Relationship between positive mental health and quality of work life in nurses

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SUMMARY

Objective: This study was conducted to evaluate positive mental health and quality of work life levels of nurses working in hospitals in terms of personal and work-related factors and to examine the relationship between positive mental health and quality of work life.

Method: This descriptive and correlational study was conducted with 247 nurses working in three public hospitals. The data were collected using an introductory information form, the Positive Mental Health Scale and the Quality of Nursing Work Life Survey. Statistical analyses were performed using a software package (Kruskal–Wallis H test, Independent Sample-t test, ANOVA test, Spearman Correlation Analysis).

Results: The mean total Positive Mental Health Scale and the Quality of Nursing Work Life Survey scores were 73.27 ±14.86 and 103.42±13.01, respectively. It was determined that the work environment, work conditions, and job perception positively affected positive mental health, whereas the increase in relations with executive nurses negatively affected positive mental health and the perception of quality of work life was related to both positive mental health and quality of work life.

Discussion: It was determined that nurses perceived their positive mental health at a level close to good and their quality of work life at a moderate level, and both positive mental health perception and quality of work life perception differed according to some variables (age, hospital type, employment type and perception of work life). In addition, it was determined that the perception of quality of work life differed according to having children, the clinic and the length of service in the clinic, and the perception of positive mental health differed according to the length of service. Practices aimed at improving the leadership and management skills of nurse managers can contribute to improving the quality of work life and mental well-being of nurses.

Key Words: Quality of Work Life, Positive Mental Health, Hospital, Nurses

INTRODUCTION

The workplace is a key environment that affects the mental health and well-being of employees. Therefore, executives need to provide an environment that supports and sustains both general health and work productivity in order to protect and promote employees' positive mental health (1,2). Hospitals are known for being both fulfilling and stressful work environments (3). In addition, nurses working in hospitals frequently face challenging situations that cause stress in their jobs (4). Therefore, there is a need to improve nurses' mental health through individual and institutional approaches (5). Individuals with positive mental health take steps to confront situations that they are uncomfortable with, aiming to reduce or eliminate their discomfort and learning new coping methods in the process (6). Quality of work life refers to an employee's subjective satisfaction with his/her working life based on personal feelings and perceptions (7). Furthermore, this concept includes improving working conditions by considering employees' physical, mental, psychological, and social needs as well as creating an environment in which employees feel that they contribute to the organization and can realize and develop their talents (8).

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Given that nurses spend a significant amount of time at work, which can affect their entire lives (9), work life and mental health are intertwined (10). While work experience, day shifts, and working at a state-owned institution positively affect nurses' positive mental health, exposure to workplace bullying (11,12), work stress (13), and low income levels (4) negatively affect it. Quality of work life, which plays an important role in nurse turnover, intention to leave work, organizational commitment, work motivation, work and life satisfaction (7, 14-16), positively and significantly affects nurses' psychological well-being, burnout, happiness, general health levels, and ethical sensitivity good (2,4,9,17-21). Studies examining the factors affecting the quality of work life reported that age, experience, working in a field requiring expertise, full-time employment, rotating shift patterns, being in a managerial position (18,21-23), adequate and fair remuneration, safe and healthy working conditions, career development opportunities, leader support (2,16), social support (10,15) and psychological support and psychological empowerment (2,20) positively affect quality of work life. On the contrary, heavy workload, lack of staff, night shifts, musculoskeletal diseases, lack of supervisor support, lack of promotion opportunities, unfair and unjust hospital policies that do not support nursing care, lack of night shift allowance (3), depressed mood, economic difficulties (4), inadequate and unfair pay, unfair promotion policies, poor management support, high job stress, job insecurity, and insufficient participation in decision-making processes (24) negatively affect the quality of work life. Given that the most important goal of nursing services is to provide better quality and more comprehensive nursing services to society (25), continuous research on what affects quality of work life and positive mental health, their connections, and their consequences in order to create and develop more productive work environments that can increase the well-being of nurses will contribute to the emergence of new insights in achieving this goal. This study was conducted to evaluate positive mental health and quality of work life levels of nurses working in hospitals in terms of personal and work-related factors and to examine the relationship between positive mental health and quality of work life.

Research questions

1. What are the perceptions of nurses about the quality of their work lives?

2. How do the nurses evaluate their positive mental health levels?

3. How do nurses' personal and working life characteristics affect their perception of the quality of work life and positive mental health levels?

4. What is the relationship between nurses' perceptions of the quality of work life and positive mental health levels?

METHODS

Design: This study is descriptive and correlational (26).

Participants

This study was conducted with nurses working in a training and research hospital, a general state hospital, or a mental health and disease hospital in the Western Black Sea region of Turkey between September and December 2018. The study population consisted of 384 nurses working in these hospitals, and the sample consisted of 247 nurses who volunteered to participate in the study, were not on leave on the dates of the study, and completed the data collection forms.

Data collection

Nurses working in the relevant hospitals were informed about the study, and those who volunteered to participate in the study were given data collection forms and asked to complete them. It took 15–20 minutes to complete the forms.

Introductory Information Form

This form, which was created by the researchers in line with the literature, includes questions about

personal and working life such as age, gender, education level, work experience, and number of shifts that may affect mental health and the quality of work life.

Positive Mental Health Scale (PMHS): This scale, which was developed by Lluch (1999) to define the positive mental health structure and level of individuals and adapted into Turkish by Teke and Arabacı (2018), consists of 39 items and six factors (27). The first factor "personal satisfaction" explains satisfaction with personal life, self-esteem, and optimism about the future. The second factor "prosocial attitude" includes being active toward society, being supportive toward others, and accepting those with different social characteristics. The third factor "self-control" addresses concepts such as emotional control, frustration, anxiety, and stress tolerance. The fourth factor "autonomy" deals with the regulation of one's own behavior, self-reliance, and independence. The fifth factor "problem solving and self-actualization" includes elements such as decision-making skills, the ability to adapt to change, and an attitude toward personal development. The sixth factor "interpersonal relationship skills" includes interpersonal relationship skills, the ability to empathize, and the ability to establish and maintain close relationships. Each item of the four-point Likert-type scale is scored as "always or almost always = 1," "quite often = 2," "sometimes = 3," and "never or rarely = 4." The highest score that can be obtained from the scale is 156, and the lowest score is 39. A low score on the scale indicates positive mental health. It was reported that the Cronbach's alpha value of the total score and subscale scores of the scale was above 0.70. (27). In this study, the total Cronbach's alpha value of the scale was 0.92.

Quality of Nursing Work Life Survey (QNWLS): The Turkish validity and reliability study of the scale, which was developed by Brooks (2001) to measure the quality of nurses' work lives, were conducted by Şirin and Sökmen 2015 (28). The scale consists of 35 items and five subscales. These consist of "Work Environment," which defines the conflicts related to nurses' workplace; "Relationships with Managers," which defines the relations of nurses with their managers in the workplace; "Work Conditions," which is defined as the practice area where nurses work and explains the effect of the workplace on nurses and patient systems; "Job Perception," which defines nurses' thoughts about their workplace; and "Support Services," which defines the support services that nurses receive help from related to their workplace. The scale is a 5-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, 5 = strongly agree). An increase in the total score that can be obtained from the scale indicates that the quality of work life of nurses is high. The Cronbach's alpha value of the scale was 0.89, and the Cronbach's alpha values of the subscales were between 0.62–0.81 (28). In this study, the total Cronbach's alpha value of the scale was 0.81.

Data analysis

Statistical analyses were performed using the SPSS (IBM SPSS Statistics 24) software package. Frequency tables and descriptive statistics were used to interpret the findings. For non-normally distributed data, the Kruskal–Wallis H test (x^2-table value) was used to compare the measurement values of three or more independent groups. For normally distributed data, independent sample-t test (t-table value) was used to compare the measurement values of two independent groups, whereas ANOVA test (F-table value) was used to compare the measurement values of three or more independent groups. In cases where at least one of them did not show a normal distribution, Spearman's rank correlation coefficient was used.

Ethical consideration

The study was conducted in accordance with the principles of the Declaration of Helsinki and approved by the Human Research Ethics Committee in Social Sciences (No. 2018/173) of the university where the study was conducted. In addition, official permission was obtained from the institutions where the study was conducted, and informed consent was obtained from all nurses participating in the study. During the data collection process, no identifying information that would reveal the identities of the nurses was requested.

The study has some limitations, such as the fact

Table 1. Distribution of findings related to scale scores

	Scale	Mean	Standard deviation	Median	Min.	Max.
Positive Mental Health Scale	Personal satisfaction	13,89	3,79	13,0	8,0	29,0
	Prosocial attitude	8,73	2,50	8,0	5,0	16,0
	Self-control	10,40	2,69	10,0	5,0	17,0
	Autonomy	8,89	2,47	9,0	5,0	19,0
	Problem solving and self-actualization	17,26	4,92	17,0	9,0	36,0
	nterpersonal relationship skills	14,09	2,93	14,0	7,0	21,0
	Total	73,27	14,86	72,0	39,0	104,0
Quality of Nursing Work Life Survey	Work environment	29,62	4,97	30,0	14,0	43,0
	Relationships with managers	9,29	2,32	9,0	5,0	16,0
	Work conditions	30,96	3,74	31,0	18,0	42,0
	Job perception	21,89	5,01	22,0	9,0	35,0
	Support services	11,67	3,11	11,0	4,0	20,0
	Total	103,42	13,01	103,0	64,0	136,0

that it was conducted in hospitals only in one province and that the data were obtained only with self-report scales.

RESULTS

Characteristics of participants

It was determined that 38.1% of the nurses who participated in the study were in the 24–29 age group, 83.4% were female, 56.3% were married, and 53.4% had no children. It was determined that 73.3% of the nurses had a bachelor's degree, 36.4% had been working for 5 years or less, 65.6% had been working in the unit for 3 years or less, and 23.1% worked in the surgical units. In addition, 47.8% of the nurses had eight or more shifts per month, and 51% of them considered the quality of work life to be at a moderate level.

Results related to scales

The mean total score of the PMHS was 73.27± 14.86, the mean personal satisfaction subscale score was 13.89± 3.79, the mean prosocial attitude subscale score was 8.73 ± 2.50, the mean self-control subscale score was 10.40 ± 2.69, the mean autonomy subscale score was 8.89 ± 2.47, the mean problem-solving subscale score was 17.26 ± 4.92, and the mean interpersonal relations subscale score was 14.09 ± 2.93 (Table 1).

The mean total score of the QNWLS was 103.42± 13.01, the mean work environment subscale score was 29.62 ± 4.97, the mean relationships with managers subscale score was 9.29±2.32, the mean work conditions subscale score was 30.96±3.74, the mean job perception subscale score was 21.89 ± 5.01, and the mean support services subscale score was 11.67 ± 3.11 (Table 1).

Comparison of PMHS and QNWLS scores of nurses according to their personal and work life characteristics

A statistically significant difference was found in terms of total PMHS scores according to the age groups of nurses (F=2,755; p=0.029), years of service (years) (F=6,264; p=0,002), the hospital they worked in (F=7,614; p=0.001), staff status (t=-2.035; p=0.043), and their perception of work life (F=4.969; p=0.008) (Table 2).

No statistically significant difference was found in terms of gender, marital status, educational level, having children, length of service in the unit, unit of employment, number of shifts, in total PMHS scores (p>0.05) (Table 2).

A statistically significant difference was found in terms of total QNWLS scores according to the age groups of nurses (F=3.052; p=0.018), number of children (t=-2,008; p=0.046), years of working in the unit (years) (t=-3,047; p=0.003), units they worked in (x^2=21,027; p=0.001), hospital they worked in (x^2=8.890; p=0.012), staff status (t=-2.055; p=0.041), and perception of work life (x^2= 32.710; p=0.001) (Table 2).

No statistically significant difference was found in terms of gender, educational level, marital status, number of seizures, total years of employment, in total QNWLS scores (p>0.05) (Table 2).

Table 2. Comparison of the total scores of QNWLS and PMHS according to personal and work characteristics

Variable (N=247)		n	QNWLS total			PMHS total		
				Median [Min-Max]	Probability Difference		Median [Min-Max]	Probability Difference
Age	18-23 (1)	23	100,39–15,50		F=3,052 [b]	67,43–14,51		F=2,755 [b]
	24-29 (2)	94	101,43–12,94		p=0,018	74,02–14,78		p=0,029
	30-35 (3)	55	102,71–09,63	-	[2-4]	77,69–15,63	-	[1-3]
	36-41 (4)	52	108,50–13,61			71,27–14,66		
	42/^ (5)	23	104,83–14,07			70,00–11,34		
Education level	Below undergraduate	53	103,74–13,26	-	t=0,198 [c] p=0,843	70,45–14,06	-	t=-1,563 [c]
	Undergraduate and higher	194	103,34–12,98			74,04–15,01		p=0,119
Having children	No	132	101,88–13,42		t=-2,008[c]	73,23–15,32		t=-0,041 [c]
	Yes	115	105,19–12,34	-	p=0,046	74,31–14,37	-	p=0,967
Years of service (years)	5/v (1)	90	102,22–12,74		F=2,661[b]	72,07–14,39		F=6,264 [b]
	6-10 (2)	67	101,69–12,84	-	p=0,072	78,54–15,17	-	p=0,002
	11 and above (3)	90	105,91–13,17			70,56–14,23		[2-1,3]
Working hospital	Training and Research Hospitals (1)	140		101,0 [64,0-136,0]	x^2=8,890 [a] p=0,012	76,31–15,86		F=7,614 [b] p=0,001
	Public Hospital (2)	79	-	105,0 [66,0-135,0]	[1-3]	68,48–12,46	-	[1-2]
	Mental Health and Diseases Hospital (3)	28		112,0 [76,0-136,0]		71,57–12,25		
Staff status	On-Contract	66	100,62–12,87		t=-2,055 [c]	70,11–12,84		t=-2,035 [c]
	Permanent	181	104,44–12,95	-	p=0,041	74,43–15,40	-	p=0,043
Units	nternal Medicine (1)	55		103,0 [64,0-122,0]	x^2=21,027 [a] p=0,001 [3-1,2]	74,27–15,40		F=2,000 [b] p=0,095
	Surgical (2)	57		100,0 [75,0-135,0]		72,31–14,43		
	Psychiatry (3)	28	-	113,0 [81,0-136,0]		71,93–11,98	-	
	ntensive Care (4)	51		104,0 [82,0-128,0]		77,63–16,98		
	Other (5)	56		104,5 [66,0-136,0]		69,96–13,36		
Years of working in the unit (years)	3/v	162	101,62–13,12		t=-3,047 [c]	72,99–13,98		t=-0,393 [c]
	4 and above	85	106,85–12,15	-	p=0,003	73,81–16,48	-	p=0,695
Perception of work life	Poor(1)	80		97,0[64,0-135,0]	x^2=32,710 [a] p=0,001 [1-2,3] [2-3]	74,81–15,42		F=4,969 [b] p=0,008 [3-1,2]
	Moderate (2)	126	-	104,0[73,0-136,0]		74,43–14,55	-	
	Good (3)	41		110,0[66,0-136,0]		66,71–13,18		

[a] Kruskal-Wallis H test, [b] ANOVA test, [c] Independent Sample-t test,

Examination of the relationships between scale scores

There was a weak relationship between the total PMHS score and the QNWLS work environment score ($r = -0.346$; $p = 0.000$); a very weak and negative relationship between the work conditions ($r = -0.156$; $p=0.014$) and work perception scores ($r = -0.144$; $p=0.024$); and statistically significant, moderate, and positive relationship between the scores of relations with executive nurses ($r=0.731$; $p=0.000$) (Table 3).

DISCUSSION

According to the study's findings, nurses perceived their positive mental health to be near-good and their quality of work life to be moderate. In the literature, similar to the results of this study, there have been studies that show nurses rate their positive mental health as good (1,12,17,29) as well as studies that show nurses do not rate their positive mental health as good (30). Various outcomes have been observed in studies on the quality of work life. It was found that nurses rated their quality of work life at a low level (31,32), at a moderate level (9,21,33-36) and at a good level (18,36). These findings indicate that positive mental health and quality of work life are influenced by many factors, that the lack of a certain standard yields different outcomes, and that differences between countries might have an effect on these results. Given that the quality of work life varies even among clinics

Table 3. Examination of the relationship between the scale scores

Correlation *			Quality of Nursing Work Life Survey					
			Work environment	Relationships with managers	Work conditions	Job perception	Support services	Total
Positive Mental Health Scale	Personal satisfaction	r	-0,305	0,679	-0,075	-0,126	-0,029	-0,072
		p	0,000	0,000	0,238	0,047	0,650	0,262
	Prosocial attitude	r	-0,157	0,448	-0,136	-0,003	0,053	-0,012
		p	0,014	0,000	0,032	0,964	0,409	0,846
	Self-control	r	-0,259	0,514	-0,088	-0,141	-0,029	-0,080
		p	0,000	0,000	0,167	0,026	0,652	0,209
	Autonomy	r	-0,281	0,731	-0,105	-0,102	0,013	-0,033
		p	0,000	0,000	0,100	0,109	0,842	0,602
	Problem solving and self-actualization	r	-0,263	0,478	-0,122	-0,072	0,013	-0,065
		p	0,000	0,000	0,055	0,262	0,845	0,312
	nterpersonal relationship skills	r	-0,277	0,588	-0,149	-0,149	-0,010	-0,100
		p	0,000	0,000	0,019	0,019	0,876	0,118
	Total	r	-0,346	0,731	-0,156	-0,144	-0,011	-0,101
		p	0,000	0,000	0,014	0,024	0,866	0,113

*Spearman

within the same institution, it is normal to detect disparities between institutions or countries. Positive mental health, which affects the quality of work life, is not an inexhaustible resource, and negativity at work is a factor that can deplete this resource. According to the results obtained from the comparison of positive mental health with personal and work life variables, it was determined that age, years of service, type of hospital worked in, staff status, and subjective opinion about work life affected the evaluation of positive mental health, whereas gender, marital status, educational level, having children, length of service in the unit, unit of employment, number of shifts did not affect the evaluation.

Although there was no significant difference between positive mental health scores according to educational level, it was found that those have below undergraduate degree had better positive mental health perceptions. In a study conducted with nurses in Poland, it was determined that higher education was a factor that positively affected mental health self-assessment in nurses compared to secondary education and that nurses with higher education tolerated unpleasant work conditions better (38). In a study conducted with nurses in China, it was reported that nurses with a higher level of education experienced less emotional exhaustion, which was attributed to an increase in the perception of personal achievement and higher income due to the assignment of nurses with a higher level of education to more challenging tasks (39). Considering this information, the finding regarding the level of education in our study may be related to the fact that the level of education and professional expertise are not yet fully taken into account in the criteria for assignment and remuneration of nurses in Turkey.

In our study, it was found that the positive mental health of the employees working in a state hospital was at a better level than the employees working in a training and research hospital. Similar to this result, a study conducted in Jordan found that nurses working in public hospitals had better positive mental health than those working in private hospitals (12). In a study conducted in a training and research hospital in Turkey, it was determined that more than half of the nurses were in a risky group in terms of mental health and that mental health problems decreased as nurses' positive perceptions of work environment increased (40).

This result may be related to the characteristics of training and research hospitals. Training and research hospitals in Turkey are high-level tertiary hospitals where advanced examinations and specialized treatments are performed, high-level technology is used, and training and research services are provided. Owing to these characteristics, although nurses working in these hospitals meet more complex care demands, the fact that nurses' salaries are not regulated accordingly may have negatively affected their positive mental health.

In our study, it was found that both quality of work life and positive mental health increased significantly as the subjective perception of quality of work life improved from poor to moderate and from moderate to good. Tamer and Öztürk (2021)

reported that nurses who evaluated their quality of work life as poor had lower quality of work life scores (21). In a study conducted with 434 intensive care nurses in China, it was concluded that the better the nursing work environment, the better the quality of work life (41). These results suggest that nurses' subjective perception of quality of work life (poor, moderate, and good) is an indicator of both positive mental health and quality of work life. Even a small assessment question such as "How do you rate the quality of your work life?" can give managers an idea about employees and the work environment.

In the literature, similar to our study, it was found that variables such as gender (42), work experience, marital status, having children, and the health institution worked at (4,12) did not have a significant effect on positive mental health. Contrary to our study, there are studies showing that gender (43) and shift work status (12) have a significant effect on positive mental health. These different results may be due to differences in personal perception.

When the results obtained from the comparison of quality of work life with personal and work life variables were examined in our study, it was determined that age, having children, type of hospital, years of service in the current department, department of employment, type of employment, and subjective perception of work life affected the quality of work life, while education level and total years of employment did not.

We found that the quality of work life in the 36–41 age group was significantly higher than in the 24–29 age group. In some studies conducted with nurses, it was determined that their quality of work life increased as their age increased and that the work experience that comes with age, a stable work life, and developing a more positive attitude toward situations or events in the work environment may have an effect on this result (23,24,33). On the contrary, there are also studies that found that the quality of work life of nurses aged ≤20 years is higher than other age groups (32), that the quality of work life decreases with age due to a decrease in physical and cognitive levels (4,35,37,44), and that there is no significant relationship between age and quality of work life (3,22,45). According to studies, the variability of the relationship between age and quality of work life is thought to vary depending on the benefits of increasing age.

In terms of the status of having children, it was found that the quality of work life of those with children was significantly higher than that of those without children. However, there are also studies showing that there is no relationship between having children and the quality of work life (23, 32).

In our study, it was determined that the quality of work life of employees working in the mental health hospital was significantly higher than that of those working in the training and research hospital. In addition, it was found that the quality of work life of nurses working in psychiatric clinics was significantly higher than that of those working in internal medicine and surgical units. These results coincide with the fact that the positive mental health of nurses working in training and research hospitals is lower than that of those working in public hospitals. In studies conducted in different countries in the literature, it was determined that the quality of work life of nurses working in tertiary hospitals was lower than that of those working in secondary hospitals (24, 35) and the quality of work life of nurses working in specialty hospitals such as otolaryngology and psychiatric care was higher than that of nurses working in general hospitals (22). In the studies conducted in the units where nurses work, it was reported that nurses working in intensive care units and emergency departments had a better quality of work life than nurses working in other clinics (21) and those working in surgical diseases clinics and intensive care units had a better quality of work life than those working in internal medicine clinics (18). In addition, it was determined that the quality of work life of nurses working in the emergency department who were trained in this field was higher than that of those who did not receive training specific to this field (34). The reason why the quality of work life varies even in different clinics within the same institution may be due to the lack of standardization of conditions such as workload and work environment. Furthermore, these results suggest that specialization, which is a result of working in specific units, positively affects the quality of work life. In this

respect, hospitals encouraging nurses to specialize and employing them in units appropriate to their areas of specialization can improve the quality of work life.

In our study, although not statistically significant, it was found that the quality of working life of nurses with a total working time of 11 years or more was significantly higher than that of nurses who worked less than 11 years. Similar to our study, although there are studies in the literature showing that work experience increases quality of work life (3,22,23,32) reported that the quality of work life scores of nurses who worked for less than 1 year were higher (32). Although the quality of work life is normally expected to increase with years of employment, this may be affected by different variables, such as the hospital and clinic or work conditions, leading to different results.

In our study, it was determined that the quality of work life of permanent employees was significantly higher than that of contract employees. In some studies in the literature, it has been determined that permanent nurses have a higher quality of work life than contract nurses and temporarily employed nurses; this is associated with higher income, better career prospects, and job stability (22,46). Contrary to our study's findings, Güçlü and Kurşun (2018) reported that contract nurses had a higher quality of work life than permanent nurses; this was associated with the fact that contract nurses were younger (32). The result regarding the type of employment in our study is thought to be due to the fact that permanent nurses have more advantages financially, legally, and in terms of work conditions.

In our study, no significant relationship was found between gender, marital status, type of work, number of shifts, receiving training, educational level, total years of employment, and quality of work life. In the studies in the literature, it was found that there was no significant difference between variables such as age, gender, marital status, education level, number of children, income level, type of work, the number of monthly shifts (21,34), participation in a certificate program related to personal development, working overtime and quality of work life. However, unlike our study results, there are opposite results in the literature, such as the fact that the quality of work life of nurses with postgraduate education level is higher than others (47) and the quality of work life scores of nurses graduated from medical vocational high school are higher than those with an associate or undergraduate degree (32). In a study conducted by Lebni et al. 2021 (46) with nurses in Iran, it was found that the quality of work life of those with high work experience and education level, those working in intensive care, those working in evening and night shifts had high quality of work life, while the quality of work life of those over 50 years of age, single and temporary workers was lower than the other groups. In addition, it was found that the quality of work life scores of nurses in managerial positions who did not work shifts (18) and male and married nurses were higher (32). In a study conducted by Van et al. (2020) with nurses, it was found that education level (university) was most strongly associated with quality of work life (36). These results show that there is no definite view about the variables affecting quality of work life and that there are many variables that can affect quality of work life.

According to another result in our study, as the work environment, work conditions, and job perception scores increase, which are subscales of the quality of work life, the positive mental health scores decrease. In other words, the positive mental health of employees is positively affected. Considering the fact that the work environment, work conditions, and job perception subscales cover a wide range of topics such as the positive approach of senior management of the institution, satisfaction with teamwork, workload not disrupting the work–family life balance, and a positive social and institutional perspective on nursing, this is an expected result. It was determined that there was no significant relationship between the support services subscale, which defines the support services that nurses receive relevant to their field of work, and positive mental health. On the contrary, as the score of the relationships with managers subscale increases, which includes being able to communicate with executive nurses, providing adequate supervision and control, receiving feedback on performance, participating in decisions, and

being appreciated, the positive mental health score also increases, implying that the employees' positive mental health suffers. According to studies in the literature, not being supported by executive nurses is an obstacle to nurses' quality of work life (3) and being valued and recognized by superiors positively affects the mental health of nurses (48). Ni et al. 2023 found that career development, leadership and management, professional autonomy and manpower competence had significant effects on nurses' quality of work life. In line with these results, it was suggested that nurse managers should strengthen the structure of the nurse team, pay attention to person-task matching, and increase nurses' work autonomy and sense of empowerment (41). In the study of Cosentino et al.2023, it was determined that the behaviours of manager nurses in the leader position such as being interested in team welfare, taking time to discuss team concerns, working closely with the team, allowing flexibility in working hours and shift planning, getting to know team members, listening with real interest and offering career advancement opportunities had a positive effect on the quality of work life of nurses (49).While it was expected that a good relationship between nurses and executive nurses would positively affect the mental health of employees, the opposite result was obtained in our study. There is a need to investigate whether this situation is related to reasons such as the adequacy of the managerial and leadership skills of executive nurses and the equivalence of their authority and responsibilities. Nursing care is a complicated job that demands nurses to be in good physical and psychological condition (4). Nurses, the largest group of healthcare providers, should have a satisfactory quality of work life in order to provide quality care to their patients (22). Because quality of work life and positive mental health affect both nurses and the individuals they care for, additional research is needed to address these two concepts.

Nurses' quality of work life and mental well-being have the potential to directly affect the quality of nursing services and patient outcomes. Therefore, investigating what affects the quality of work life and positive mental health will contribute to the emergence of new understandings in order to develop more efficient working environments that will increase the well-being of nurses. The most striking results of our study are that interacting with nurse managers negatively affects the positive mental health of nurses, and being specialized in a field positively affects the positive mental health of nurses. Hospital managers should take into account nurses' self-assessments of their quality of work life, implement practices to strengthen relations with executive nurses, and create work conditions that will enable nurses to specialize in a field. Practices aimed at improving the leadership and management skills of nurse managers can contribute to improving the quality of work life and mental well-being of nurses. In addition, implementing practices such as providing in-service trainings to improve nurses' mental health literacy levels and providing mental health support to nurses from time to time may have positive effects on both positive mental health and quality of work life of nurses.

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