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Research Article

Stress and Quality of Life: The Mediating Role of Happiness

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ABSTRACT

The aim of the study is to test the mediating role of happiness in the relationship between stress and quality of life. The study uses the Turkish version of the World Health Organization's (WHO) brief Quality of Life (WHOQOL-BREF) Scale to measure quality of life. The WHOQOL-BREF Scale has four main domains: physical, psychological, social relations, and environmental. In addition, the study uses the Turkish version of the Oxford Happiness Questionnaire to measure individuals' happiness levels and the stress sub-scale from the Turkish adaptation of the Depression, Anxiety, and Stress Scale (DASS-42) to measure stress levels. A total of 216 people aged 18 or older participated in the study. Model 4 in Process Macro was used to test the hypotheses related to the research model. The highest relationship between domain values was obtained between the psychological and physical domains. According to the mediation analysis findings, happiness mediates the relationship between stress and all domains of quality of life. These results emphasize the importance of happiness in individuals' lives. The study has concluded stress to have an indirect and large effect size on all domains of quality of life and found the highest indirect effect size of stress to be on the psychological domain. Based on the results, paying special attention to happiness levels is suggested in order to improve quality of life, the ability to cope effectively with stress and tension, and to empower oneself.

Keywords: WHOQOL-BREF, quality of life, happiness, stress

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1. Introduction

In recent years, the concept of quality of life has gained importance both in the field of health and in daily life. According to the World Health Organization (WHO), quality of life is the individual's perception of one's position in life, which is shaped according to the culture and value system in which one lives and in accordance with one's goals, objectives and expectations (WHO Quality of Life [WHOQOL]-Group, 1995). Many factors are found to affect this comprehensive concept, including physical health, psychological state, level of independence, social relations, environmental factors, religious beliefs, and personal beliefs (WHOQOL-Group, 1993, 1994, 1995, 1997, 1997, 1998a, 1998b).

In today's rapidly changing world, stress has an important impact on individuals' quality of life. As stress factors increase, people's levels of happiness and life satisfaction can be negatively affected. This emphasizes the impact of stress not only on psychological health but also on overall quality of life. Happiness is defined as the general judgment of a person's life, the satisfaction in one's life, the increase in good feelings, and the reduction to a negligible level of the negative effects encountered in life (Diener et al., 1999). Happiness is the feeling that a person has as a result of experiencing pleasant feelings, having positive emotions, and performing meaningful and moral tasks appropriate for themself (Fisher, 2010). According to another definition, overall happiness is the degree to which an individual positively evaluates the overall quality of his or her life as a whole (Veenhoven, 2015). A few years ago, the positive psychology approach, which focuses on happiness and quality of life, emerged under the leadership of Martin Seligman (2002), who emphasized the importance of building strengths in people by focusing on increasing quality of life, by making it Fight satisfying and productive, and by identifying talented people. This approach emphasizes what is right rather over what is wrong with individuals and focuses on ways to live a happy life. Positive psychology also helps develop strategies for coping with stress and maximizing personal potential (Seligman, 2002).

Happiness and quality of life are influenced by many different individual factors such as income level, education level, age, gender, and employment status. In addition, health status and utilization of health services are important factors affecting both variables. several different mechanisms are found through which a positive perspective positively affects happiness and quality of life. Firstly, a positive perspective can reduce stress levels by providing a better ability to cope in the face of challenges. Also, individuals with a positive outlook tend to have a better mood and higher self-esteem levels. In turn, this can help them build healthier relationships, develop a more optimistic vision of the future, and lead a more satisfied life in general (Seligman, 2006). Positive thinking can reduce stress and increase happiness and quality of life by enabling a person to approach daily experiences and events from a more positive perspective.

Many researchers have addressed the positive effects and mediating role of happiness in various areas. The literature review shows studies to have investigated the mediating role of happiness in explaining turnover intention (Yang et al., 2018; Al-Ali et al., 2019; Alserhan et al., 2021), job satisfaction (De Guzman et al., 2014), work engagement (Kim, 2019), and psychological well-being (Arslan, 2023). Meanwhile, interviews with experts show them to have stated a definite relationship to exist between violence and happiness (Sarkar, 2021). According to the literature review, however, no study is found to have addressed the relationship among stress, quality of life, and happiness alongside examining the mediating role of happiness in the relationship between stress and quality of life. Therefore, this article aims to analyze the impact of stress on quality of life and the mediating role of happiness in this relationship. The analysis aims to contribute to formulating strategies for mitigating the negative effects of stress and for helping individuals lead healthier and more fulfilling lives. In addition, the study has the secondary objective of revealing which demographic variables differentiate individuals' quality of life. In this context, the first objective will test the conceptual model in Figure 1 separately regarding each quality-of-life domain (i.e., physical, psychological, social relations, and environment).

As Figure 1 shows, the research model aims to test hypotheses H1, H2, and H3 that are stated as follows:
H1. Stress is negatively associated with happiness.
H2. Happiness is positively associated with the quality-of-life domains.
H3. Stress is negatively associated with the quality-of-life domains.
In addition, the research model also tests hypothesis H4, which forms the following statement:
H4. Happiness mediates the relationship between stress and quality of life.

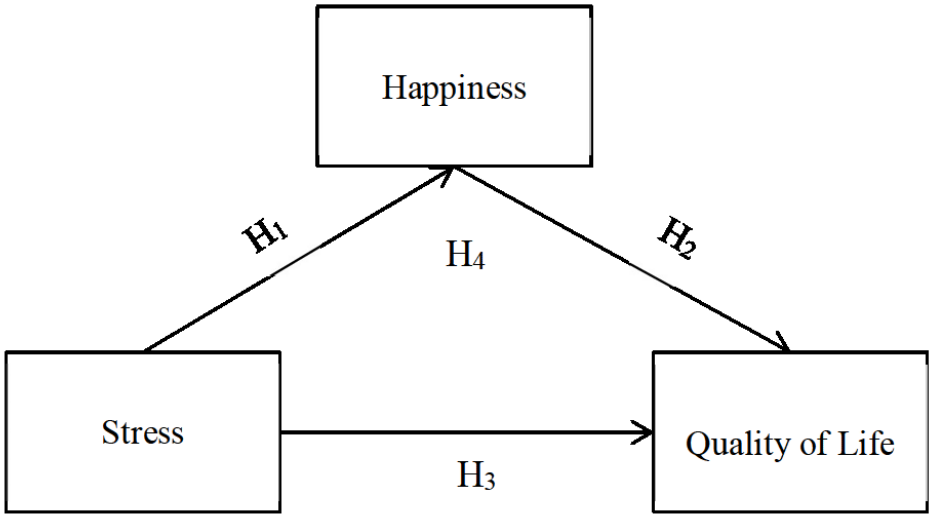

Figure 1. The research model and its hypotheses.

Method

Participants

The study uses and online questionnaire to collect the data for testing the conceptual model. The survey involves demographic questions and some scales as measurement tools. Participants were chosen using convenience sampling in August 2023, with 216 people participating in this questionnaire. The sample consists of participants who vary in terms of gender, age, marital status and perceived income. The study uses three different measurement tools (i.e., the WHO Brief Quality of Life (WHOQOL-BREF) Scale, the Oxford Happiness Scale, and the Depression-Anxiety-Stress Scale (DASS-42). The study was approved by the Fenerbahçe University Ethics Committee (Approval No. 2023/8-2).

Constructs and Measures

WHOQOL-BREF

The study uses the Turkish version of the WHOQOL-BREF scale to measure the participants' quality of life as translated into Turkish by the WHOQOL Turkey group, with the validity and reliability analyses being performed by Eser et al. (1999a, 1999b) and Aydemir and Köroğlu (2006). WHOQL-BREF is a shorter version of the WHOQOL-100 Scale (WHOQOL, 2012) and provides ease of application due to its brevity. WHOQOL-BREF can be considered an instrument that is sensitive to differences regarding both health-related and socioeconomic variables. In addition, quality of life scores can be used as an input for community health indicators and summary health measures (Eser et al., 1999a; Yıldırım et al. 2011; Dadhich et al. 2023). The WHOQOL-BREF scale consists of 26 questions and includes one Perceived Quality of Life question, one Perceived Health question, and questions on the Physical Domain (i.e., pain, physical strength, sleep, mobility, daily activities, medication dependence, and capacity to work), Psychological Domain (i.e., positive emotions, thinking and decision-making, memory, self-esteem, body image, negative emotions, and personal beliefs), Social Relationships Domain (i.e., relationships with others, social support, and sex life), and Environment Domain (i.e., physical safety, home environment, material resources, health and social services, access to new information, leisure time, physical environment, and transportation facilities). The questions are score on a 5-point Likert-type scale. Each section is assessed on a maximum of 20 or 100 points, with this study basing the assessment on 100 points, where higher scores indicate a higher quality of life.

Oxford Happiness Scale-Short Form

The Oxford Happiness Scale was developed by Hills and Argyle (2002). The Turkish adaptation of the 7-item scale's short form was conducted by Doğan and Çötok (2011). Scores between 7-35 can be obtained from the scale, with higher scores indicating a higher level of happiness.

Depression-Anxiety-Stress Scale (DASS-42)

The study uses the Turkish version of the Depression, Anxiety, and Stress Scale (DASS-42) developed by Lovibond & Lovibond (1995) for testing depression, anxiety, and stress levels, with the Turkish adaptation and validity-reliability analyses having been conducted by Bilgel and Bayram (2010). the study only uses the stress sub-scale from DASS-42. Scores between 0-42 are obtainable from the scale, with higher scores indicating higher stress levels.

Analysis

Sample characteristics were evaluated by considering standard descriptive analyses. Cronbach's alpha values were calculated to show the internal consistency of the scales. The study then examined the linear relationships among the variables using the Pearson product-moment correlation coefficient (r). The study also conducts t-test and variance analyses for the scales with regard to various demographic data before lastly analyzing the mediating role of happiness in the relationship between stress and quality of life. The study uses IBM SPSS 26.0 to analyze the data and Process Macro (Hayes, 2018) to test the hypotheses related to the research model.

Findings

Descriptive Statistics and Group Differences

The participants' ages range between 18-78 years (M = 41.50, SD = 12.76), and 63% are female. 31.9% of the participants reported low monthly earnings and 27.8% reported high monthly earnings. Demographic information of the study group is presented in Table 1.

Table 1. *Demographic Characteristics*

	Frequency	%
Gender		
Female	136	63.0
Male	80	37.0
Education status		
High school and below	25	11.6
University and above	191	88.4
Marital status		
Married	114	52.8
Single	102	47.2
Perceived income		
Low	69	31.9
Moderate	87	40.3
High	60	27.8

Of the participants, 88.4% stated having a university education or higher. In this regard, the individuals in the sample are seen to have a high level of education. Means, standard deviations, and Cronbach's alphas for the scales are presented in Table 2.

Table 2. *Mean, Standard Deviation, and Cronbach's Alpha Values*

Scales	Item	*M*	*SD*	Cronbach's alpha
Physical	7	26.61	4.51	0.78
Psychological	6	21.54	4.65	0.86
Social Relations	3	10.36	2.50	0.72
Environment	8	27.61	5.56	0.83
Happiness	7	23.63	5.00	0.78
Stress	7	10.21	4.73	0.85

Cronbach's alpha values for the reliability analyses range between 0.72-0.86, with all coefficients being found within acceptable limits. Table 3 shows the correlation values among the scales.

Table 3. *Correlations*

	Physical	Psychological	Social Relations	Environment	Happiness
Psychological	.653**				
Social Relations	.556**	.625**			
Environment	.573**	.597**	.565**		
Happiness	.647**	.800**	.642**	.623**	
Stress	-0.315**	-0.334**	-0.219**	-0.237**	-0.413**

** $p < 0.01$

When examining the correlations among the scales, statistically significant relationships were obtained at the 1% significance level. The highest correlation ($r = 0.653$; $p < 0.01$) was obtained between the psychological and physical domains. In addition, stress was found to have a significant inverse relationship with all quality-of-life domains and with happiness. In Table 3, the highest relationship was obtained between happiness and the psychological domain variables ($r = 0.800$; $p < 0.01$). Table 4 presents the t-test results by gender.

Table 4. *The Results from the t-Test With Respect to Gender*

Scales	Female	Male	*t*	*p*
Physical	67.29 ± 16.98	66.25 ± 19.56	.412	.237
Psychological	62.07 ± 18.74	63.12 ± 21.40	-0.379	.495
Social Relations	61.95 ± 21.24	60.94± 19.29	.349	.239
Environment	59.49 ± 17.60	58.96± 17.68	.212	.955
Happiness	3.44 ± .72	3.27± .70	1.662	.331
Stress	1.45 ± .70	1.48 ± .64	-0.326	.396

With regard to gender, no statistically significant differences are found between males and females regarding the domains of quality of life (i.e., physical, psychological, social relations, and environment). Likewise, no differences were found regarding happiness and stress with respect to gender. Table 5 presents the t-test results with respect to marital status.

Table 5. *The Results from the t-Test With Respect to Marital Status*

Scales	Married	Single	t	p
Physical	67.93 ± 18.09	65.76 ± 17.80	.885	.189
Psychological	66.59 ± 18.47	57.84 ± 20.14	3.328	.000
Social Relations	64.33 ± 18.73	58.50 ± 22.00	2.103	.018
Environment	61.49 ± 18.77	56.83 ± 15.90	1.957	.026
Happiness	3.47 ± .71	3.27 ± .71	2.135	.017
Stress	1.44 ± .64	1.48 ± .71	-0.497	.310

With respect to marital status, statistically significant differences were found between married and single people regarding the psychological, social relations, and environmental domains of quality of life. In addition, a statistically significant difference at the 5% significance level is found regarding happiness with respect to marital status. Accordingly, the quality-of-life (i.e., psychological, social relations, environment) and happiness levels of married people were found to be higher than those of single people. Table 6 present the results from the F-test with respect to perceived economic status.

A statistically significant difference was found at the 1% significance level regarding all the domains of quality of life with respect to perceived economic status. Accordingly, quality of life in relation to its physical, psychological, social relations, and environmental domains is higher for those who perceive their economic status to be high compared to those who perceive their economic status to be poor or moderate. In addition, a statistical difference at the 1%

Table 6. *The Results of the F-Test With Respect to Perceived Economic Status*

Scales	Low	Moderate	High	F	p	Post Hoc*
Physical	62.26 ± 20.81	66.11 ± 16.57	73.40 ± 14.32	6.658	.002	L = Mod < H
Psychological	58.43 ± 22.32	59.61 ± 16.79	71.22 ± 17.99	8.865	.000	L = Mod < H
Social Relations	57.61 ± 23.60	59.96 ± 19.39	68.47 ± 16.46	5.148	.007	L = Mod < H
Environment	50.58 ± 17.49	58.70 ± 15.48	70.17 ± 14.70	24.315	.000	L < Mod < H
Happiness	3.25 ± .76	3.27 ± .68	3.67 ± .63	7.536	.000	L = Mod < H
Stress	1.60 ± .71	1.43 ± .65	1.33 ± .65	2.764	.065	-

*Tukey; L = Low; Mod. = Moderate; H = High

significance level was found regarding happiness with respect to perceived economic status. The happiness levels of those who stated having a high economic status were found to be higher than those perceive their economic status as poor or moderate.

Analyzing the Mediation Effect

At this stage, the study conducts mediation tests in order to test the hypotheses by separately considering the domains that make up quality of life. The mediation effect was tested using Mediation Model 4 in the Process Macro program (Hayes, 2018). The number of resamples (bootstrapped) was taken as 5.000 at a 95% confidence interval. Table 7 presents the results from the mediation analyses for all domains.

Table 7. *Mediation Tests*

Paths	Std β	β	*SE*	95% CI	*p*	R^2
Stress → Happiness	-0.413	-0.437	0.066	[-0.566, -0.307]	0.000	0.17
Stress → Physical	-0.058	-1.555	1.521	[-4.552, 1.443]	0.308	
Happiness → Physical	0.623	15.634	1.437	[12.800, 18.467]	0.000	0.42
Stress → Happiness →Physical	-0.257	-6.825	0.042ǂ	[-0.337, -0.176]§	-	
Stress → Psychological	-0.004	-0.120	1.317	[-2.716, 2.476]	0.927	
Happiness → Psychological	0.799	22.042	1.245	[19.588, 24.496]	0.000	0.64
Stress → Happiness →Psychological	-0.330	-9.623	0.047ǂ	[-0.416, -0.232]§	-	
Stress → Social	0.056	1.695	1.746	[-1.747,5.138]	0.332	
Happiness → Social	0.665	19.087	1.651	[15.832, 22.341]	0.000	0.41
Stress → Happiness →Social	-0.274	-8.332	0.046ǂ	[-0.362, -0.183]§	-	
Stress → Environmental	0.024	0.622	1.531	[-2.396, 3.640]	0.685	
Happiness → Environmental	0.633	15.585	1.448	[12.731, 18.438]	0.000	0.39
Stress → Happiness →Environmental	-0.261	-6.804	0.043ǂ	[-0.349, -0.177]§	-	

ǂ Bootstrap standard error (BSe); § Bootstrap confidence interval (BCI)

When analyzing Table 7, stress is seen to statistically significantly affect happiness inversely (Std β=-0.413). In addition, 17% of the total variation in happiness is explained by stress alone.

When considering the physical domain of quality of life, stress was found to have no direct effect in the model. However, a significant indirect effect was found through happiness (β=-6.825; 95% CI [-0.337, -0.176]). Here, the fully standardized effect size of the mediation effect is seen to be η^2 = -0.257, thus revealing a high effect. In addition, the effect of happiness on the physical domain was found to be in the same direction and statistically significant. The model explains 42% of the total variance in the physical domain score.

When taking the psychological domain of quality of life into consideration, stress was not found to have any direct effect in the model. However, an indirect and significant effect was found through happiness (β=-9.623; 95% BCI [-0.416, -0.232]). When examining the standardized beta value here, the effect size is seen to be η^2 = -0.330. This value shows happiness to have a high effect. In addition, the effect of happiness on the psychological domain was found to be in the same direction and statistically significant, with the model explaining 64% of the total variance in the psychological domain score.

When analyzing the model that was established for the social relations domain, stress was found to have no direct effect, while happiness was found to have a direct effect. In addition, the model with the indirect effect was found to be

statistically significant (β=-8.332; 95% BCI [-0.362, -0.183]), with the model explaining 41% of the total variance in the social relations domain variable.

Again, no direct effect was found from stress in the model created for the environment domain. This model found happiness to found to have a full mediation effect. The fully standardized effect size of the mediation effect is η^2=-0.261. Through the established model, 39% of the total variance in the environmental domain score is seen to be explained by stress and happiness.

According to all the analysis findings, happiness is seen to mediate the relationship between stress and all domains of quality of life. In other words, stress is concluded to have an indirect effect on all domains of quality of life. In light of these results, all of the research hypotheses except H3 are found to be supported.

Discussion and Conclusion

According to the analysis results, no difference has been found between males and females regarding quality of life, happiness, and stress levels. This finding for quality of life coincides with the findings from the studies conducted by Caron et al. (2005) and Shafie et al. (2021). Fontana et al.'s (1993) study also found no statistically significant difference between stress and gender. In addition, Hudson and O'Regan (1994), Matud (2004), and Bayram and Bilgel (2008) found women to be more stressed than men. With respect to marital status, the current study has concluded married individuals to have higher levels for the psychological, social relations, and environmental domains and for happiness compared to single individuals. Individuals who stated having a high economic status were found to have higher levels of happiness and quality of life in all domains compared to those who stated having a poor or moderate economic status. Stack et al.'s (1998) study concluded married people to be happier, and Brakus et al. (2022) also found a positive relationship between perceived income and happiness. The results obtained from the current study can therefore be said to generally coincide with the literature.

Understanding which factors mediate happiness is important (Wesarat et al., 2014). The mediation test results from the current study show happiness to be able to improve individuals' quality of life by decreasing their perceived stress. For this reason, increasing and improving happiness can be considered an effective parameter for controlling individuals' stress levels. Moreover, in order to improve individuals' quality of life, paying attention to and understanding the factors that affect happiness are important.

Dehghan et al. (2020) conducted a path analysis of mindfulness using the variables of perceived stress and quality of life in cancer patients. They concluded perceived stress to affect mindfulness and mindfulness to play a mediating role. Meanwhile, the current study has concluded happiness to play a mediating role in the relationship between perceived stress and quality of life.

Bitsko et al. (2008), Santos et al. (2018), and Ferrer-Cascales et al. (2019) all found happiness to have a direct positive effect on quality of life, with their obtained findings overlapping with the results of the present study. At the same time, the current study has shown individuals with higher happiness levels to have lower perceived stress levels. Cohen-Louck and Levy (2023) stated individuals' happiness levels to be negatively related to their stress, and this result has been verified in several other studies (Park, 2014; Poormahmood et al., 2017; Kyoung Hwang & Lee, 2018; Yang et al., 2018; Tan et al., 2019). These findings emphasize the significance of happiness in decreasing individuals' stress levels.

This study found an indirect negative effect between stress and quality of life. Meanwhile, Yan et al. (2022) study found a direct negative effect between stress and quality of life. In addition, the studies by Delgado (2007), Bhandari, (2012), and Ribeiro (2018) found a negative relationship between stress and quality of life. These results coincide with those of the present study.

As suggested, the results show individuals' happiness to be able to buffer the effect of perceived stress on quality of life. In other words, as stressed individuals' happiness increases, so does their quality of life. The study's results may reveal how happiness can improve individuals' quality of life, with the results indicating that happier individuals are able to focus on existing problems and eliminate negative thoughts, which in turn reduces perceived stress and leads to an increase in quality of life.

As a result, this study has found happiness and perceived stress to affect individuals' quality of life and concluded happiness to directly affect quality of life and perceived stress to indirectly affect quality of life. In other words, happiness directly affects individuals' quality of life and plays a mediating role in stress' effect on quality of life.

The study's findings suggest that high levels of happiness have an important role in reducing individuals' stress and improving their quality of life. When considering the direct mediating role of happiness, the study suggests the use of happiness-enhancing practices to reduce some negative outcomes from things such as stress in individuals' lives.

This study has some limitations. One, it was conducted with a single sample. In other words, because it is a cross-sectional study, it does not reflect long-term effects. Meanwhile, the sample was obtained online using the convenience sampling method, and the sample also consists of individuals with a high level of education. Therefore, the obtained results have been evaluated within the scope of this sample. These limitations indicate that care should be taken when applying the study's findings to the general population. Future studies are also recommended to apply the conceptual model to different samples.

Ethics Committee Approval: The study was approved by the Fenerbahçe University Ethics Committee (Approval No. 2023/8-2).

Informed Consent: The participants were first allowed to see the interview form, and interviews were conducted only if they provided their consent.

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REFERENCES

Al-Ali, W., Ameen, A., Isaac, O., Khalifa, G. S., & Shibami, A. H. (2019). The mediating effect of job happiness on the relationship between job satisfaction and employee performance and turnover intentions: A case study on the oil and gas industry in the United Arab Emirates. *Journal of Business and Retail Management Research, 13*(4), 103–116.

Alserhan, H., Al-Adamat, A., & Al-Adamat, O. (2021). The mediating effect of employee happiness on the relationship between quality of work-life and employee intention to quit: A study on fast-food restaurants in Jordan. *Management Science Letters, 11*(3), 933–938. https://doi. org/10.5267/j.msl.2020.10.004

Arslan, G. (2023). Mediating effect of fear and externality of happiness in the association between psychological maltreatment and psychological well-being. *Psychology, Health & Medicine, 28*(3), 707–718. https://doi.org/10.1080/13548506.2021.1950783

Aydemir Ö., & Köroğlu E. (2006). *Psikiyatri'de Kullanılan Ölçekler*. Medicographics Ajans ve Matbaacilik Hizmetleri, Ankara.

Bayram, N., & Bilgel, N. (2008). The prevalence and socio-demographic correlations of depression, anxiety and stress among a group of university students. *Social psychiatry and psychiatric epidemiology, 43*, 667–672. https://doi. org/10.1007/s00127-008-0345-x.

Bhandari, P. (2012). Stress and health related quality of life of Nepalese students studying in South Korea: A cross sectional study. *Health and quality of life outcomes, 10*(1), 1–9. https://doi. org/10.1186/1477-7525-10-26

Bilgel, N. G., & Bayram, N. (2010). Turkish version of the depression anxiety stress scale (DASS-42). *Psychometric properties.* https://doi. org/10.4274/npa.5344

Bitsko, M. J., Stern, M., Dillon, R., Russell, E. C., & Laver, J. (2008). Happiness and time perspective as potential mediators of quality of life and depression in adolescent cancer. *Pediatric Blood & Cancer, 50*(3), 613–619. https://doi. org/10.1002/pbc.21337

Brakus, J. J., Chen, W., Schmitt, B., & Zarantonello, L. (2022). Experiences and happiness: The role of gender. *Psychology & Marketing, 39*(8), 1646–1659. https://doi. org/10.1002/mar.21677

Caron, J., Lecomte, Y., Stip, E., & Renaud, S. (2005). Predictors of quality of life in schizophrenia. Community Mental Health Journal; *41*(4), 399–417. https://doi. org/10.1007/s10597-005-5077-8.

Cohen-Louck, K., & Levy, I. (2023). Happiness during a mass trauma: Predicting happiness during the COVID-19 pandemic through function, stress, anxiety, and coping. *Psychological Trauma: Theory, Research, Practice, and Policy, 15*(3), 493. https://doi. org/10.1037/tra0001314

Dadhich, S., Shakrawal, N., Soni, K., Pareek, P., & Patro, S. K. (2023). Impact of Radiotherapy on Quality of Life in T2 and Early T3 Laryngeal Carcinoma. *Indian Journal Of Otolaryngology And Head And Neck Surgery, 75*(2), 654–660. https://doi.org/10.1007/s12070-022-03397-3

De Guzman, A. B., Largo, E., Mandap, L., & Muñoz, V. M. (2014). The mediating effect of happiness on the job satisfaction of aging Filipino workers: a structural equation model. *Educational Gerontology, 40*(10), 767–782. https://doi. org/10.1080/03601277.2014.882108

Dehghan, M., Jazinizade, M., Malakoutikhah, A., Madadimahani, A., Iranmanesh, M. H., Oghabian, S., & Zakeri, M. A. (2020). Stress and quality of life of patients with cancer: the mediating role of mindfulness. *Journal of Oncology, 1–10.* https://doi.org/10.1155/2020/3289521

Delgado, C. (2007). Sense of coherence, spirituality, stress and quality of life in chronic illness. *Journal of Nursing Scholarship, 39*(3), 229–234. https://doi.org/10.1111/j.1547-5069.2007.00173.x

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological Bulletin, 125*(2), 276.

Eser, E., Fidaner, H., Fidaner, C., Eser, S. Y., Elbi, H., & Göker, E. (1999a). WHOQOL-100 ve WHOQOL-BREF'in psikometrik özellikleri. *Psikiyatri Psikoloji Psikofarmakoloji (3P) Dergisi,7*(ek2), 23–40.

Eser, Y.S., Fidaner, H., Fidaner, C., Elbi, H, Eser, E., & Göker, E. (1999b) Yaşam kalitesinin ölçülmesi, WHOQOL-100 ve WHOQOL-Bref, *Psikiyatri Psikoloji Psikofarmakoloji (3P) Dergisi, 7*(ek2): 5–13.

Ferrer-Cascales, R., Albaladejo-Blázquez, N., Ruiz-Robledillo, N., Clement-Carbonell, V., Sánchez-SanSegundo, M., & Zaragoza-Martí, A. (2019). Higher adherence to the mediterranean diet is related to more subjective happiness in adolescents: The role of health-related quality of life. *Nutrients, 11*(3), 698. https://doi.org/10.3390/nu11030698

Fisher, Cynthia D. (2010) Happiness at work. *International journal of management reviews 12* (4):384–412.

Fontana, D., & Abouserie, R. (1993). Stress levels, gender and personality factors in teachers. British Journal of educational psychology, *63*(2), 261–270. https://doi.org/10.1111/j.2044-8279.1993.tb01056.x

Hudson, S. A., & O'Regan, J. (1994). Stress and the graduate psychology student. *Journal of clinical psychology, 50*(6), 973–977.

Kim, K. S. (2019). The influence of hotels high-commitment hrm on job engagement of employees: Mediating effects of workplace happiness and mental health. *Applied Research in Quality of Life, 14*(2), 507–525. https://doi.org/10.1007/s11482-018-9626-z

KyoungHwang, Y., & Lee, C. S. (2018). Relationship between stress and happiness in middle school students: dual mediation effect of growth mindset and self-esteem. *Medico-Legal Update, 18*(1), 248–253.

Lovibond, S. H., & Lovibond, P. F. (1995). Manual for the Depression Anxiety Stress Scales. *Sydney: Psychology Foundation*.

Matud, M. P. (2004). Gender differences in stress and coping styles. *Personality and Individual Differences, 37*(7), 1401–1415. https://doi.org/10.1016/j.paid.2004.01.010

Park, H. S. (2014). Stress, yangsaeng and subjective happiness among female undergraduate nursing students in the republic of Korea. *The Journal of Korean academic society of nursing education, 20*(4), 471–481. https://doi.org/10.5977/jkasne.2014.20.4.471

Poormahmood, A., Moayedi, F., & Alizadeh, K. H. (2017). Relationships between psychological well-being, happiness and perceived occupational stress among primary school teachers. *Archives of Hellenic Medicine/Arheia Ellenikes Iatrikes, 34*(4), 504–510.

Ribeiro, Í. J., Pereira, R., Freire, I. V., de Oliveira, B. G., Casotti, C. A., & Boery, E. N. (2018). Stress and quality of life among university students: A systematic literature review. *Health Professions Education, 4*(2), 70–77. https://doi.org/10.1016/j.hpe.2017.03.002

Sarkar, A. (2021). Non-Violence at Workplace: The Way to Happiness and Well-Being: Interview with Dr Saamdu Chetri, as the Former Head of GNH Centre. *South Asian Journal of Human Resources Management, 8*(2): 290–298.

Santos, E. J. F., Duarte, C., Ferreira, R. J., Pinto, A. M., Geenen, R., & da Silva, J. A. (2018). Determinants of happiness and quality of life in patients with rheumatoid arthritis: a structural equation modelling approach. *Annals of the Rheumatic Diseases, 77*(8), 1118–1124. http://dx.doi.org/10.1136/annrheumdis-2017-212934

Seligman, M.E.P. (2002). Positive psychology, positive prevention and positive therapy. In C.R. Snyder and S.J. Lopez (Ed.). *Handbook of Positive Psychology*. New York: Oxford University Press.

Seligman, M.E.P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5–14. https://doi.org/10.1037/0003-066X.55.1.5

Seligman, M.E.P., Rashid, T., & Parks, A.C. (2006). Positive psychotherapy. *American Psychology, 61*, 774–788. https://doi.org/10.1037/0003-066X.61.8.774

Shafie, S., Samari, E., Jeyagurunathan, A., Abdin, E., Chang, S., Chong, S. A., & Subramaniam, M. (2021). Gender difference in quality of life (QoL) among outpatients with schizophrenia in a tertiary care setting. *BMC psychiatry, 21*(1), 1–9. https://doi.org/10.1186/s12888-021-03051-2

Stack, S., & Eshleman, J. R. (1998). Marital status and happiness: A 17-nation study. *Journal of Marriage and the Family*, 527–536. https://doi.org/10.2307/353867

Tan, C. S., Tan, S. A., Mohd Hashim, I. H., Lee, M. N., Ong, A. W. H., & Yaacob, S. N. B. (2019). Problem-solving ability and stress mediate the relationship between creativity and happiness. *Creativity Research Journal, 3*1(1), 15–25. https://doi.org/10.1080/10400419.2019.1568155

The WHOQOL Group. (1993). Study protocol for the World health Organisation project to develop a quality of life assessment instrument (WHOQOL), *Quality of Life Research, 2*, 153–159.

The WHOQOL Group. (1994). Development of the WHOQOL: rationale and current status. Monograph on Quality of Life Asessment: cross-cultural issues-2, *International Journal of Mental Health, 23*(3), 24–56.

The WHOQOL Group. (1995). The World Health Organisation Quality of Life assessment (WHOQOL): position paper from the World Health Organisation, Special Issue on Health Related Quality of Life: what is it and how should we measure it? *Social Science and Medicine, 41*(10), 1402–1409.

The WHOQOL Group. (1997). An approach to response scale development for cross-cultural questionnaires. *European Psychologist, 2.*

The WHOQOL Group. (1998a). The World Health Organization Quality of Life Assessment (WHOQOL): development of general psychometric properties. *Social Science and Medicine, 46*(12), 1569–1585.

The WHOQOL Group. (1998b). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological medicine, 28*(3), 551–558. https://doi.org/10.1017/s00332917980 06667

Veenhoven, R. (2015). *Concept of happiness. World database of happiness, measures of happiness, introductory text.* Erasmus University:

Rotterdam, The Netherlands.

Wesarat, P., Sharif, M.Y., & Abdul Halim A M. (2014). A conceptual framework of happiness at the workplace. *Asian Social Science, 11*(2): 78–88.

Yan, J., Wu, C., Du, Y., He, S., Shang, L., & Lang, H. (2022). Occupational stress and the quality of life of nurses in infectious disease departments in China: The mediating role of psychological resilience. *Frontiers in Psychology, 13*, 817639. https://doi.org/10.3389/fpsyg.2022.817639

Yang, C. C., Fan, C. W., Chen, K. M., Hsu, S. C., & Chien, C. L. (2018). As a happy kindergarten teacher: The mediating effect of happiness between role stress and turnover intention. *The Asia-Pacific Education Researcher, 27*, 431–440. https://doi.org/10.1007/s40299-018-0403-4

Yıldırım, A., & Hacıhasanoğlu, R. (2011). Sağlık Çalışanlarında Yaşam Kalitesi ve Etkileyen Değişkenler, *Psikiyatri Hemşireliği Dergisi - Journal of Psychiatric Nursing 2*(2),61–68.

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