

## The mediating role of work stress in the relationship between work engagement and turnover intention

### İşe adanmışlık ve işten ayrılma niyeti arasındaki ilişkide iş stresinin aracı rolü

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#### Abstract

This study investigated the relationship between work engagement and turnover intention in the context of health sector employees and the mediating role of work stress in the relationship between these two variables. A questionnaire was applied to 350 healthcare workers in Erzincan, Turkey, to obtain the data. Analysis of Moment Structures (AMOS) and Statistical Package for the Social Sciences (SPSS) package applications was used to analyse the data obtained in the research. The study concluded that work engagement was significantly and negatively related to work stress and turnover intention, and work stress was significantly and positively related to turnover intention. Furthermore, the study determined that work stress has a mediating role in the relationship between work engagement and turnover intention.

**Keywords:** Work Stress, Work Engagement, Turnover Intention, Healthcare Employees

**Jel Codes:** D23, M12, M54

#### Öz

Bu çalışmada sağlık sektörü çalışanları bağlamında işe bağlılık ve işten ayrılma niyeti arasındaki ilişki araştırılmış ve bu iki değişken arasındaki ilişkide iş stresinin aracı rolü araştırılmıştır. Verileri elde etmek için Erzincan ilinde 350 sağlık çalışanına anket uygulanmıştır. Araştırmada elde edilen verilerin analizinde AMOS ve SPSS paket uygulamaları kullanılmıştır. Araştırmada, işe bağlılığın iş stresi ve işten ayrılma niyeti ile anlamlı ve negatif, iş stresinin işten ayrılma niyeti ile anlamlı ve pozitif ilişkili olduğu sonucuna varılmıştır. Araştırmada işe adanmışlık ile işten ayrılma niyeti arasındaki ilişkide iş stresinin aracı rolü olduğu belirlenmiştir.

**Anahtar Kelimeler:** İş Stresi, İşe Adanmışlık, İşten Ayrılma Niyeti, Sağlık Çalışanları

**JEL Kodları:** D23, M12, M54

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**Submitted:** 17/07/2022

**Revised:** 25/08/2022

**Accepted:** 31/08/2022

**Online Published:** 25/09/2022

**Citation:** Baş, M., The mediating role of work stress in the relationship between work engagement and turnover intention, *bmij* (2022) 10 (3): 1161-1171, doi: <https://doi.org/10.15295/bmij.v10i3.2097>

## Introduction

Work engagement (WE) has been examined repeatedly in academic research due to its advantages for organizations. However, as WE is an individual concept, it also has implications at an individual level. In other words, WE is also related to individuals' behaviours, attitudes and intentions (Saks, 2006). One of the individual-level consequences of WE is its impact on employees' turnover intention (TI). The highly engaged employees may have difficulty quitting the job because they generally identify with their jobs and put a lot of energy into them. Besides, they can avoid changing jobs since they do not want to lose the experience gained in their current jobs (Halbesleben & Wheeler, 2008). Therefore, engaged employees are expected to intend out turnover less.

Work stress (WS) is a situation that employees often experience today when they cannot respond to the job's requirements at the desired level or when their expectations about the job differ from reality (Dolan & Lingham, 2008). In addition to the individual consequences of WS, such as a decrease in employee morale and performance, and an increase in absenteeism, there are also significant consequences at the organizational and country levels like increased turnover rates, decreased productivity, and raised health expenditures (Nissly, Barak, Levin, 2005; Palmer, Cooper, Thomas, 2004; Park, 2007). In this context, organizations' role in preventing employees from leaving their jobs should be to regulate policies that help reduce employees' WS and increase their WE.

In the study, the relationship between WE and TI was examined and investigated whether this relationship changed according to the WS level of the employees. In addition, no study examining the mediating role of WS in the relationship between WE and TI has been found in the literature. For this reason, it is thought that this study will be a valuable resource for future research. Within the scope of the research, the concepts of WE, TI, and WS were first explained. Subsequently, hypotheses were formed due to the literature review on the relationships between these concepts. Later, statistical methods were used to examine the data collected from the healthcare workers through the survey approach. The results were then analysed, and recommendations were made.

## Literature review

### Work engagement

Researchers have started to look at the phrase "work engagement" rather than "burnout" in recent years due to the growing significance of human capital in organizations, the increase in the psychological participation of employees in work activities, and the rising interest in positive psychology (Schaufeli, 2013; Bakker, Schaufeli, Leiter, Taris, 2008). Kahn first conceptualized WE, defining it as "the dedication of employees to their work physically, cognitively, and emotionally" (Kahn, 1990: 694). According to another definition made by Schaufeli, Salanova, González-romá, Bakker (2002), WE is "a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption". Accordingly, "vigour at work is characterized by the employee's high energy level, mental stamina while working, and perseverance even in the face of difficulties. Furthermore, the employee's work dedication is characterized by a sense of importance, enthusiasm, inspiration, and pride. Lastly, the employee's absorption of his work is characterized by the fact that the person is fully concentrated and deeply immersed in his work. In this way, the time passes quickly for the employee, and he finds it difficult to separate himself from work" (Schaufeli et al., 2002, pp. 74-75).

Previous studies illustrated that WE increase work performance (Halbesleben, 2011), work satisfaction (Saks, 2006), organizational commitment (Hakanen, Bakker, Schaufeli, 2006), and decreases TI (Schaufeli & Bakker, 2004). Research has shown that engaged employees exhibit proactive behaviours (Bakker et al., 2008), have more creative ideas, are innovative and entrepreneurial (Bakker & Albrecht, 2018), and work more efficiently (Bakker & Demerouti, 2008). Emotional exhaustion, depressive symptoms and physical complaints are more common in non-dedicated employees (Gill, 2007).

### Turnover intention

Turnover intention, which occurs just before turnover behaviour, is considered a significant precursor of quitting (Lee & Mowday, 1987; Mowday, Koberg, McArthur, 1984). Therefore, to better understand working individuals' turnover intentions, it will be important to determine what factors affect them. When the literature is examined, the turnover intention is generally defined as the willingness and desire of employees to leave their jobs voluntarily (Fried, Shirom, Gilboa, Cooper, 2008; Koçak & Yücel, 2018; Tett & Meyer, 1993). On the other hand, Takase (2010) argued that TI is a multi-stage process. Employees dissatisfied with their jobs first react negatively to the work environment. These reactions later cause them to withdraw mentally and physically from the job, resulting in turnover behaviour (Takase, 2010).

Many factors affect employees' TI. These factors include employees' individual and demographic characteristics (Arnold & Feldman, 1982; Cotton & Tuttle, 1986, Baş & Şirin, 2021), job characteristics, the organization's human resources practices and work environment (Kim et al., 2005), employees' job satisfaction, organizational commitment (Arnold & Feldman, 1982; Bluedorn, 1982; Lambert & Hogan, 2001), WE (Saks, 2006), WS (Kim & Stoner, 2008) and the existence of alternative job opportunities (Lambert & Hogan, 2001).

### **Work stress**

The term stress was first used by Selye (1976) in its current meaning and is defined as "the nonspecific response of the body to any demand made upon it" (Selye, 1976: 137). In the literature, WS is also expressed with concepts such as occupational stress, organizational stress, and workplace stress. WS is the situation that occurs when employees cannot respond adequately to job demands or when their expectations about the job are different (Dolan & Lingham, 2008). In studies, the stress variable is generally measured by perceived stress levels (Cohen, Kamarck, Mermelstein, 1983). The stressful aspects of the job are defined as "job stressors", and the consequences of the stressors on employees are called "job strain" (Cicero, Pierro, van Knippenberg, 2007).

Work-related stress is one of the most popular topics in the literature due to its negative consequences at both personal and organizational levels (Nissly et al., 2005). Stressful employees' physical and mental health is impaired, their motivation decreases, and these people feel less productive and less secure in the workplace. On the other hand, organizations can be less successful in the competitive market due to their stressful employees. Work-related stress also negatively affects the country's economy, causing a loss of productivity and increased health expenditures (Palmer et al., 2004; Park, 2007).

## **Hypotheses**

### **Work engagement and turnover intention**

Various studies have revealed that WE reduces employees' TI at the individual level. For instance, Schaufeli and Bakker (2004) found in their study that WE is negatively correlated with TI and that WE has a mediating role in the relationship between job resources and TI. Saks (2006), in his research, noted that high WE results in low TI. The study conducted by Du Plooy and Roodt (2010) illustrated that employees' WE has a significant and negative relationship with their TI. In their study, Agarwal and Gupta (2018) revealed that employees with increased WE display low TI levels. Lastly, Erdil and Müceldili (2014) reported that emotional engagement, one of the sub-dimensions of WE, has a negative relationship with TI. Based on previous work, the following hypothesis was formulated:

*H<sub>1</sub>: There is a negative relationship between WE and TI.*

### **Work engagement and work stress**

Since WE has been defined as a positive, fulfilling, work-related state of mind, the engaged employee has a high energy level and mental resilience (Schaufeli et al., 2002). In this framework, the employee's WE positively affects his/her psychological well-being (Koyuncu, Burke, Fiksenbaum, 2006). Different research studies have shown that WE reduces employees' WS levels. For instance, Schaufeli et al. (2008) concluded in their study that vigour and dedication sub-dimensions of WE are negatively related to employees' stress/depression levels. Akyol (2019) found a negative and significant correlation between WE and WS in his research. In addition, Caesans, Stinglhamber, Luypaert, (2014) found in their study that WE reduced the perceived stress levels of employees. Finally, Caesens and Stinglhamber (2014) research revealed that WE reduces the psychological tension of the employee. Thus, the following hypothesis was created:

*H<sub>2</sub>: There is a significant and negative relationship between WE and WS.*

### **Work stress and turnover intention**

Different studies in the literature examine the relationship between WS and TI. To illustrate, Fang and Baba (1993) found that stress factors such as role ambiguity, role conflict, and excessive role load are important determinants of stress in the workplace. Therefore, stress significantly affects employees' intention to quit. Besides, the research of Nissly et al. (2005: 79) reported that employees with high-stress levels were more likely to quit their jobs. Furthermore, Lee et al. (2013) concluded that WS positively affects employees' TI. Furthermore, in their study, Chan et al. (2010) found a significant and positive relationship between WS and TI. Lastly, in their study, Elçi, Şener, Aksoy, Alpkan, (2012) determined that work-related stress increases employees' intention to leave. Accordingly, the following hypothesis was developed:

**H<sub>3</sub>:** There is a significant and positive relationship between WS and TI.

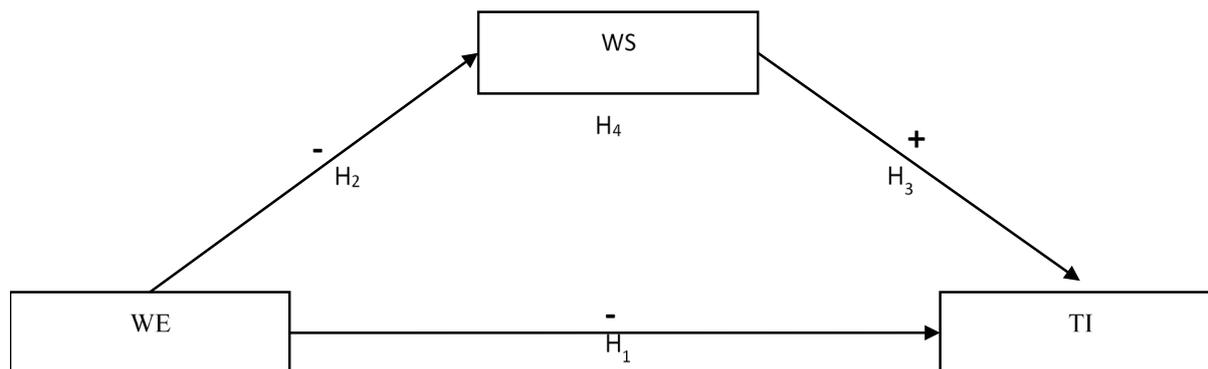
### The mediating role of work stress

To the best of the authors' knowledge, no research has been done on the mediating role of WS in the relationship between WE and TI. On the other hand, based on the above-recorded studies that examine the relationship between the three variables separately, it is considered that employees who are more engaged in their jobs can have less job stress and thus consider leaving less frequently. In other words, employees' WE reduces their TI by decreasing their job stress levels. In this framework, the following hypothesis was established:

**H<sub>4</sub>:** WS has a mediating role in the relationship between WE and TI.

### Research methodology

The research model is based on the mediating role of work stress in the relationship between work engagement and turnover intention. The research model is given in Figure 1.



**Figure 1:** The Research Model

The research population consists of 1300 health workers working in the state hospital in Erzincan. In collecting data, the face-to-face survey technique was applied in April and May 2022 and the convenience sampling method was used to select the participants. As a result, 350 questionnaires were collected and analysed from health professionals participating in the study. In this context, the number of data meets the minimum sample size in the 95% confidence interval (Ural and Kılıç, 2005:43). In the first part of the research questionnaire, there are questions about the demographic characteristics of health workers. In the second part of the questionnaire used in the research, the participants asked questions about the scales used. In order to measure the WE levels of healthcare workers, the WE Scale consisting of 9 statements developed by Schaufeli and Bakker (2003), was used. To determine the TI levels of healthcare workers, Camman, Fichman, Jenkins, Klesh, (1979) and consisting of 3 statements, the TI scale was used. In addition, the WS scale consisting of 4 statements developed by Cohen et al. (1983) was used.

A normality test was applied to determine the analyses for the scales used in the research. In the normality test, Skewness and Kurtosis values were checked. The Skewness value for the WE variable is between -0.095 and 0.130, and the Kurtosis value is between -0.548 and 0.260. The Skewness value for the WS scale is between 0.375 and 0.130, and the Kurtosis value is between -0.604 and 0.260. In addition, the Skewness value for the TI scale is between 0.384 and 0.130, and the Kurtosis value is between -0.597 and 0.260. Scale values between -1.5 and 1.5 are acceptable (Tabachnick & Fidell, 2013, p. 113). In addition, reliability and factor analysis, SEM (Structural Equation Modelling) and mediator variable analysis were applied in the research.

### Demographic findings

When the demographic characteristics of the participants are examined, it is seen that 10.3% of the respondents are doctors, 28.9% are nurses, 9.1% are midwives, 19.1% are health officers, 13.7% are laboratory workers, 16.9% are radiology technicians, and 16.9% radiology technicians. In addition, it consists of 2 pharmacists. Regarding gender, 51.1% of the employees participating in the survey are male, 49% are female, 63.4% are married, and 36.6% are single employees in terms of marital status. Furthermore, considering the educational status of the participants, 26.9% were high school graduates, 30% were associate degree graduates, 32.6% were undergraduate graduates, and 10.5% were postgraduate employees. In addition, when the length of service of the employees participating in our

research is examined, 14.9% work in the hospital for less than one year, 29.4% between 1-5 years, 21.4% between 6-10 years and 34.3% for them 11 years or more.

## Results

### Reliability and factor analysis results regarding the scales

The exploratory factor analysis results of the scales of the study are shown in Table 1. When Table 1 is examined, it is seen that the KMO values of the scales are above 0.50, the Bartlett Sphericity Test (BST) is significant, and the factor loads of the scales are at an acceptable level (Kalaycı, 2010). Another finding in Table 1 is that the reliability coefficients of the scales used in the study were highly reliable, above 0.70 (Kayış, 2010).

**Table 1:** Exploratory Factor Analysis Results

SCALES		Factor Loadings	Eigenvalue	Explained Variance	Cronbach Alpha
Work Engagement	WE1	.774	4.320	48.005	0.858
	WE2	.777			
	WE3	.734			
	WE4	.831			
	WE5	.812			
	WE6	.629			
	WE7	.640			
	WE8	.482			
	WE9	.437			
KMO = .834 BST= 1503,706 p					
Turnover Intention	TI1	.786	2.019	67.304	0.754
	TI2	.881			
	TI3	.791			
KMO = .646 BST= 274,715					
Work Stress	WS1	.724	2.671	66.777	0.832
	WS2	.835			
	WS3	.879			
	WS4	.824			
KMO= .766 BST= 572,464					

Source: Author

### Hypothesis tests

Correlation analysis was applied to determine the relationships of the scales used in the research. Table 2 shows the results obtained.

**Table 2:** Correlation Analysis Findings

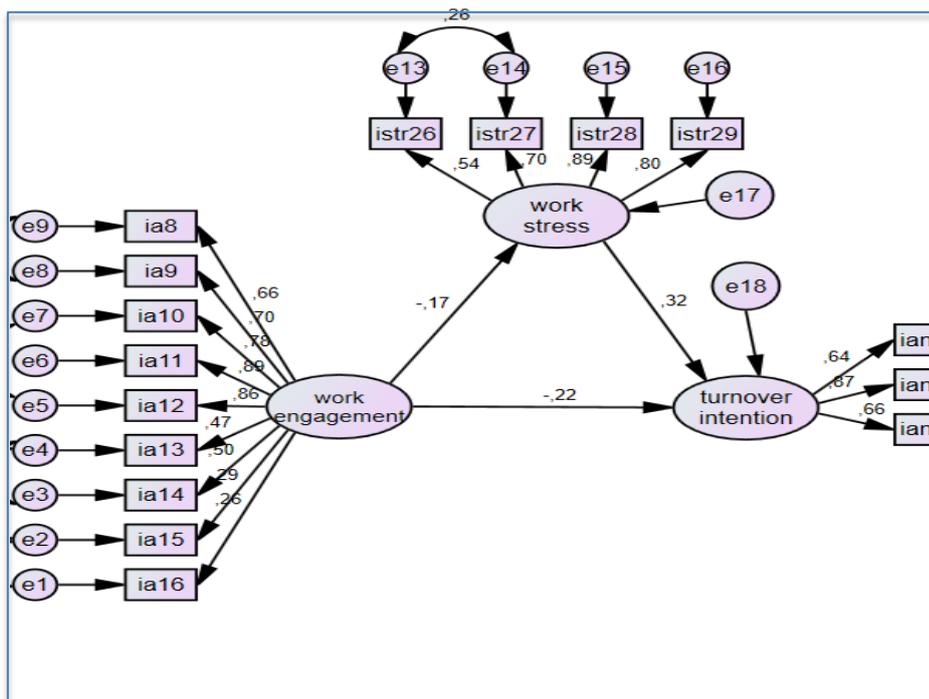
Factors	$\bar{x}$	S.D.	1	2	3
Work Engagement	3.11	.950	-		
Work Stress	2.69	1.103	-.117*	-	
Turnover Intention	2.57	1.086	-.256**	.334**	-

Source: Author

When the findings in Table 2 were examined, it was revealed that there was a negative relationship ( $r = -0.256$ ) between WE and TI. Furthermore, it is also seen that there is a negative relationship ( $r = -0.117$ ) between WE and WS. The final finding in Table 2 is that there is a positive relationship between WS and TI ( $r = 0.334$ ;  $p = 0.000$ ). Thus, the H1, H2 and H3 hypotheses were accepted.

### Mediating role analysis

Structural equation model analysis was applied using the AMOS 23 package program to reveal the statistical and logical significance of the variables used in the research. In order to determine the validity of the model belonging to the research, the analysis was applied by looking at the goodness of fit values of the model and the relations between the variables. The Bootstrap method was used while determining the relationships between the research variables. In the Bootstrap method, the number of samples was increased by 1000, the Bias-Corrected Confidence Intervals method, which gives the confidence intervals at 95%, was chosen, and the Bootfactor value was marked as 1. In structural equation modelling, the independent variable of the research is WE, the dependent variable is TI, and the mediating variable is WS. In the study, firstly, how the WE variable affected TI was examined, then the mediating variable WS was added to the model, and the effect and significance level were calculated using the Bootstrap technique. Figure 2 shows the prediction results for the model.



**Figure 2:** Estimation Results Regarding the Research Model

The model created to analyse the mediating effect was tested with structural equation analysis. As the data obtained as a result of the analysis were not suitable for normal distribution, some modifications were made, as seen in Figure 2. As a result of the modifications made, it is seen that the goodness of fit values of the research model ( $\chi^2/df = 3.112$  RMSEA=0.07; CFI=0.92; TLI= 0.90; SRMR=0.06) are at an acceptable level (Hu ve Bentler, 1999; Nye ve Drasgow, 2011; Mishra ve Datta, 2011; Gürbüz 2019).

Table 3 shows the standardized factor loading and bootstrapping confidence interval in the research model created for testing the research hypotheses. When Table 3 is examined, it is seen that the effect of

WE on TI is 99% significant, the effect of WE on WS is 95% significant, and the effect of WS on TI is 99% significant. The lower and upper-level values in Table 3 show the ranges in which WE affect TE.

**Table 3:** Factor Load and Bootstrap Confidence Interval

Hypothesis		Dependent Variable		Independent Variable	Standardized Factor Loads	Low Level	High Level	P
H1		TI	←	WE	-.22	-.40	-.17	.000**
H2		WS	←	WE	-.17	-.25	-.01	.029*
H3		TI	←	WS	.32	.36	.13	.000**
		** p <0.01; * p<0.05						

Source: Author

The results in Table 4 are taken from the output of the AMOS program. Table 4 shows that the correlation between WE and TI is direct and significant ( $r=-0.22$ ;  $p=0.000$ ). Another finding in Table 4 showed that the relationship between WE and WS was direct and significant ( $r=-0.17$ ;  $p=0.029$ ). The third finding in Table 4 shows a direct and significant relationship between WS and TI ( $r=0.36$ ;  $p=0.000$ ). Table 4 summarizes the bootstrapping method's direct, indirect, and total effects on testing the basic research model.

**Table 4:** Indirect and Total Effects in the Research Model

Variables	Effects	WE	WS	TI
WS	Direct	-.17	.000	.000
	Indirect	.000	.000	.000
	Total	-.17	.000	.000
TI	Direct	-.29	.32	.000
	Indirect	-.22	.000	.000
	Total	-.51	.32	.000

Source: Author

In order to test the H4 hypothesis, the last hypothesis of the research, Baron and Kenny's (1986) method, which is one of the simple mediation methods, was preferred. In this context, to determine whether WS has a mediating role in the relationship between WE and TI, a mediation test was conducted considering the conditions determined by Baron and Kenny (1986). If one of these conditions is missing, mediation cannot be mentioned. In this method, the first condition is that the independent variable WE of the research should have a significant effect on the dependent variable TI. In the second condition, the independent variable WE significantly affects the research's mediating variable, WS. In the third condition, the mediating variable WS should have a significant effect on the dependent variable TI of the study. The last condition of this method shows that it has a full mediation effect if the relationship between WE and TI becomes meaningless when the mediating variable WS is added to the relationship between independent variable WE and dependent variable TI. However, if the effect of WE on TI decreases, it shows a partial mediation effect (Baron and Kenny, 1986: 1176).

**Table 5:** Significance of Mediator Variable

Mediating Role Model	Direct Effect	Total Effect	Mediating Effect
WE-WS-TI	-0.29	-0.51	-0.22

The Bootstrap method was used to determine the effect of the mediator variable WS on this relationship. With the inclusion of WS in the analysis, the statistical decrease of the effect of WE on TI shows that it has a partial mediating role. When Table 5 is examined, in the research model, WE directly affects TI at  $r=-0.29$ . When the mediating variable WS is added to the research model, it has been determined that WE affects TI at  $r=-0.22$  through WS (indirect effect), and the total effect level on the TI is  $r=-0.51$ .

According to this result, WS mediates the relationship between WE and TI. Thus, the H4 hypothesis was accepted.

### **Conclusions and recommendations**

This study examined the relationship between WE and TI and whether this relationship changes according to the employees' perceived stress levels. In the literature, numerous studies were found that separately examine the relationships between these variables (Fang & Baba, 1993; Schaufeli & Bakker, 2004; Nissly et al., 2005; Saks, 2006; Schaufeli et al., 2008; Du Plooy & Roodt, 2010; Chan et al., 2010; Elçi et al., 2012; Lee et al., 2013; Erdil & Müceldili, 2014; Caesens et al., 2014; Caesens & Stinglhamber, 2014; Agarwal & Gupta, 2018; Akyol, 2019). However, there is no study handling the mediating role of WS in the relationship between WE and TI. Therefore, it is considered that the research will be an important resource for managerial decisions and future research.

In this research, the AMOS program was used to determine the relationships between the variables. Accordingly, the independent variable WE directly affects the dependent variable TI at -0.29. However, if the mediating variable WS is added to the model, the independent variable WS indirectly affects the dependent variable TI at -0.22. As a result, it was revealed that WS partially mediated the relationship between WE and TI.

According to the research results, the increase in the level of employees' WE negatively affects their TI levels. In other words, if employees engage in their jobs, they are satisfied with their jobs; contribute more to the organization both motivationally and in terms of performance, and thus they intend to turnover less. On the other hand, it is crucial to raise employees' WE, particularly in demanding and stressful businesses like the healthcare industry. Since healthcare professionals serve human health, it is important that they concentrate on their work, keep their motivation high, and be happy while doing their job. Another study result is that engaged employees perceive WS positively and thus reduce their TI. Accordingly, it is possible to reduce employees' TI by taking necessary measures for factors that increase their WS, such as poor working conditions, heavy workload, role ambiguity, role conflict, and frustration.

### **Practical implications**

The COVID-19 epidemic experienced worldwide showed us that healthcare professionals serve society at the expense of revealing their lives in an environment where hundreds of thousands of people have lost their lives, and their decisions are hazardous and important. Working in such an environment can only be possible by loving and embracing the job, exhibiting extra-role behaviour for the organization, and performing emotionally, cognitively, and physically while working. In a sector with such a high risk, healthcare employees need to be engaged in their jobs to reduce their intention to quit. Health sector managers have significant responsibilities to ensure this condition. For example, health sector managers should consider employees' welfare and well-being, value their opinions, give them responsibility, guide them when necessary, motivate them through rewards, follow an appropriate wage policy and take measures to improve work. In addition, some opportunities such as respecting the beliefs of the employees, being with them on special days such as birth and death, offering opportunities that will make their lives easier according to the cultural and social structure of the geography they are in, and increasing the WE of the employees can also increase the WE of the employees.

### **Limitations and implications**

This study has several limitations. A drawback of the study is that it covers only one city and one sector. Future research may expand the sample by incorporating more industries and occupations. Future research may compare health organizations in other cities or regions. Finally, future researchers may create new models by including more mediating variables in their analysis.

### **Peer-review:**

Externally peer-reviewed

### **Conflict of interests:**

The author has no conflict of interest to declare.

**Grant Support:**

The author declared that this study has received no financial support

**Ethics Committee Approval:**

Ethics committee approval was received for this study from Erzincan Binali Yıldırım University, Human Studies, Social Sciences and Humanities Ethics Committee on 22/ 06 /2022 and 06/12 document number.

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