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Assessment of the Thyroid Hormone Abnormalities on Male Sexual Function in Primary Health Care Centerin Makkah City, Saudi Arabia in 2021

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ABSTRACT:

Background:

Prevalence of thyroid disorders is a very common medical condition. Symptoms of thyroid disorders depending on the condition of thyroid gland functions . The function of the thyroid can be primarily affected from the gland itself (most common) or secondarily affected from higher centers signal in the brain (hypothalamic pituitary axis). This effect on the gland function will result in one of two types of disorders hypothyroidism or hyperthyroidism. Hypothyroidism is the most prevalent type affecting 4-5% in the developed countries. While it's is more common in areas with iodine deficiency .Thyroid hormones for its relevance to male reproduction in the last few decades. Hyperthyroidism and hypothyroidism both affect testicular functions and influence neuroendocrine regulations over reproductive functions via the crosstalk between the hypothalamic-pituitary-thyroid axis and the hypothalamic-pituitary-gonadal axis. The alterations in the male reproductive hormonal milieu by thyroid hormones may lead to reduced testosterone levels and deterioration of semen quality. However, there are very few reports on the direct effects of thyroid disorders upon testicular functions and semen quality**.**

Aim of this study: Assessment of the thyroid hormone abnormalities on male sexual function in Primary Health Care Center in Makkah City.

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Methods: This is a cross-sectional study among the male patients underwent thyroid hormonal test. Study participants have been recruited from Primary Health Care Center in Makah City, Kingdom of Saudi Arabia; data were collected via an online validated questionnaire. Our total participants were (200)**.**

Results:the Thyroid dysfunction the majority of participants answer no sufferings from thyroid dysfunction were (65.0%). Regarding the If the answer to the previous question is (yes), what is the type of disorder majority of participants thyroid laziness were (60.0%), regarding the was there a difference in sexual activity the majority of participants were (55.71%), while not suffering from difference in sexual activity were(44.29%).

Conclusion: it's recommended that all male patients who had sexual dysfunction undergo a full investigation of thyroid function, critically and concisely presented an updated concept on general functions of thyroid hormones in the regulation of male reproductive functions. Based on available reports, it also has put forth probable mechanism by which thyroid disorders may affect testicular physiology, resulting in altered semen quality.

Keywords: Impact, thyroid hormone, abnormalities, male, sexual function, Makkah Al-Mukarramah

1.INTRODUCTION:

Regulation of thyroid hormone starts at the hypothalamus. The hypothalamus releases thyrotropin-releasing hormone (TRH) into the hypothalamic-hypophyseal portal system to the anterior pituitary gland. TRH stimulates thyrotropin cells in the anterior pituitary to the release of thyroid-stimulating hormone (TSH). TRH is a peptide hormone created by the cell bodies in the periventricular nucleus (PVN) of the hypothalamus. These cell bodies project their neurosecretory neurons down to the hypophyseal portal circulation, where TRH can concentrate before reaching the anterior pituitary.[1]

Thyroid gland is a vital organ in the human body and the burden of thyroid diseases in the general population is massive. Thyroid hormonal abnormalities or dysthyroidism is a state in which the thyroid produces a huge or very low amount of thyroid hormone. Hyperthyroidism affects around 2% of female, but considerably less in men.[2]

Sexual dysfunctions (SD), which has traditionally included disorders of interest or desire, arousal, and inhibited orgasm, are a complex process and highly prevalent disorders for female and male in worldwide. It was suggested that the prevalence of new female sexual

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difficulty is 36% at 12-month follow-up.[3] The incidence of Erectile dysfunction, a common type of male sexual dysfunctions, was observed in 31.7% of eligible men at a 5-year follow-up.[4]TRH is a tropic hormone, meaning that it indirectly affects cells by stimulating other endocrine glands first. It binds to the TRH receptors on the anterior pituitary gland, causing a signal cascade mediated by a G-protein coupled receptor. Activation of Gq protein leads to the activation of phosphoinositide-specific phospholipase C (PLC). PLC hydrolyzes phosphatidylinositol [5]. P(PIP) intotriphosphate (IP) and 1,2-diacylglycerol (DAG). These second messengers mobilize intracellular calcium stores and activate protein kinase C, leading to downstream gene activation and transcription of TSH. TRH also has a non-tropic effect on the pituitary gland through the hypothalamic-pituitary-prolactin axis. As a non-tropic hormone, TRH directly stimulates lactotropic cells in the anterior pituitary to produce prolactin. Other substances like serotonin, gonadotropin-releasing hormone, and estrogen can also stimulate prolactin release. Prolactin can cause breast tissue growth and lactation.[6]
Epidemiologic researches have shown that endocrine disease, age, cardiovascular disease, urinary tract infections, chronic health problems, and general health play a key role in the development of female and male sexual dysfunctions[7] However, the exact role of the endocrine disease is still not completely unclear. Recent studies have shown that hypothyroidism was associated with sexual health in both women and men [8]

In mammals, altered thyroid status is known to adversely affect many organs and tissues. Nevertheless, for many years, the impact of thyroid disorders on male reproduction remained controversial. Early studies in the 1950's demonstrated that testes were essentially independent of thyroid hormone effects [9].
Erectile dysfunction (ED) can be defined as the inability to reach or maintain a firm enough erection for satisfactory sexual intercourse. This is a very common sexual problem among aging male subjects. The Massachusetts Male Aging Study reported that fifty-two percent of their community-based survey of men aged between 40 and 70 years old suffered from some degree of Erectile dysfunction.[10] Erectile dysfunction has been demonstrated to have a negative impact on intimate relationships, quality of life and self-respect. Although the causes of Erectile dysfunction is really complex and known to be the result of interplay between poor erectile nerve function, cognitive decline, illness-related stress and dropping interpersonal interaction, both the pathology of Erectile dysfunction and abnormal thyroid function have been showed as having common underlying endocrine abnormalities.[11]

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1.2. Literature review:

Wang et al(2020) report the patients had overt disease, this possibly explaining the difference between their study results. [12]Batese , et al.(2020). According to the U.S. National Health and Nutrition Examination Survey III, the prevalence of hypothyroidism was 4.6% (0.3% of overt and 4.3% of subclinical). Hypothyroidism was found to affect more women than men (ratio: 5−8: 1).[13,14] The other thirty percent of hyperthyroidism cases result from other reasons like nodular goiter, acute thyroiditis, and iodine exposure from some medications or imaging contrast and postpartum thyroiditis. Despite of autoimmune, inflammatory or metabolic sources, the effects of hyperthyroidism have been known to be related to sexual dysfunction and impotence among male gender. [15]

Study has found that nuclear receptors of the thyroid hormone which located in the penis provide the biological standard for the immediate action of thyroid hormones on this organ and recommended that doctors should be encourage their male patients who had thyroid disorder to investigate their sexual health status by using the international index of erectile function score and semen analysis if indicated. (16,17)

Another study report because the testes are rich in polyunsaturatedfatty acids and poor in antioxidant defense, they are more vulnerable to peroxidation injury than other tissues [18,19] Normal thyroid function seems important, at least in some parameters, for maintenance of semen quality via genomic or non-genomic mechanisms, either locally acting on Sertoli cells, Leyding cells, or germ cells, or by affecting crosstalk between the HPT axis and the HPG axis.(20)

Carosa et al. (2010) reported the prevalence of hypothyroidism was 6.18% in Libya and 47.34% in Saudi Arabia according to a study on the thyroid diseases in the Arab world. The primary scenario and consequences of severe hypothyroidism was often described as cretinism, which includes deficiency of mental and physical growth, development, and has a negative effect on most organ systems. Infertility was common and sexual dysfunction. [21]

Romano's et al.(2017) reported that the results in humans they showed that the addition of T4 (0.002 μg/mL) to sperm preparation rapidly (after 20′) and significantly improved sperm motility, while also increasing the number of spermatozoa recovered by the "swim-up" technique. The authors hypothesized that T4 acts directly on calcium channels, increasing calcium intake and cyclic adenosine monophosphate (cAMP) synthesis and leading to protein kinase an activation, which, in turn, causes vigorous flagella movements resulting in so-

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called “hyper activation”. Also the pathophysiological mechanism underlying testicular dysfunction resulting from thyroid disorders has not as yet been elucidated [22]

Study by Lotti et al(2018) note mean sperm count was lower in hyper and hypothyroid subjects in comparison to controls. Fast and total progressive motility was significantly decreased and non-motile sperm was significantly higher in the hyper- and hypothyroid groups. Sperm morphology did not differ between the groups, although the normal percentage was slightly higher in the thyroid group[23] They concluded that THs do play a role in male reproduction.[24] Study by Ajmani et al.(2016) patients with thyroid dysfunction had mild disease, i.e., all were subclinical [25]

Rationale

Thyroid disorder is common in our society as well as erectile dysfunction has a major negative impact on psychological health and quality of life. several studies have shown that there is a strong association between thyroid abnormalities and ED.The thyroid hormone is one of the most vital Hormon that play a critical role in the normal growth, differentiation, metabolism, and physiological functioning of the human body. Thyroid hormone dysfunction is one of the most common problems in clinical practice and has become more prevalent throughout the world in recent decades, also relevant information regarding the impact of Impact of thyroid hormone abnormalities on male sexual function is Unsatisfactory and weak, the researcher is willing to shed light also highlight the importance of thyroid hormone effect in male sexual function.

2.1 Aim of the Study:

Assessment of the thyroid hormone abnormalities on male sexual function in Primary Health Care Center in Makkah 2021

2.2 Objectives:

- To assess the association between hormonal abnormalities that include thyroid hormones and prolactin; and male sexual function by using the international index of erectile function score.

3. Subjects and methods:

3.1 Study design:

This is a cross-sectional study that has be conducted in united clinics and in Primary Health Care Center in Makkah 2021, Kingdom of Saudi, between the period of April 2021 and November 2021, a structured and self-administered validated online questionnaire was

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distributed among patients underwent thyroid function test.

3.2 Study setting / study area:

Study participants will be recruited inin Primary Health Care Center in Makkah

Kingdom of Saudi Arabia. They are distinguished by their environment and the large number of residents in them, also its locations, which are characterized good environment and the large number of residents in them.

3.3 Study population:

The researcher selected participants has be recruited in Primary Health Care Center in Makkahcity, in Kingdom of Saudi Arabia, between the period of April 2021 and November 2021, patients underwent thyroid function test after taking two permissions from the patients and the clinics

Inclusion Criteria :

- Age ≥ 20 years old.
- Male gender.
- All male patients with underwent thyroid function test were included in this study.
- A study participant has be recruited Saudi and Non-Saudi. and other minor cities
- patient Chronic prostatic diseases, use of IPDE-5, urological visits and LUTS

Exclusion criteria:

- Any patient below 20 years old.
- Female gender.

3.4 Study Samplesize :

From the previous literature review of thyroid hormone abnormalities on male sexual function , it is estimated that about 47.34% in Saudi Arabia according to a study on the thyroid diseases in the Arab world and data analysis and a "p-value" less than 0.05 is considered statistically significant in the final models,wecalculated a sample size of 40 individuals. To account for a 10% loss from invalid cases (non-response, dropout, ineligible, or incomplete cases), the sample size required is.

3.5 Sampling Technique

- All laboratory results that include thyroid function tests and prolactin will be included in our study from laboratory database at both centers.
- All patients will be evaluated and assessed for sexual function from time of the test till the current time longitudinally.

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3.6 Study field : Study has been conducted take place between the period ofApril 2021 and November 2021.

3.7 Data collection methods:

A structured and self-administered validated online questionnaire was distributed among patients underwent thyroid function test after taking two permissions from the patients and the clinics with no personal data disclosing the identity of any of the patients was revealed in this study and data were collected using Microsoft Excel and analyzed by using "The Statistical Package for the Social Sciences" (SPSS) version 24. The questionnaire was divided into three sections: the first one was about the demographic data of the patients. The second one was about the general health of the patients including the thyroid status. The last section was about the sexual health by IIEF score

A Pilot study

Was carried out at the questions were first pre-tested and were revised and finalized after it was pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. This study has been conducted and all suggestions taken into consideration.

Data Management and Analysis:

The paired t-test used for quantitative data analysis and a "p-value" less than 0.05 is considered statistically significant in the final models. Arabic questionnaire has been designed based on valid IIEF score and some variables which are: BMI, age, nationality, marital status, educational level (based on the academic achievement), exercise, chronic prostatic diseases, use of IPDE-5, urological visits and LUTS. All male patients with underwent thyroid function test were included in this study with exclusion criteria of any patient below 20 years old.

Measurements:

- **Outcome measures**
  - IIEF score
  - SHIM score
- **Study variables**
  - Prolactin level
  - TSH, T3, T4 level
- **Covariates**

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- Age
- Charlson comorbidity index (CCI)
- HA1C
- BMI
- Total testosterone
- Free testosterone
- Smoking
- Exercise

3.10 Ethical consideration :

- The ethical approval was obtained from the ethical committees of Primary Health Care Center managers Makkah City.
- Permission from the regional Research and Ethical Committee hasbe given to conduct our study.
- All the subjects has been participate voluntarily in the study .
- Privacy of information and confidentiality has been maintained .
- Full explanation about the study and its purpose was carried out to obtain their participation.

3.11 Budget: Self-funded

4.RESULT:

Table 1. Distribution of Socio-demographic characteristics of the studied participated (Age, Body Mass Index, Nationality, Marital status, number of children, Educational level, Exercise, Prostatic disease, Urology visits, Use IPDE-5 (n- 200).

	N	**%**
Age		
<30	30	15
30-50	44	22
50-60	74	37
>60	52	26
Body Mass Index		
Underweight	46	23
Normal weight	44	22
Overweight	68	34

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Obese	42	21
Nationality		
Non-Saudi	32	16
Saudi	168	84
Marital status		
Not-married	44	22
Married	156	78
Educational level		
Non-educated	38	19
Educated	162	81
Exercise		
No exercise	146	73
Exercise	54	27
Prostatic disease		
No prostatic disease	162	81
Prostatic disease	38	19
Urology visits		
No	142	71
Yes	58	29
Use IPDE-5		
No	190	95
Yes	10	5

The total number of participants was 200 were males. The participants were classified into 4 age groups, most of them were (37.0%)in the 50-60 years flowed by >60 years were(26.0%). regarding Body Mass Index most of participated overweight were (34.0%), Only 16.0% among the participants Non-Saudi whileSaudi were (84.0%), regarding Marital status the majority of participated Married were (78.5%). Regarding Educational level in study the most of participant's educated were (81.0%) . Regarding exercise habits in study the most of participant's people were not exercise were (73.0%) . while No Prostatic disease were(81.5%), regarding Urology visits or not the majority of participant not visits were(71.0%), regarding the Use IPDE-5 the majority (92.0%) answered 'NO' while (2.5%)

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answered 'Yes'

Table (2): Knowledge about distribution summary of variables habits of the Participants suffering from thyroid hormone abnormalities on male sexual function

variables habits	**N**	**%**
What is the nature of the sport you do?		
I don't practice.	88	44
Walk	90	45
Weight lifting	22	11
How regularly do you exercise over the course of a week?		
No	58	29
<3 days	32	16
3-4 days	66	33
More than 5 days	44	22
Duration of exercise per day		
No	92	46
Less than 30min.	24	12
30-60min.	64	32
>one hour	20	10
Health problems		
No	70	35
Yes	130	65
Are you committed to using medications for chronic diseases?		
No	50	25
Yes	150	75
While doing various activities		
every day	12	6
More than half of the days	22	11
some days	60	30
no never	106	53
During the past two weeks, have you felt depressed or depressed?		
every day	18	9

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More than half of the days	16	8
some days	68	34
no never	98	49
do you suffer from		
nothing	130	65
Prostatitis	24	12
Prostate enlargement	20	10
Varicocele	26	13
Risk factor		
problems urinating	40	20
suffer from frequent pelvic pain	32	16
pelvic or genital surgery or radiotherapy	64	32
used testosterone injections	36	18
used erection pills	80	40
used other treatments to increase sexual ability	48	24
Do you smoke		
No	82	41
Ex-smoker	40	20
Yes	78	39
Do you use any of the following smoking methods?		
No	92	46
Shisha	10	5
Moasel	22	11
cigarettes	76	38

Regarding participants what is the nature of the sport you do the most of participants walk were (45.0%), regarding how regularly do you exercise over the course of a week majority of participants 3-4 days were (33.0%), regarding of duration of exercise per day majority of participants don't practice the exercise were (46.0%), regarding health problems majority of participants answer Yes suffering from health problems were were(65.0%), regarding are you committed to using medications for chronic diseases most of participants answer Yes

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were(75.0%). Regarding while doing various activities the majority of participants answer no never were (33.0%) . Regarding the past two weeks, have you felt depressed or depressed the majority of participants answer no never suffering from felt depressed or depressed were(49.0%), regarding do you suffer from, the most of participants were not suffering from nothing were(65.0%), regarding risk factor most of participants used erection pills were(40.0%), regarding do you smoked the majority of participants answer not smoking were(41.0 %), regarding do you use any of the following smoking methods most of participants not used any methods were(46.0%).

Table (3):Distribution of Thyroid dysfunction VS sexual dysfunction the studied participated

	N	%
Thyroid dysfunction		
No	130	65
Yes	70	35
If the answer to the previous question is (yes), what is the type of disorder?		
Thyroid laziness	42	60
Thyroid gland activity	28	40
Was there a difference in sexual activity?		
No	39	55.71
Yes	31	44.29

Regarding the Thyroid dysfunction the majority of participants answer no sufferings from thyroid dysfunction were (65.0%). Regarding the If the answer to the previous question is (yes), what is the type of disorder majority of participants thyroid laziness were (60.0%), regarding the was there a difference in sexual activity the majority of participants were (55.71%), while not suffering from difference in sexual activity were(44.29%).

Table (4): distribution of thyroid troubles in the participants suffering from thyroid

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hormone abnormalities in male about the Erectile Function

Variables of Erectile Function	**N**	**%**
How often were you able to get an erection during sexual activity?		
Almost never or never	18	9
A few times	22	11
Sometimes	32	16
Most times	44	22
Almost always	84	42
When you had erections with sexual stimulation, how often were your erections hard enough for penetration?		
Almost never or never	18	9
A few times	22	11
Sometimes	32	16
Most times	46	23
Almost always	82	41
When you attempted intercourse, how often were you able to penetrate your partner?		
Almost never or never	14	7
A few times	26	13
Sometimes	32	16
Most times	34	17
Almost always	60	30
No sexual activity	34	17
During sexual intercourse, how often were you able to maintain your erection after you had penetrated your partner?		
Almost never or never	12	6
A few times	28	14
Sometimes	32	16
Most times	44	22
Almost always	60	30
No sexual activity	24	12
During sexual intercourse, how difficult was it to maintain your erection to completion of intercourse?		

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Not difficult	80	40
Slightly difficult	50	25
Difficult	38	19
Very difficult	8	4
Extremely difficult	10	5
No sexual activity	14	7
How do you rate your confidence that you can get and keep your erection?		
Very low	16	8
Low	38	19
Moderate	52	26
High	44	22
High	50	25

Table 4 show that regarding how often were you able to get an erection during sexual activity the majority of participants answer almost always were(42.0%), while most of times were(22.5%), regarding when you had erections with sexual stimulation, how often were your erections hard enough for penetration most of participants almost always followed be most times were(41.0% and 23.0%), regarding when you attempted intercourse, how often were you able to penetrate your partner the majority of participants answer almost always were (30.0%), while Some times were(16.0%), regarding during sexual intercourse, how often were you able to maintain your erection after you had penetrated your partner most of participants almost always followed be some times were(30.0%). Regarding during sexual intercourse, how difficult was it to maintain your erection to completion of intercourse the majority of participants answer not difficult were (40.0%), regarding how do you rate your confidence that you can get and keep your erection most of participants moderate flowed be high were(26.0% and 25.0%).

Table (5):distribution of thyroid troubles in the participants suffering from thyroid hormone abnormalities in male about the Variables Orgasmic Function

Variables of orgasmic Function	**N**	**%**

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When you had sexual stimulation or intercourse, how often did you ejaculate?		
Almost never or never	24	12
A few times	8	4
Sometimes	32	16
Most times	22	11
Almost always	78	39
No sexual activity	36	18
When you had sexual stimulation or intercourse, how often did you have the feeling of orgasm (with or without ejaculation)?		
Almost never or never	22	11
A few times	26	13
Sometimes	46	23
Most times	30	15
Almost always	76	38
Sexual Desire		
How often have you felt sexual desire?		
A few times	12	6
Sometimes	36	18
Most times	70	35
Almost always	82	41
How would you rate your level of sexual desire?		
Low	18	9
Moderate	64	32
High	38	19
High	80	40
Intercourse Satisfaction		
How many times have you attempted sexual intercourse?		
11-20 times	22	11
7-10 times	12	6
5-6 times	10	5
3-4 times	38	19
1-2 times	84	42

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No attempts	34	17
When you attempted sexual intercourse how often was it satisfactory for you?		
Almost never or never	12	6
A few times	44	22
Sometimes	52	26
Most times	26	13
Almost always	54	27
No sexual activity	12	6
How much have you enjoyed the sexual intercourse?		
Not very enjoyable	26	13
Not very enjoyable	44	22
Highly enjoyable	52	26
Very highly enjoyable	50	25
No intercourse	28	14
Overall Satisfaction		
How satisfied have you been with your overall sex life?		
Very dissatisfied	18	9
Moderately dissatisfied	32	16
About equally satisfied and dissatisfied	46	23
Moderately satisfied	42	21
Very satisfied	62	31
How satisfied have you been with your sexual relationship with your partner?		
Very dissatisfied	18	9
Moderately dissatisfied	22	11
About equally satisfied and dissatisfied	46	23
Moderately satisfied	66	33
Very satisfied	48	24

Regarding When you had sexual stimulation or intercourse, how often did you ejaculate the majority of participants answer almost always were (39.0%), regarding when you had sexual

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stimulation or intercourse, how often did you have the feeling of orgasm (with or without ejaculation) most of participants almost always were(38.0 %)

Regarding Sexual Desire

How often have you felt sexual desire the majority of participants answer almost always were (41.0%), regarding how would you rate your level of sexual desire most of participants moderate flowed be high were(40.0%).

Regarding Intercourse Satisfaction

How many times have you attempted sexual intercourse the majority of participants answer 1-2 times were (420%), while 3-4 times were(19.0%), regarding when you attempted sexual intercourse how often was it satisfactory for you the majority of participants answer almost always were (27.0%), regarding how much have you enjoyed the sexual intercourse the majority of participants answer very highly enjoyable and not very enjoyable were (26.0%)

Regarding Overall Satisfaction

How satisfied have you been with your overall sex life the majority of participants answer very satisfied were (31.0%), while moderately satisfied were(23.0%), regarding how satisfied have you been with your sexual relationship with your partner the majority of participants answer very satisfied and moderately satisfied were (33.0%), highly enjoyable were(24.0%), about equally satisfied and dissatisfied were(20.0%)

Table (6):Distribution the relation between Thyroid dysfunction and the Variables Orgasmic Function (Erectile , Orgasmic, Sexual Desire, Intercourse Satisfaction, Overall Satisfaction, Total score) on sexual function male

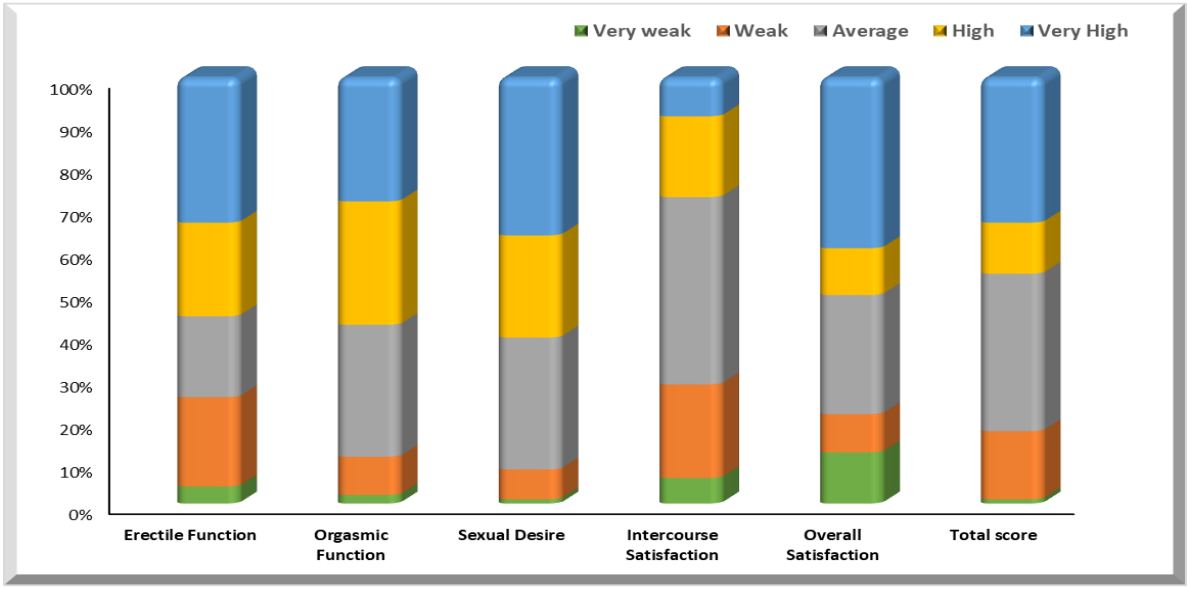
		Very weak	Weak	Average	High	Very High	%
Erectile Function	**N**	1	8	8	8	15	74
	%	2.50%	20.00%	20.00%	20.00%	37.50%	
Orgasmic Function	**N**	0	2	14	8	16	79
	%	0.00%	5.00%	35.00%	20.00%	40.00%	
Sexual Desire	**N**	0	2	14	8	16	79
	%	0.00%	5.00%	35.00%	20.00%	40.00%	
Intercourse Satisfaction	**N**	2	13	19	2	4	56.5
	%	5.00%	32.50%	47.50%	5.00%	10.00%	

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Overall Satisfaction	**N**	4	3	13	7	13	71
	%	10.00%	7.50%	32.50%	17.50%	32.50%	
Total score	**N**	0	7	16	4	13	71.5
	%	0.00%	17.50%	40.00%	10.00%	32.50%	

Table 6 and figure 1 show the majority of participant very high Erectile Function were (37.50%) while the Orgasmic Functionthe majority of participant very high Orgasmic Function were (40.00%) Regarding the Sexual Desire the majority of participant very high Sexual Desire were (40.00%). Regarding the Intercourse Satisfaction the majority of participant average Intercourse Satisfaction were (47.50%). Regarding the Overall Satisfaction the majority of participant average Overall Satisfaction were (32.50%). Regarding the Total score the majority of participant average Total score were (40.00%).

Figure 1Distribution the relation between Thyroid dysfunction and the Variables Orgasmic Function (Erectile , Orgasmic, Sexual Desire, Intercourse Satisfaction, Overall Satisfaction, Total score) on sexual function male



DISCUSSION

Thyroid diseases are among the commonest endocrine disorders worldwide and attention to physical examination findings, combined with selected laboratory and radiologic tools, aids in the early diagnosis and treatment of thyroid endocrine disorders is fundamental [26]

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Reproductive function in male needs normal libido, normal erection, normal hypothalamic-pituitary-target endocrine gland pathway, and normal spermatogenesis and accessory organs of ejaculation [27] . Anecdotal reports suggest a relationship between libido and/or impotence and hyper- and hypothyroidism.[28] , but no controlled data have been published until now. By using a validated SHIM 5-item questionnaire, regarding the International Index of Erectile Function questionnaire, we found that patient with abnormal thyroid function had 51 SD = 12.68 in IIEFS while patient with normal thyroid function had 54 SD = 12.36. This study intended to report the prevalence ofErectile dysfunction in dysthyroid patients and identify any relationships between thyroid and Erectile dysfunction.

This community-based study was conducted on male sexual function in the Makkah Al-Mukarramahcity, of male sex, thyroid hormone abnormalities on male sexual function in a representative sample. Saudi Arabia is a rapidly developing country with changes that influence lifestyle of the population towards urbanization with more progression towards impact of thyroid hormone abnormalities on male sexual function . The results and outcomes of this study present unique information in trends male sex in Makkah Al-Mukarramah
, their socio-demographic characteristics, and their knowledge on thyroid gland, mainly, hypothyroidism, and hyperthyroidism.

Thyroid dysfunction is common in Saudi Arabia account in 47.34% depends on a study on the thyroid diseases in the Arab world. And we found that there is a non-significant relation between thyroid abnormalities and male sexual dysfunction and there is another study that recommend all male patient with abnormal thyroid function to screen about erectile function.[29] We found in our study relation between abnormal thyroid function with urological clinic not visit , marital status , educational level , and LUTS .

Krysiak et al. (2017)The study population was divided into three groups: included: men with autoimmune overt hypothyroidism (group A), men with autoimmune subclinical hypothyroidism (group B), and healthy euthyroid males without thyroid autoimmunity (group C). All enrolled patients finished a questionnaire evaluating male sexual function (International Index of Erectile Function-15: IIEF-15) and evaluating the presence and severity of depressive symptoms (Beck Depression Inventory-Second Edition – BDI-II) before and after the intervention of Levothyroxine for 6 months. The results showed that autoimmune hypothyroidism in males is characterized by sexual and mood disorders and that Levothyroxine improve the sexual dysfunction and depressive symptoms of the hypothyroidism patients.([30]

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Conclusion

This study recommended that health policy makers must arrange more effective health education sessions to increase knowledge of the population and their caregivers about the various aspects of thyroid diseases and the importance of compliance with its treatment.The study concluded that there is an association between thyroid dysfunction and erectile dysfunction but not reaching the statistical significant value, there is also a significant association between thyroid dysfunction and each of the following: lower urinary tract symptoms, educational level, marital status and there is a relation between those who diagnosed with thyroid dysfunction and urology clinic visit. It is recommended that all patient with sexual dysfunction undergo thyroid hormone level and function test.

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