



## **IMPACT OF MARITAL STATUS DIFFERENCE IN THYROID PATIENT: A PSYCHOLOGICAL PERSPECTIVE**

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### **Abstract**

The most prevalent type of endocrine cancer is thyroid cancer. The purpose of this study was to explore variations in personality, self-efficacy, stress, and quality of life among thyroid patients influenced by their marital status. While marital status has been shown to have a significant impact on a number of cancer outcomes, its significance for thyroid cancer is yet unclear. A retrospective analysis was conducted on 352 eligible patients who had thyroid diagnoses between January 2023 and December 2023. We separated those patients into married and single groups according to their marital status. Married individuals have lower self-efficacy, lower quality of life, higher neuroticism, lower agreeableness, and slightly lower stress, extraversion, conscientiousness, and openness compared to unmarried individuals.

**KEYWORDS:** Thyroid, Marital Status, Personality, Quality of life

### **Introduction**

Globally, the prevalence of thyroid cancer is rising, and patients have a very high (98–100%) 5-year survival rate (NCIC, 2019). The most prevalent type of endocrine cancer is thyroid cancer. In the United States, there were over 62,980 new instances of thyroid cancer detected in 2014, and the number is still rising every year (Siegel, 2014). Cancer patients require everyday healthcare treatments since their symptoms persist after therapy (Boland L, 2018). Compared to other cancer patients, individuals with thyroid cancer have comparable or even lower quality of life, and it has been demonstrated that they suffer a variety of adverse effects from treatment .Thyroid cancer survivors had higher levels of worry, despair, exhaustion, and sleep difficulties than other cancer survivors .Differentiated thyroid carcinoma (DTC), which makes up over 90% of thyroid cancer cases, is the subject of a lot of attention despite having a slow clinical course and low rates of morbidity and death (Harness,1998:, Mazzaferri,1995) The Davies and Welch study's survival analysis indicates that the death rate from thyroid cancer has remained steady at 0.5 per 100,000 people. (Davies, L, 2006).

It is commonly recognized that social support and environmental circumstances can have a substantial impact on an individual's overall mental state of well-being, particularly for cancer patients. Research indicates that married individuals experience improved mood and receive greater social support, which includes financial and practical resources. This allows them to



concentrate on their treatment and generally demonstrates a faster recovery from a single malignancy. Chemotherapy's survival benefit in prostate, breast, colorectal, and esophageal cancers is not nearly as high as the survival benefit linked to marriage among top 10 causes of cancer death in the US. (Inverso, 2015; Aizer, 2013)

Socio-psychological aspects are receiving greater attention, nevertheless, as our understanding of human health and disease advances. Psychosocial variables have been connected to low back pain and may have an impact on the prognosis, according to a prior clinical study. (Thomas E). Though it is yet unknown how marriage status relates to thyroid, it has been shown to have a significant impact on a number of cancer outcomes. This study aimed to explore whether marital status had different effects on thyroid patients'. A specific group of socio-psychological variables that affects cancer survival is acknowledged to be marital status. Married patients had a much higher survival rate than single patients, according to numerous research on the study explores the correlation between marital status and cancer. However, as of right now, not many researches have been done on the marital status of thyroid cancer patients.

Personality has been associated with health problems, with heart disease patients being the most frequently researched population. It has been linked to treatment outcomes, mental health, and prolonged symptoms as well as a lower quality of life. Type D personality has only been studied in thyroid cancer survivors; in these cases, it did not predict quality of life or medication adherence.

### **Aim and Objectives of this study**

The study aimed to explore variations in personality, self-efficacy, stress, and quality of life among thyroid patients influenced by their marital status.

### **Materials and Methods**

The study was conducted in the Jaunpur district of Uttar Pradesh from December 2022 to October 2023, with the informed consent of the individuals and institutional ethical approval obtained.

Operational Procedure: The institutional ethics council of the Institute of Medical Sciences initially granted ethical clearance. The study employed inclusion and exclusion criteria to determine which respondents from the Jaunpur and Kanpur region of Uttar Pradesh were included. After informing the respondents about the nature and goal of the study, each respondent's consent was sought. Interviews with selected respondents were conducted using Performa developed especially for the project. Each interview lasted roughly twenty minutes in a single session.



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## **Tool and Survey**

The tool and questionnaire used in this study are composed of two parts: The first socio demographic survey asked questions regarding age, gender, employment status, education, religion, issues and non-issues, problem type and timing, etc.

Second, (1) The Big-Five-Inventory-10 short form was used to evaluate personality traits (Big Five), according to Rammstedt and John (2007). Five subscales comprise the ten items on the scale: neuroticism, conscientiousness, agreeableness, extraversion, and openness to new experiences. The three subscales consist of two items each. Respondents had to indicate how much they agreed or disagreed with each question on a five-point scale, where 1 meant strongly disagree and 5 meant strongly agree.

(2) Stress was measured using Cohen's Perceived Stress Scale (PSS). It gauges how anxious a person feels about particular circumstances in their life. The PSS questions covered the preceding month's thoughts and emotions. Out of the 10 items in the test, four have reverse scoring, which assigns a score between 0 and 4. It is possible to obtain the scores for the four positively stated items (items 4, 5, 7, and 8) by reversing the responses, so that 0 = 4, 1 = 3, 2 = 2, 3 = 1, and 4 = 0. The values are then totaled for each element of the scale. The total score ranges from 0 to 40.

(3) Self-efficacy was measured using the General Self-Efficacy Scale (GSES; Jerusalem and Schwarzer 1992), which was translated into French by Dumont et al. (2000). Ten questions make up the test, and the answers range from 1 (not at all true) to 4 (completely true) on a Likert scale. The overall GSE score ranges from 10 to 40, with a higher score indicating stronger levels of self-efficacy.

(4) American psychologist John Flanagan developed the Quality of Life Scale (QOLS) in the 1970s, and it has been modified for use with groups that experience chronic illnesses. The original QOLS comprised fifteen items and assessed five basic areas of quality of life: leisure, personal growth and fulfillment, monetary and physical well-being, and social, civic, and community activities. Following a descriptive study that inquired about the perspectives of individuals with chronic illnesses on quality of life, an additional item was added to the instrument: independence, or the ability to care for oneself. Consequently, the current version of the QOLS consists of 16 components.



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## **Inclusion and Exclusion**

1. Must be 60 years of age or older to be eligible.
2. Participants with additional physiological and physical issues were included in the current investigation.

The following exclusion criteria were applied: 1. Participants had to be less than 20 years old; 2. People with serious mental illness or long-term medical issues were not allowed to participate in this study.

2. being unwilling to take part in the due to a chronic sickness or impairment of hearing or eyesight.

**Statistical Analysis:** Mean and standard deviation were estimated for continuous data, and frequency distributions were constructed for descriptive statistics. The data was shown as mean plus or minus standard deviation. For each variable, descriptive analysis using the mean and standard deviation was used. The t-test for independent samples was used

**Result - Marital** status differences in Personality, Self efficacy, Stress and Quality of life.

The findings related to objective of this study, the difference of Marital status in self efficacy, stress, quality of life and different dimensions of personality have been reported. The independent t test was applied to explore the difference of Marital status this table show the mean and stander deviation for all of the studied variables across and the t ratios and significance level (p) depicting the of Marital status.



**Table Outcomes for the marital status differences on the Self efficacy, Stress, Quality of life and different dimension of personality (independent sample t test)**

		N	Mean	SD	t-test	Sig
SE	Married	205	17.8098	6.80311	5.07**	.000
	Unmarried	147	21.3129	5.77169		
ST	Married	205	19.0878	5.54501	-.023	.981
	Unmarried	147	19.1020	5.76804		
QOL	Married	205	40.6780	13.40229	-3.16**	.002
	Unmarried	147	44.8912	10.61153		
EXT	Married	205	5.0098	1.24849	-1.535	.126
	Unmarried	147	5.2381	1.53647		
AGE	Married	205	5.1122	1.44239	-4.91**	.000
	Unmarried	147	5.9048	1.55860		
CON	Married	205	5.1854	1.20651	.101	.920
	Unmarried	147	5.1701	1.63177		
NEU	Married	93	4.0585	1.43707	3.62**	.000
	Unmarried	259	3.4014	1.96078		
OPE	Married	205	4.0390	1.22011	-.058	.954
	Unmarried	147	4.0476	1.58042		

\*\* Difference is significant at  $p < .01$ (2-tailed)

\* Difference is significant at  $p < .05$ (2-tailed)



As report of the mean score of self efficacy Married 17.80(SD=6.80) and Unmarried mean score 21.31(SD=5.77). Stress mean score Married 19.08(SD =5.54) and Unmarried mean score 19.10(SD=5.76). Quality of life mean score Married 40.67 (SD =13.40) and Unmarried mean score 44.89(SD=10.61). In personality dimension extraversion mean score Married 5.00(SD =1.24) and Unmarried mean score 5.23 (SD=1.53). Another personality dimension agreeableness mean score Married 5.11(SD =1.44) and Unmarried mean score 5.90(SD=1.55). In personality dimension conscientiousness mean score Married 5.18(SD =1.20) and Unmarried mean score 5.17 (SD=1.63). In personality dimension neuroticism mean score Married 4.5(SD =1.43) and Unmarried mean score 3.40(SD=1.96). In personality dimension openness mean score Married 4.03(SD =1.22) and Unmarried mean score is 4.4 (SD=1.58).

In this table the t- values establish that there are significant differences in Self efficacy( $t=5.07, p<.01$ ), QOL( $t=3.16, p<.01$ ) in both group. In different dimension of personality Agreeableness ( $t=4.91, p<.01$ ) and Neuroticism( $t=3.62, p<.01$ )

Also, no differences have been reported on the variable of Stress, Extraversion, Conscientiousness and Openness in both groups.

Table shows that married is low self efficacy compare to Unmarried. In quality of life scale show married quality of life less than Unmarried. Personality dimension neuroticism high in Married compare to Unmarried. Agreeableness is low in Married compare to Unmarried .Stress, Extraversion, conscientiousness and openness is little bit difference in both groups.

## **Discussion**

The study's goal was to investigate how married status affected thyroid people's personalities, levels of self-efficacy, stress, and quality of life. In this context, the prediction was that there would be notable variations between married and single status in terms of personality, self-efficacy, stress, and quality of life among thyroid patients.

Our research revealed that married patients showed concerning the variables of stress, extraversion, conscientiousness, and openness, no changes between the two groups have been noted. Married people have lower self-efficacy than single people. On a quality of life scale, married people have a lower quality of life than single people. Neuroticism is a higher personality dimension in married people than in single people. When compared to single people, married people are less agreeable. There are slight variations in stress, extraversion, conscientiousness, and openness between the two groups.

In earlier research, it was discovered that married younger patients with certain diseases, such as breast cancer, multiple myeloma, and oral cavity cancer, had significantly better results than



single patients.( Zhai Z,2019: Costa LJ,2016: Liao PH,2018). According to a recent study on differentiated thyroid cancer (DTC), the effect of age on marriage status on survival differed.

Research from as far back as the 19th century revealed that married people died at lower rates from a range of illnesses(Goodwin,1987) The outcomes were consistent with earlier studies examining the relationships between married status and survival in malignancies of the breast, lung, colon, stomach, and esophagus.( Ghazali,2013: Brusselaer,2014: Lagergren,2016: Li, Q,2015)

## References

- Ai L, Li N, Tan HL, Wei B, Zhao YX, Chen P, Hu HY, Liu M, Ou-Yang DJ, Qin ZE, Huang P, Chang S. Effects of marital status on survival of medullary thyroid cancer stratified by age. *Cancer Med.* 2021 Dec;10(24):8829-8837. doi: 10.1002/cam4.4388. Epub 2021 Nov 1. PMID: 34723436; PMCID: PMC8683521.
- Aizer AA, Chen M-H, McCarthy EP, et al. Marital status and survival in patients with cancer. *J Clin Oncol.* 2013;31(31):3869-3876. [PMC free article] [PubMed] [Google Scholar] [Ref list].
- Aizer, A. A. , Chen M. H., McCarthy E. P., Mendu M. L., Koo S., Wilhite T. J., et al. 2013. Marital status and survival in patients with cancer. *J. Clin. Oncol.* 31:3869–3876. [PMC free article] [PubMed] [Google Scholar]
- Boland L, Bennett K, Connolly D (2018) Self-management interventions for cancer survivors: a systematic review. *Support Care Cancer* 26(5):1585–1595PubMed
- Brusselaers, N. , Mattsson F., Johar A., Wikman A., P. Lagergren , Lagergren J., et al. 2014. Marital status and survival after oesophageal cancer surgery: a population-based nationwide cohort study in Sweden. *BMJ Open* 4:e005418. [PMC free article] [PubMed] [Google Scholar]
- Chen Z, Yin K, Zheng D, et al. Marital status independently predicts non-small cell lung cancer survival: a propensity-adjusted SEER database analysis. *J Cancer Res Clin Oncol.* 2020;146(1):67-74. [PubMed] [Google Scholar] [Ref list]
- Cohen S, Kamarck T, Mermelstein R. Perceived stress scale. *Measuring stress: A guide for health and social scientists.* 1994:235-83.
- Costa LJ, Brill IK, Brown EE. Impact of marital status, insurance status, income, and race/ethnicity on the survival of younger patients diagnosed with multiple myeloma in the United States. *Cancer.* 2016;122(20):3183-3190. [PubMed] [Google Scholar]
- Davies, L. , and Welch H. G.. 2006. Increasing incidence of thyroid cancer in the United States, 1973-2002. *JAMA* 295:2164–2167. [PubMed] [Google Scholar]





- Flanagan JC (1978). A research approach to improving our quality of life. *American Psychologist*, 33, 138-147. Flanagan JC (1982). Measurement of quality of life: Current state of the art. *Archives of Physical Medicine and Rehabilitation*, 63, 56-59
- Ghazali, S. M. , Othman Z., Cheong K. C., Hock L. K., Wan Mahiyuddin W. R., Kamaluddin M. A., et al. 2013. Non-practice of breast self examination and marital status are associated with delayed presentation with breast cancer. *Asian Pac. J. Cancer Prev.* 14:1141–1145. [PubMed] [Google Scholar]
- Goodwin, J. S. , Hunt W. C., Key C. R., and Samet J. M.. 1987. The effect of marital status on stage, treatment, and survival of cancer patients. *JAMA* 258:3125–3130. [PubMed] [Google Scholar]
- Harness, J. K. , McLeod M. K., Thompson N. W., Noble W. C., and Burney R. E.. 1988. Deaths due to differentiated thyroid cancer: a 46-year perspective. *World J. Surg.* 12:623–629. [PubMed] [Google Scholar]
- Inverso, G. , Mahal B. A., Aizer A. A., Donoff R. B., Chau N. G., and Haddad R. I.. 2015. Marital status and head and neck cancer outcomes. *Cancer* 121:1273–1278. [PubMed] [Google Scholar]
- Jin J-J, Wang W, Dai F-X, et al. Marital status and survival in patients with gastric cancer. *Cancer Med.* 2016;5(8):1821-1829. [PMC free article] [PubMed] [Google Scholar] [Ref list]
- Lagergren, J. , Andersson G., Talback M., Drefahl S., E. Bihagen , Härkönen J., et al. 2016. Marital status, education, and income in relation to the risk of esophageal and gastric cancer by histological type and site. *Cancer* 122:207–212. [PubMed] [Google Scholar]
- Li, Q. , Gan L., Liang L., Li X., and Cai S.. 2015. The influence of marital status on stage at diagnosis and survival of patients with colorectal cancer. *Oncotarget* 6:7339–7347. [PMC free article] [PubMed] [Google Scholar]
- Liao PH, Lee CC. The influence of marital status on survival for patients aged 65 years and younger with oral cavity cancer. *Auris Nasus Larynx.* 2018;45(6):1227-1232. [PubMed] [Google Scholar]
- Mazzaferri, E. L. , and Jhiang S. M.. 1995. Differentiated thyroid cancer long-term impact of initial therapy. *Trans. Am. Clin. Climatol. Assoc.*106: 151–168; discussion 168-170. [PMC free article] [PubMed] [Google Scholar]
- National Cancer Information Center (2019) Cancer in statistics <https://www.cancer.gov> Accessed 1 September 2019
- Petros Perros, Endre Vezekenyi Nagy, Enrico Papini, Juan Abad-Madroñero, Peter Lakwijk, Alan J Poots, Floortje Mols, Laszlo Hegedüs, Hypothyroidism and Type D Personality: Results From E-MPATHY, a Cross-sectional International Online Patient





Survey, *The Journal of Clinical Endocrinology & Metabolism*, 2024;, dgae140, <https://doi.org/10.1210/clinem/dgae140>

- Rammstedt, B. & John, O. P. (2007). Measuring personality in one minute or less: A 10 item short version of the Big Five Inventory in English and German. *Journal of Research in Personality*, 41, 203-212
- Shi RL, Qu N, Lu ZW, Liao T, Gao Y, Ji QH. The impact of marital status at diagnosis on cancer survival in patients with differentiated thyroid cancer. *Cancer Med*. 2016 Aug;5(8):2145-54. doi: 10.1002/cam4.778. Epub 2016 Jun 5. PMID: 27264532; PMCID: PMC4898978.
- Shi R-L, Qu N, Lu Z-W, Liao T, Gao YI, Ji Q-H. The impact of marital status at diagnosis on cancer survival in patients with differentiated thyroid cancer. *Cancer Med*. 2016;5(8):2145-2154. [PMC free article] [PubMed] [Google Scholar]
- Siegel, R. , Ma J., Zou Z., and Jemal A.. 2014. Cancer statistics, 2014. *CA Cancer J. Clin*. 64:9–29. [PubMed] [Google Scholar]
- Thomas E, Silman AJ, Croft PR, Papageorgiou AC, Jayson MIV, Macfarlane GJ. Predicting who develops chronic low back pain in primary care: a prospective study. *BMJ*. 1999;318(7199):1662-1667. [PMC free article] [PubMed] [Google Scholar] [Ref list]
- Torre, L. A. , Bray F., Siegel R. L., Ferlay J., Lortet-Tieulent J., and Jemal A.. 2015. Global cancer statistics, 2012. *CA Cancer J. Clin*. 65:87–108. [PubMed] [Google Scholar]
- Wang X, Cao W, Zheng C, Hu W, Liu C. Marital status and survival in patients with rectal cancer: an analysis of the Surveillance, Epidemiology and End Results (SEER) database. *Cancer Epidemiol*. 2018;54:119-124. [PubMed] [Google Scholar] [Ref list]
- Zhai Z, Zhang F, Zheng YI, et al. Effects of marital status on breast cancer survival by age, race, and hormone receptor status: a population-based study. *Cancer Med*. 2019;8(10):4906-4917. [PMC free article] [PubMed] [Google Scholar] [Ref list]
- Zurück zum Zitat Goswami S, Mongelli M, Peipert BJ, Helenowski I, Yount SE, Sturgeon C (2018) Benchmarking health-related quality of life in thyroid cancer versus other cancers and United States normative data. *Surgery* 164(5):986–992PubMedCrossRef Goswami S, Mongelli M, Peipert BJ, Helenowski I, Yount SE, Sturgeon C (2018) Benchmarking health-related quality of life in thyroid cancer versus other cancers and United States normative data. *Surgery* 164(5):986–992PubMedCrossRef