

TREATMENT SATISFACTION AMONG FEMALE HYPOTHYROID PATIENTS IN MAKKAH, SAUDI ARABIA

Meshary Sami Alqurash¹, Nasser Mansour Nasser Alhusaini², Mohammed Haidar Abdulaziz Alsharif³, Alaabarkat Alhussini⁴, Saeed Ali Safar Alzahrani⁵, Omar Faisal Hasaneen⁶, Ahlam Hamid Saad Alengawi⁷, Abdullah Abdulaziz Alharbi⁸, Majed Noor Albsher Mia⁹

¹General physician, Primary healthcare batha'aquraish, Saudi Arabia.

²Social worker, King Faisal Hospital, Saudi Arabia.

³Nursing technician, AbiUrwa Center, Saudi Arabia.

⁴Hospital management specialist, wired and wireless communication, Saudi Arabia.

⁵Specialist Nursing, Health Center BathaQuraish, Saudi Arabia.

⁶Specialist Health Services and Hospital Administration, Health Center BathaQuraish, Saudi Arabia.

⁷Dental assistant, Aladel PHC, Saudi Arabia.

⁸Specialist Health Services and Hospital Administration, Health Affairs in Makkah, Saudi Arabia.

⁹pharmacy technician, Alhajla Health center, Saudi Arabia.

Background

Hypothyroidism, also known as subclinical hypothyroidism, occurs among 4 to 21 percent of females and 3 to 16 percent of males [1]. Substitution of thyroid hormone with levothyroxine is the therapeutic option for this common illness [2]. The determination of the recommended normal range of thyroid hormone levels is still a point of contention [3]. Furthermore, even if euthyroidism is restored, individuals getting this medication have reported lower levels of happiness[4].

There is no convincing reason for hypothyroid individuals who are administering euthyroid on l-T4 medication to have a lower quality of life. Thyroid markers including thyroid-stimulating hormone (TSH), triiodothyronine (T3) and free thyroxine (FT4) appear to have an association with QOL. Attempts to increase QOL among patients have been made, for example, by targeting lowering the serum TSH level during therapy [5, 6], supplementing liothyronine replacement to l-T4 [7], or making minor modifications to the l-T4 dosage [8]. Yet, those efforts really haven't led to an increase in satisfaction.

In recent years, there has been a growing interest in assessing patient satisfaction and quality of life in the context of healthcare. Also, it has become a popular patient-reported outcome measure [28-30]. The purpose of this study was to assess the treatment satisfaction pattern among hypothyroid female patients in Makkah, KSA.

Methods:

Study design:

It is a questionnaire based cross sectional study that was conducted from 2018 to 2019 in Saudi Arabia.

Study population:

All available family medicine physicians from different parts of KSA. The inclusion criteria were physicians of both genders and any nationality who approved to participate in the study after publishing the online questionnaire. Subjects were chosen according to geographical and sex distribution. Sample size was calculated based on the formula of Swinscow and Cohen (2003), taking the total size of Makkah female population, confidence level. Then the patients were chosen from different 5 primary health care centers distributed in the north, south, east, west and middle of Makkah using the stratified random sampling technique. The study included 500 hundred hypothyroid Saudi females. Patients smaller than 19 years old, and pregnant women were excluded from the study. An informed consent was taken from all participants in the study.

Conceptual framework : The study was based on a self-administrated questionnaire sheet considering the satisfaction of hypothyroid patients to their treatment.

Study tools

After reviewing the available studies considering the treatment satisfaction, a questionnaire was distributed among the subjects which was translated into simple Arabic language. The Underactive Thyroid Treatment Satisfaction Questionnaire (ThyTSQ) was used which was the first statistically validated survey tool designed to assess hypothyroid patients' therapeutic satisfaction [9]. The ThyTSQ

survey is split into two components, each of which has been independently validated: At the start of hypothyroid therapy, four questions were asked to assess treatment and physician satisfaction (ThyTSQPast). A set of seven questions assesses current therapy and satisfaction with providers (ThyTSQ-Present). The findings of both parts of the survey are combined to provide an Overall Satisfaction Score. The score for each questionnaire item is 0-6 where higher scores indicating greater satisfaction.

Statistical analysis:

The statistical analysis was done using the Statistical Package for Social Sciences version 20 (SPSS Inc., Chicago, IL, USA) using simple descriptive and analytical methods (Univariate statistic) showed as frequency and percentage.

Results: Demographics: Table (1) indicates the basic characteristics of the included patients where they were divided in four age groups. The duration of treatment was less than 5 years among 25%, 5-10 years among 19%, 10-20 years among 38% and more than 20 years among 18%.

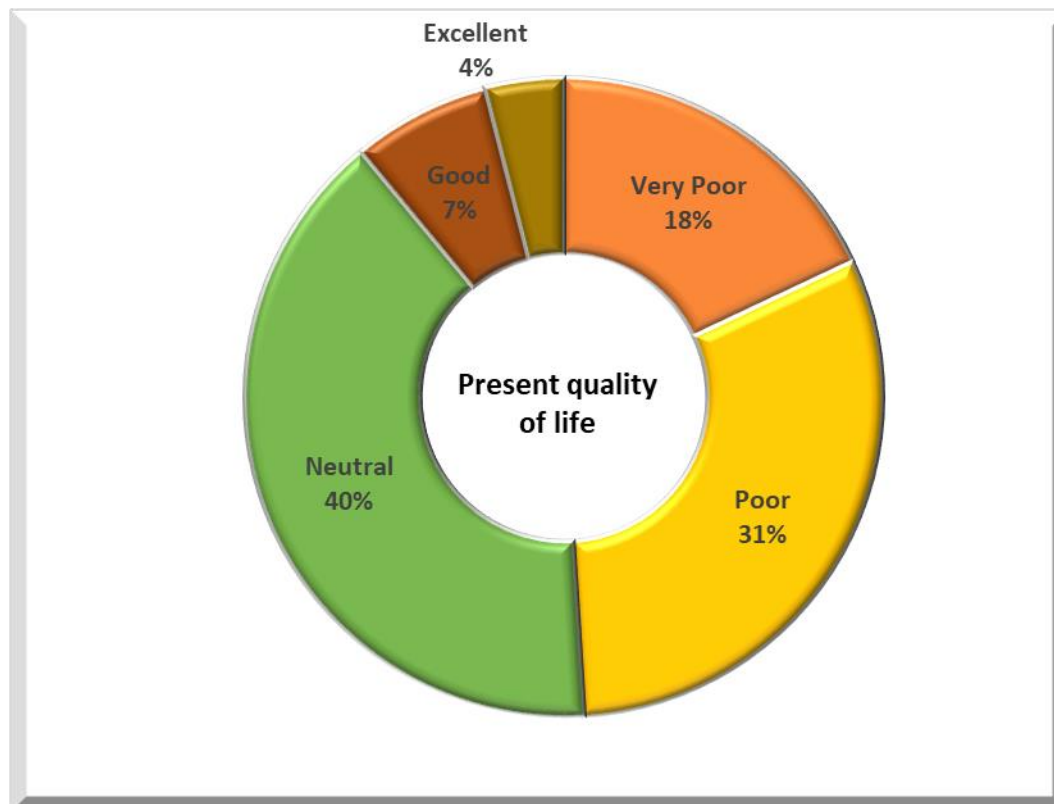
Table (1): Demographics of included subjects

	N	%
Age		
19-25	175	35
25-35	110	22
35-45	75	15
>45	140	28
Marital status		
Married	210	42
Single	100	20
Divorced	190	38
Education Level		
Illiterate	150	30
School level	130	26
College or higher	220	44
Occupation		
Working	185	37
Not working	315	63
Duration		
<5	125	25
5-10.	95	19
10-20.	190	38
>20.	90	18

Assessing the general quality of life: As for the quality of life, 18% of the subjects stated to have very poor QOL, 31% were poor, 40% were neutral, 7% were good and 4% were excellent.

Table (2): quality of life.

In general, my present quality of life is?		
	N	%
Very Poor	90	18.0
Poor	155	31.0
Neutral	200	40.0
Good	35	7.0
Excellent	20	4.0
Total	500	100.0

**Fig. 1: percentage of general quality of life.****Thyroid treatment satisfaction:**

The present level of treatment satisfaction was good toward the currently used treatment, continuation of the treatment and the dose. Also, the majority were satisfied with understanding their disease, controlling the symptoms, and getting the prescription. Most of the patients will encourage others to have the same treatment (Table. 3). The past level of satisfaction is showed in table. 4 as the most of them gave a score of satisfaction more than 50% regarding satisfaction with the way their doctors dealt with the disease, gave this information and taking hem with their disease seriously. The level of satisfaction was 47.33% about satisfaction of the information given about their disease (Table. 4).

Table (3): ThyTSQ-Present:

ThyTSQ-Present	Score	Mean±SD	Level	One sample t-test	
				t	P-value
present satisfaction* How satisfied are you with the current treatment for your thyroid disease?	0-6.	4.851±1.116	80.83	37.087	<0.001*
How satisfied would you be to continue with your present treatment and dose?	0-6.	4.08±1.33	68.00	18.158	<0.001*
How satisfied are you with your understanding of your disease?	0-6.	5.018±1.334	83.63	33.826	<0.001*
How well do you feel the treatment is working?	0-6.	4.015±1.32	66.92	17.194	<0.001*
How well do you feel that the treatment is controlling symptoms of underactive thyroid?	0-6.	5.123±1.32	85.37	35.963	<0.001*
How convenient have you found your treatment to be recently (e.g. remembering to take the medication, getting prescriptions)?	0-6.	5.122±2.011	85.20	23.595	<0.001*
Would you encourage someone else with underactive thyroid to have your kind of treatment?	0-6.	5.123±0.94	85.38	50.502	<0.001*

Table (3): ThyTSQ-Past:

ThyTSQ-Past	Score	Mean±SD	Level	One sample t-test	
				t	P-value
How satisfied were you with the way doctors dealt with your underactive thyroid around the time it was first diagnosed?	0-6.	4.113±2.025	68.55	12.29	<0.001*
Were you satisfied with the information provided by doctors about underactive thyroid?	0-6.	2.84±1.022	47.33	3.501	0.0005
Were you satisfied with the information provided by doctors about the treatment for underactive thyroid?	0-6.	3.44±1.200	57.33	8.199	<0.001*
Are you satisfied with that doctors took you and your thyroid seriously?	0-6.	4.721±1.05	78.68	36.65	<0.001*

Thyroid treatment satisfaction score:

The present treatment satisfaction was high among 58.4% of patients, average among 29.8% and weak among 11.8%. The past treatment satisfaction was weak among 33.8%, average among 51.4% and high among 14.8%.

Table. 5: ThyTSQ score:

		QOL		Score	
		N	%	Range	Mean+SD
ThyTSQ-Present	Weak	59	11.8	1-43.	30.712+7.650
	Average	149	29.8		
	High	292	58.4		
ThyTSQ-Past	Weak	169	33.8	0-26	13.680+4.452
	Average	257	51.4		
	High	74	14.8		

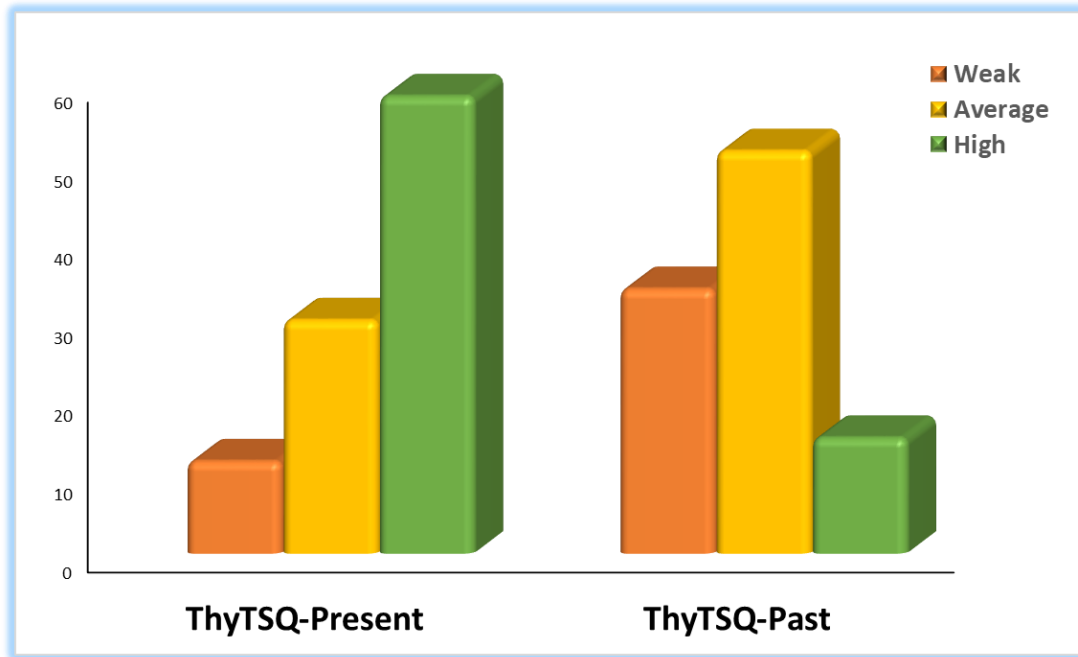


Fig. 2: ThyTSQ present and past score.

The relation between the demographics with ThyTSQ:

As presented in table 6 and 7 the present and past ThyTSQ showed no significant association with the patients' demographics except for the duration of illness as the shorter the duration, the higher the level of treatment satisfaction.

Table (6): Relation between different studied basic demographic data and present ThyTSQ:

Demographic data		N	ThyTSQ-Present		F or T	ANOVA or T-test	
			Mean	± SD		test value	P-value
Age	<25	175	30.469	± 7.528	F	0.666	0.573
	25-35	110	31.600	± 6.994			
	35-45	75	30.227	± 7.770			
	>45	140	30.579	± 8.238			
Marital status	Married	210	30.652	± 7.832	F	0.140	0.869
	Single	100	30.440	± 7.689			
	Divorced	190	30.921	± 7.460			
Education Level	Illiterate	150	30.667	± 7.621	F	0.139	0.870
	School level	130	30.454	± 7.350			
	College or higher	220	30.895	± 7.872			
Occupation	Working	185	31.016	± 7.331	T	0.693	0.489
	Not working	315	30.533	± 7.838			
Duration	<5	125	38.232	± 1.369	F	127.405	<0.001*
	5-10.	95	32.484	± 5.361			
	10-20.	190	28.026	± 6.219			
	>20.	90	24.067	± 8.382			

Table (7): association between demographics' and past ThyTSQ:

Demographic data		N	ThyTSQ-Past			F or T	ANOVA or T-test	
			Mean	±	SD		test value	P-value
Age	<25	175	13.366	±	4.262	F	0.837	0.474
	25-35	110	14.118	±	3.864			
	35-45	75	13.400	±	4.547			
	>45	140	13.879	±	5.034			
Marital status	Married	210	13.752	±	4.723	F	0.092	0.912
	Single	100	13.520	±	4.571			
	Divorced	190	13.684	±	4.087			
Education Level	Illiterate	150	13.473	±	4.308	F	0.628	0.534
	School level	130	13.492	±	4.111			
	College or higher	220	13.932	±	4.740			
Occupation	Working	185	13.719	±	4.274	T	0.150	0.881
	Not working	315	13.657	±	4.560			
Duration	<5	125	17.560	±	4.217	F	73.245	<0.001*
	5-10.	95	14.253	±	3.063			
	10-20.	190	12.132	±	3.363			
	>20.	90	10.956	±	4.279			

Discussion

The phenomena of patient discontent with therapy has been observed several times. It's found in a small percentage of hypothyroidism patients, and it's linked to prolonged symptoms after seemingly appropriate medication [10].

This study aimed at finding the level of treatment satisfaction among female hypothyroid patients and the effect of patient's demographic on the treatment satisfaction.

The main finding of this study is that the level of present treatment satisfaction and quality of life were high among the studied groups while the level of past treatment satisfaction was average among the majority of respondents. Also, the factors affecting the level of satisfaction were the duration of illness and treatment as the shorter the duration, the higher the quality of life. On the other hand, some studies showed that other variables appear to have a role in influencing happiness and quality of life linked with hypothyroidism therapy including changing the doses and combination of medications [11, 12] as well as female gender and older age were associated with low satisfaction levels [10, 13].

Satisfaction is a subjective term that contrasts a patient's subjective criteria to their opinion of the treatment they got. The results of this survey were in contrast with previous findings in settings other than hypothyroidism, where satisfaction was found to be influenced by preconceptions, prior healthcare knowledge, age, gender, and the quality of information provided by healthcare providers [14, 15].

The incidence of satisfaction in the present study was substantially greater than that documented in cohort studies [16, 17]. Satisfaction with treatment and care would appear to have contributed additionally to any effect of treatment. The high level of satisfaction could be attributed to that the healthcare professionals gave the patients the available information, and their interaction with patients was good resulting in high satisfaction and quality of life [18, 19].

A strength factor of this study is that the sample size is representative. The limitations of this study are it is a self-reported study based on the response of the subjects without clinical screening. The study didn't evaluate other aspects of quality of life.

Conclusion:

Average to high level of satisfaction by medications was reported which indicated good interaction between patients and healthcare professionals as well as improvement in the quality of drugs and information given by healthcare providers.

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