment of growth hormone deficiency, cytotoxic therapy, lithium, interferon α , interferon β , and therapeutic monoclonal antibodies. Patients with a family or client history of thyroid disease, goiter, history of spontaneous abortion in women, Positive thyroid peroxidase antibody, origin from areas of endemic iodine deficiency, Previous thyroid disease or surgery, or any symptoms suggesting at higher risk for hypothyroidism and hyperthyroidism⁽⁴⁾.

OBJECTIVES OF THE STUDY:

1. To assess contributing factors related to hypothyroidism / hyperthyroidism for adult patients.
2. To find out the relationships between contributing factors related to hypothyroidism/hyperthyroidism and adult patients' certain variables such as (age, gender, educational level).

METHODOLOGY:

A descriptive study was carried out throughout the present study to assessment contributing factors related to hypothyroidism/hyperthyroidism for adult patients who attended the outpatient consultation of Baghdad Teaching Hospital. The study was carried out during the period extended from the of October 28th 2014 to May 15th 2015. The sample consisted of (100) patients divided two group (50) patients hypothyroidism and (50) patients hyperthyroidism. These patients were attending out patient's consultation of Baghdad Teaching Hospitals (Al- Yarmouk Teaching Hospital, Baghdad Teaching

Hospital, AL. Kindly Teaching Hospital and Medical City Kazimain (peace be upon them). A questionnaire- interview format was designed and developed by the researcher for the purpose of the study; such development was employed through the available literature, clinical background and interview with patients who hypothyroidism/hyperthyroidism. All the items were measured on scale of (3) indicates that the always 1, sometimes 2, never 3. Diet domain; daily 1, Weekly 2, monthly 3 for hyperthyroidism, daily 3, Weekly 2, monthly 1 for hypothyroidism. The questionnaire consisted of (3) parts.

Part I: Demographic Information Sheet.

Part II : historical information satisfactory to the patient and family.

Part III: Contributing factors domain which include diet, Psychological domain (anxiety & depression), social and Medication domain. Rating scale was used to rate the frequency and extension of the problems. The content validity of the instrument was established through a panel of (14) experts. Test- retest reliability was determined through a computation of Pearson Correlations for the scales. Coefficients for the (43) items of contributing factors of hypothyroidism and hyperthyroidism were ($r = 0.861$) for the total score of contributing factors. The data were collected by using the questionnaire structured format through interview technique. Each patient was interviewed personally by the researcher. Throughout each interview explanation of the study was held up with patient in order to accept participation. Each interview took approximately from (20-30) minute and initiated at the waiting room. Data were collected between 8.30 am to 1.30 pm. The determination was conducted during the period from January 13th to April 5th 2015. The data were analyzed through descriptive data analysis and inferential data analysis the data were analyzed through the use of Statistical Package of Social Sciences (SPSS) version 16.0.

RESULTS:

Table (1): Distribution of the study Samples by Socio-Demographic Characteristics.

No.	variables	Groups	Hypothyroidism		Hyperthyroidism	
			F.	Percent	F.	Percent
1.	Gender	Male	2	4.0	8	16.0
		Female	48	96.0	42	84.0
2.	Age Groups (Per years)	18- 27 years	10	20.0	6	12.0
		28- 37 years	16	32.0	11	22.0
		38- 47 years	12	24.0	13	26.0
		48 - 57 years	9	18.0	14	28.0
		58- 67 years	3	6.0	6	12.0
3.	Residence	Urban	44	88.0	46	92.0
		Rural	6	12.0	4	8.0
4.	Marital status	Single	5	10.0	7	14.0
		Married	40	80.0	41	82.0
		Widow	4	8.0	1	2.0
		Divorced	1	2.0	1	2.0
5.	Level of Education	Illiterate	5	10.0	6	12.0
		Read & write	3	6.0	2	4.0
		primary Graduate	15	30.0	16	32.0
		Intermediate Graduate	10	20.0	14	28.0
		secondary Graduate	6	12.0	5	10.0
		Diploma Graduate	3	6.0	2	4.0
		College Graduate	7	14.0	4	8.0
		Master Graduate	1	2.0	1	2.0
6.	occupation	Govern. employee	11	22.0	10	20.0
		Free job	2	4.0	2	4.0
		Retired	1	2.0	2	4.0
		Housewife	35	70.0	35	70.0
		Students	1	2.0	1	2.0
8.	Monthly Income	Sufficient	16	32.0	26	52.0

	Barely sufficient	19	38.0	13	26.0
	Not Sufficient	15	30.0	11	22.0

Table(1) revealed that 96% of the study samples were females for hypothyroidism and 84% of them were females for hyperthyroidism, more age (28-37)years old for hypothyroidism and more age(48-57) years old for hyperthyroidism, high percentage of them were primary graduated for both groups, hypothyroidism 30% and hyperthyroidism 32% , 70% of them were equal to housewife for hypothyroidism and hyperthyroidism ,(88%) study sample from urban setting for hypothyroidism and 92% from urban setting for hyperthyroidism,38% have barely sufficient income for hypothyroidism and 52% have sufficient income for hyperthyroidism.

Table (2): Distribution of Patients and Family according to Hypothyroidism and Hypothyroidism Related to Clinical History.

List	Clinical history	Hypothyroidism		Hyperthyroidism	
		Freq.	percent	Freq.	percent
1 st	Clinical history for patient				
1	High cholesterol in the blood	6	12.0	7	14.0
2	Heart disease	8	16.0	14	28.0
3	Hypertension	15	30.0	18	36.0
4	Previous surgery of thyroid gland	12	24.0	13	26.0
5	Diabetes mellitus	5	10.0	5	10.0
6	Use of radioactive iodine	6	12.0	3	6.0
2 nd	Clinical history for family	22	44.0	24	48.0

Table (2) shows that 44% of patients had family history of hypothyroidism and 48% of patients had family history of hyperthyroidism.

Table (3): Diet and psychological domain for adult patients with Hypothyroidism.

No.	Items	Daily	Weekly	Monthly	M.S	ASS.
1 st	Diet domain					
1	Meat (liver)	7	21	22	2.3	M
2	Fish ,chicken and dairy products	33	12	5	1.44	L
3	Milk	17	7	26	2.18	M
4	Cheese	30	8	12	1.64	L
5	Butter	5	4	41	2.72	H
6	Lettuce	36	5	9	1.46	L
7	Spanish	24	12	14	1.8	M
8	Green pepper	23	8	19	1.92	M
9	Pineapple	6	4	40	2.68	H
10	Raisins	14	4	32	2.36	M
2 nd	Psychological domain	Always	Sometimes	never	M.S	ASS
1	Feel my sleep turbulent and disturbance	26	10	14	1.76	M
2	Feel nervous.	36	8	6	1.4	L
3	Feel disturbing dreams (nightmares).	25	10	15	1.8	M
4.	Feel distress of stomach.	31	5	14	1.66	L
5	Feel tired quickly.	42	2	6	1.28	L
6	Discomfort feeling when you wait.	38	5	7	1.38	L
7	Concentrate thinking in action.	30	11	9	1.58	L
8	Sweating in cold days.	31	5	14	1.66	L
9	Headache	27	20	3	1.52	L
10	Feeling anxiety from things are worthless.	33	9	8	1.5	L
11	A tense person	34	7	9	1.5	L
12	Feel sad.	36	7	7	1.42	L
13	Feel pessimistic about the future.	13	8	29	2.32	M
14	Disappointed in myself.	10	10	30	2.4	H
15	Lose my interest in people.	16	8	26	2.2	M

16	Working the same efficiency with which I was working before.	17	5	28	2.22	M
17	Normal sleep pattern.	13	5	32	2.38	M
18	Tired more quickly than usual.	45	2	3	1.16	L
19	My appetite is not as good as before.	22	8	20	1.96	L

M.s=mean of score(1-1.69= low,1.7-2.39= moderate,2.4-3= high)

Table(3)shows that the mean of score are high on items (1st(5,9),2nd(14), moderate and low on the remaining items.

Table (4): Social and medication domain for adult patients with Hypothyroidism.

3 rd	Social domain	Always	Sometimes	never	M.S	ASS
1	Do take advantage of your free time?	18	11	21	2.06	M
2	Participate in social activities	34	5	11	1.54	L
3	Do you like to be relationships with others?.	43	4	3	1.2	L
4	Do you deal easily with your colleagues ?	42	5	3	1.22	L
5	Are increasing problems during menstrual ?	10	5	35	2.5	H
6	Feel anxiety when you stay at home.	4	38	8	2.08	M
7	Prefer to stay at home away .	2	24	24	2.44	H
4 th	Medication domain	Always	Sometimes	never	M.S	ASS
١	Antacids drugs	15	11	24	2.18	M
٢	Iron and product	6	18	26	2.4	H
٣	Contraceptive drugs	7	18	25	2.36	M
٤	Sedatives and opiates	8	17	25	2.34	M
٥	Anti-thyroid drugs	2	3	45	2.86	H
٦	Cardiovascular drugs	9	10	31	2.44	H
٧	Diuretic drugs	3	3	44	2.82	H

M.s=mean of score(1-1.69= low,1.7-2.39= moderate,2.4-3= high)

Table (4) shows that the mean of score are high on items3rd (5,7), 4th (2,5,6,7),moderate and low on the remaining items.

Table (5): Diet and psychological domain for adult patients with Hyperthyroidism.

NO	Item	Daily	Weekly	Monthly	M.S	ASS.
1 st	Diet domain					
1	Meat (liver)	6	11	33	2.54	H
2	Fish ,chicken and dairy products	34	7	9	1.5	L
3	Milk	22	12	16	1.9	M
4	Cheese	27	9	14	1.74	M
5	Butter	8	6	36	2.56	H
6	Lettuce	37	7	6	1.38	L
7	Spanish	27	8	15	1.76	M
8	Green pepper	35	5	10	1.5	L
9	Pineapple	5	7	38	2.66	H
10	Raisins	7	7	36	2.58	H
2 nd	Psychological domain	Always	Sometime	never	M.S	ASS.
1	Feel my sleep turbulent and disturbance	23	20	7	1.68	L
2	Feel nervous.	37	10	3	1.32	L
3	Feel disturbing dreams (nightmares).	22	13	15	1.86	M
4	Feel distress of stomach.	24	7	19	1.9	M
5	Feel tired quickly.	43	5	2	1.18	L
6	Discomfort feeling when you wait.	35	4	11	1.52	L
7	Concentrate thinking in action.	34	6	10	1.52	L
8	Sweating in cold days.	24	11	15	1.82	M
9	Headache	28	12	10	1.64	L
10	Feeling anxiety from things are worthless.	31	10	9	1.56	L
11	A tense person	32	٦	١٢	١.٦٢	L
12	Feel sad.	34	7	٩	١.٥	L
13	Feel pessimistic about the future.	8	9	33	2.5	H
14	Disappointed in myself.	6	6	38	2.64	H

15	Lose my interest in people.	10	11	29	2.38	M
16	Working the same efficiency .	16	10	24	2.16	M
17	Normal sleep pattern.	11	10	29	2.36	M
18	Tired more quickly than usual.	34	2	14	1.6	L
19	My appetite is not as good as before.	27	8	15	1.67	L

M.s=mean of score(1-1.69= low,1.7-2.39= moderate,2.4-3= high)

Table(5) shows that the mean of score are high on items (1st(1,5,9,10),2nd (13,14),moderate and low on the remaining items.

Table (6): Social and medication domain for adult patients with Hyperthyroidism.

3 rd	Social domain	ASS	M.S	never	Some times	Always
1	Do take advantage of your free time?	21	8	21	2	M
2	Participate in social activities	31	3	16	1.7	M
3	Do you like to be relationships with others?.	37	2	11	1.48	L
4	Do you deal easily with your colleagues at work?	34	5	11	1.54	L
5	Are increasing problems during menstrual cycle days	11	10	29	2.36	M
6	Feel anxiety when you stay at home.	34	2	14	1.6	L
7	Prefer to stay at home away from the eyes of the people.	27	8	15	1.67	L
4 th	Medication domain	ASS	M.S	never	Some times	Always
١	Cortisone drugs	6	21	23	2.56	H
٢	Steroids drugs	15	3	32	2.82	H
٣	Sedatives and opiates	18	9	23	2.34	M
٤	Anti-thyroid drugs	5	12	33	2.34	M
٥	Cardiovascular drugs	3	3	44	2.1	M

M.s=mean of score(1-1.69= low,1.7-2.39= moderate,2.4-3= high)

Table(6)shows that the mean of score are high on items 4th (1,2), moderate and low on the remaining items.

Table (7) Correlation coefficient between (gender, age, level of education) with contributing factors domains for hypothyroidism patients.

Correlations	Gender	Age(years)	Level of education	Total score
Gender	1	.101	.058	-.162-
Age(years)	.101	1	-.136-	.028
Level of education	.058	-.136-	1	.144
Total score	-.162-	.028	.144	1

**. Correlation is significant at the 0.01 level (2-tailed).

**Correlation is significant at the 0.05 level (2-tailed).

Table (7) show that there is weak negative relationship between contributing factors with gender ($r=-.162-$), and there is positive moderate relationship between contributing factors with level of education($r=.144$), there is relationship between contributing factors with age($r=.028$).

Table (8) Correlation coefficient between (gender, age, level of education) with contributing factors domains for hyperthyroidism patients.

Correlations	Gender	Age(years)	Level of education	Total score
Gender	1	-.114-	-.133-	-.113-
Age(years)	-.114-	1	-.220-	-.041-
Level of education	-.133-	-.220-	1	.055

Total score	-.113-	-.041-	.055	1
**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).				

Table (8) show that there is week negative relationship between contributing factors and gender($r = -.113$ -), and relationship between contributing factors and{age($r = -.041$ -),level of education($r = .055$).

DISCUSSION

Through the course of the data analysis of the present study, the finding showed that the majority of the study samples for both group, hypothyroidism (96%) females, (32%) were (28- 37) years old and hyperthyroidism (48%) females, (28%) were (48- 57) years old. This finding agree with other researcher who stated that Hyperthyroidism attacked approximately (2%) of female in UK, and this rate was (10) times to attack female. Graves' disease contributed to approximately (60% - 80%) of hyperthyroidism patients. This number achieved (10) times higher in women, where highest onset risk happen at age from (40 – 60) years old ⁽⁵⁾.

Seventy percent of both the study samples group are housewife as occupation and Thirty eight percent are barely sufficient for hypothyroidism and sufficient for hyperthyroidism as monthly income.

The finding of the study sample shows that highest percentages (94%) don't smoking for hypothyroidism and (90%) don't have hyperthyroidism.

This finding disagrees with other researcher who reported that there was relationship between smoking and hyperthyroid (the participation were nonsmoking (25%), While (75%) were smokers) ⁽⁶⁾.

Regarding residence, majority (88%) of the study was urban for hypothyroidism and (92%) of the study were urban for hyperthyroidism. This finding were in good agreement with that obtain by other researcher which reported that the finding of participants had (19%) participants from urban areas, (81%) participants from rural areas ⁽⁷⁾.

The finding of the study sample shows that (44%) of the patient had family history for hypothyroidism and 48% of patients had family history of hyperthyroidism. This findings can be supported by another study the findings who reported that there was no significant difference between those who had history of thyroid problem in their family and those who did not have history of thyroid problem in their family in cases as well as in control group ⁽⁸⁾.

Our finding about psychological domain are similar to those reported that of the other researcher who stated there was predominance of Major depressive disorder 24.2%, followed by anxiety disorders (23%). The p-value of the comparison between the case and the control patients is 0.0001 which is highly significant ⁽⁹⁾.

The mean of score of social domain in table (3) for hypothyroidism patients are high on item (Are increasing problems during menstrual cycle days?) and item (Prefer to stay at home away from the eyes of the people). The mean of score is moderate item (Do take advantage of your free time?), item (Feel anxiety when you stay at home) and low on the remaining items. This finding agrees with other researcher which reported that the patients of thyroid disease were significantly more anxious and perceived higher social support from family when compared with the control group ⁽¹⁰⁾.

The mean of score of medication domain in table (4) for hypothyroidism patients are high on item (Iron and product), item (Anti-thyroid drugs), item (Cardiovascular drugs) and item (Diuretic drugs). The mean of score is moderate item (Antacids drugs), item (Contraceptive drugs) and item (Sedatives and opiates).

These results were similar to those obtained by other researchers who stated that many different drugs affect thyroid function. Most of these medications act at the level of the thyroid in patients with normal thyroid function, or at the level of thyroid hormone absorption or metabolism in patients requiring exogenous levothyroxine⁽¹¹⁾.

The mean of score of diet domain in table (5) for hyperthyroidism patients are high on item (Meat (liver)), item (Butter), item (pineapple) and Green pepper. The mean of score is moderate & low on the remaining items.

This finding is supported by other researchers who reported that iodine concentration in aquatic products, poultry products, vegetables, meat and poultry was relatively high. As patients with hyperthyroidism or subclinical hyperthyroidism were not allowed to take iodine or foods with high iodine content by recommendation of their doctors, participants with a known history of hyperthyroidism or subclinical hyperthyroidism are excluded⁽¹²⁾.

The mean of score of medication domain in table (6) for hyperthyroidism patients is high on item (Cortisone drugs), and item (Steroids drugs). The mean of score is moderate item (Sedatives and opiates), item (Anti-thyroid drugs) and item (Cardiovascular drugs).

This finding is supported by another study done who reported that shows Beta-adrenergic blockers were the most frequently prescribed concomitant drugs with 24% of the subclinical hyperthyroid group, and 10.1% of the subclinical hypothyroid group taking this medication⁽¹³⁾.

The findings of the study sample hypothyroidism patients indicated that there is weak negative relationship between contributing factors with gender ($r = -.162$), and there is weak positive relationship between contributing factors with level of education ($r = .144$), there is no relationship between contributing factors with age ($r = .028$). Table (7)

The findings of the study sample hyperthyroidism patients indicated there is weak negative relationship between contributing factors and gender ($r = -.113$), and relationship between contributing factors and age ($r = -.041$), level of education ($r = .055$). Table (8)

CONCLUSIONS

Our data indicate that the contributing factors domains of patients with hypothyroidism and hyperthyroidism moderate decline in all domains except medication domain is high of contributing factors domains.

RECOMMENDATION:

Based on the results and conclusions of the present study; the researcher recommends the following:

- 1- These results suggest the identification of early detection hypothyroidism and hyperthyroidism for adult patient.
- 2- Education program for patient and family to help and understand the thyroid disease and find ways to reduce the risk of future thyroid problems.

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