

## The relationship between mindfulness and work-life balance: The mediation role of emotional regulation

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### ARTICLE INFO

#### Article history

Received March 10, 2023

Revised August 12, 2023

Accepted December 26, 2023

#### Keywords

work-life balance;  
mindfulness;  
emotion regulation;  
air traffic controller.

### ABSTRACT

Air Traffic Controller (ATC) is one of the occupations in the service sector. ATC, like other jobs, has other social tasks outside of work that require the ability to balance work and family or personal and social responsibilities (i.e., work-life balance). This research aims to test the role of emotional regulation in mediating the relationship between mindfulness and work-life balance among ATC officers. This research was conducted quantitatively. The data was collected through the work-life balance, emotion regulation, and mindfulness scales and was analyzed using structural equation modeling (SEM) operated through the JASP program version 16. 172 employees (59% males) involved in this research. Results showed that emotional regulation significantly mediates the relationship between mindfulness and work-life balance. This indicates that ATC officers with a mindful condition will consciously be able to direct their attention to focus on the current situation and role. This will affect ATC's ability to manage cognitively to provide emotional responses and express emotions according to the needs of the current situation in completing the role at hand and achieving work-life balance. This finding has implications on how management might assist ATC officers in improving work-life balance by enhancing emotional regulation skills and mindfulness.

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### Introduction

One of the professional jobs available in the service sector is air traffic controller (ATC). According to ICAO (International Civil Aviation Organization) in Annex 11, air traffic control officers provide service that aims to prevent collisions between aircraft and aircraft and other objects in the maneuver area as well as expedite and maintain smooth air traffic. In Indonesia, ATC officers work under the Public Corporation (Perum) of the Indonesian Navigation Service Provider, better known as AirNav Indonesia. To maintain the ability and performance of an ATC while working, the company routinely conducts evaluations regulated by International Civil Aviation Organization (ICAO) regulations.

The regulation controls the validity period of licenses, setting maximum working hours, working shift patterns, work positions, validity periods for medical documents, validity periods for ICAO English Language Proficiency (IELP) competencies, and rating validity periods (ICAO, 1993). ATC officers who work at airports that provide 24-hour non-stop

service are subject to a shift work pattern that is inseparable from the provisions stipulated in KP 287 of 2015. They also have to work in a specific work schedule comprising three shifts: morning, afternoon, and evening, which makes them prone to having problems managing work-life balance (Pearson, 2015).

As an individual, an ATC officer has other social roles outside of work. This role includes interactions with family, association with friends, and the community in the surrounding environment. An ATC officer can act as husband, wife, father, mother, child, or as a member of the community or group in the neighbourhood where he lives. These roles have different demands and obligations. Sometimes, those can go hand in hand, but they can also conflict with each other. This can become a problem when an ATC cannot balance their work with family or social environment demands.

Work-life balance is an effort made by an individual to balance the two or more roles he or she is serving (Fisher et al., 2009). According to Fisher et al. (2009), work-life balance is defined as a multidimensional construct of the use of time, energy, goal achievement, and tension in work and personal life. Fisher established four dimensions of work-life balance: work interference with personal life, personal life interference with work, work enhancement of personal life, and personal life enhancement of work. According to Poulou (2014), one factor influencing work-life balance is an individual's adaptive ability to recognize, express, regulate, and manage emotions in oneself and others. Researchers found that emotion regulation is useful for carrying out work effectively. Happy employees tend to have a positive work attitude, don't withdraw, and show productive work behaviour; they also become more successful than unhappy employees (Kassem & Kelly, 1970). Based on the results of a survey conducted on 72 ATC officers, 69.44% of them found it difficult to control their emotions. They also admit that they often feel restless, anxious, and unfocused at work and, at the same time, have to think about other roles outside of work that have not been completed. Facing those conditions, emotional regulation is an important skill for ATC officers to help them manage their job and personal lives.

Emotion regulation is a person's ability to assess, overcome, manage, and express appropriate emotions in order to achieve emotional balance. A high ability to manage emotions will enable individuals to deal with tension in their lives (Gross, 2014). According to Gross (2015), inappropriate emotional responses can lead individuals in the wrong direction. When emotions seem inappropriate to certain situations, individuals often try to regulate emotional responses so that these emotions can be more useful for achieving goals. Thus, we need a strategy that can be applied to deal with emotional situations in the form of emotional regulation that can reduce the experience of negative emotions and maladaptive behavior (Gross, 2015). Gross describes emotion regulation in the form of strategy, among others cognitive reappraisal, and expressive suppression (Gross & John, 2003).

According to Luberto et al. (2018), effective emotion regulation focuses on an individual's ability to regulate, restrain, and remove negative emotions that arise effectively. This ability can be increased through mindfulness. Mindful individuals are able to observe and assess the emotions they feel. Individuals are also more prepared to deal with unpleasant experiences (Roemer et al., 2015). Mindfulness causes individuals to be able to regulate emotions by the attention given to the individual's experience along with acceptance of the experience (Yusainy et al., 2019). Brown and Ryan (2003) define mindfulness as the presence of awareness that is inherent and involves experience from moment to moment. According to Baer et al. (2006), mindfulness is an increase in full awareness by focusing on current experiences (present-moment awareness) and acceptance without making a judgment (nonjudgemental acceptance). Mindfulness emphasizes awareness, making the individual fully aware of what is happening in the present moment. Brown and Ryan (2003) divided mindfulness into two aspects: attention and awareness. Conceptually, mindfulness is defined as increasing awareness and focusing on the "now and here" condition, which is carried out purposefully and non-judgmentally (Kabat-Zinn, 2018). Mindful individuals are able to

observe and assess the emotions they feel as well as deal with unpleasant experiences (Roemer et al., 2015).

Awareness of the emotions felt will increase if the individual has good mindfulness. With good emotional awareness, individuals can regulate emotions effectively so that they can reduce aggressiveness (Thohar, 2022). It is also predicted that difficulties in regulating emotions can hinder individual responses to situations due to increased negative emotions and a tendency to daydream. Individuals will find it difficult to focus attention, have difficulty thinking and acting, and have difficulty controlling themselves (Lokita et al., 2021). Mindfulness also can improve individual work-life balance. Past research found that individuals who practice mindfulness are satisfied with work-life balance (Althammer et al., 2021). A study proved that individuals who do mindfulness activities for only five to ten minutes will have better health, including cognitive, neurological and emotional aspects and make positive changes to their well-being (Grunwald, 2018). Thus, we expected that higher mindfulness would be related to a work-life balance and that the relationship would be mediated by emotional regulation.

Research on work-life balance among ATC officers is scarce, while research into it is very important as this profession is associated with a high level of focus and awareness. That way, this research will be important to help ATC officers and management develop strategies to improve work-life balance so that ATC officers can overcome obstacles that arise in work situations and the demands of the family and social environment. Thus, this study aimed to examine the role of emotional regulation in mediating the relationship between mindfulness and work-life balance in air traffic controllers.

## Method

### *Participants*

**Table 1**

*The Distribution of Study Participants*

	Frequency	Percentage
Gender		
Male	102	59.3%
Female	70	40.7%
Age		
26-30 years old	57	33.1%
31-40 years old	88	51.2%
41-50 years old	21	12.2%
>50 years old	6	33.5%
Education level		
High School	1	0.6%
D2	12	1.2%
D3	99	57.6%
D4	7	4.1%
S1	56	32.6%
S2	7	4.1%

**Table 1**  
(continued)

	Frequency	Percentage
Work period		
<10 years	113	65.7%
11-20 years	30	17.4%
21-30 years	25	14.5%
>30 years	4	2.3%
Marital status		
Married	153	89%
Not married	9	11%
Married period		
<10 years	138	80.2%
11-20 years	19	11%
21-30 years	13	7.6%
>30 years	2	1.2%

The population in this study were all ATC at Soekarno-Hatta International Airport, totalling 368 people. The sample in this study amounted to 172 employees (59% males) who were chosen through a simple random sampling technique. The majority of the participants have worked for 1 to 10 years, are between the ages of 31 and 40 years, have a diploma level of education and have been married for 1 to 10 years. See [Table 1](#).

### Instruments

This research used quantitative methods. Data was collected through scales with a Likert format. The scale used were the work-life balance scale compiled by Gunawan (2019) consists of 17 items. This scale aims to measure the dimensions of work-life balance proposed by Fisher (2009) including work interference with personal life, personal life interference with work, work enhancement of personal life, and personal life enhancement of work. The distribution of the items are showed in [Table 2](#). High and low reliability empirically indicated by a number called the value of the reliability. Reliability value of the work life balance scale indicated by CR values of 0.976 and VE 0.707, which means that the work life balance scale is classified as reliable (Gunawan, 2019).

**Table 2**  
*Distribution of Work-Life Balance Scale Items*

No	Dimensions	Number of items		Total
		Favourable	Unfavourable	
1.	WIPL	-	1, 2, 3, 4, 5	5
2.	PLIW	-	6, 7, 8, 9, 10, 11	6
3.	WEPL	12, 13, 14	-	3
4.	PLEW	15, 16, 17	-	3
Total		6	11	17

Note: WIPL= work interference with personal life; PLIW= personal life interference with work; WEPL = work enhancement of personal life; PLEW= personal life enhancement of work.

The emotion regulation scale was compiled by Radde et al. (2021). This scale consists of 10 items that aim to measure the aspects of emotion regulation proposed by Gross & John (2003), including cognitive reappraisal and expressive suppression. The distribution of the items is displayed in Table 3. The reliability test showed an  $\alpha$  value of 0.790 (Radde et al., 2021).

**Table 3**  
*Distribution of Emotion Regulation Scale Items*

No	Aspect	Number of items		Total
		Favourable	Unfavourable	
1.	Cognitive reappraisal	1,2,3,4,5,6	-	6
2.	Expressive suppression	7,8,9,10	-	4
Total		10	-	10

Fourteen items of mindfulness scale aims to measure mindfulness aspects which includes attention and awareness was used in this research. The scale was proposed by Brown and Ryan (2003) and adapted by researchers into Indonesian. The internal consistency (alpha) was 0,82 (Brown & Ryan, 2003). The The distribution of the items is presented in Table 4.

All scales were distributed to 172 participants who agreed to be involved in this research by signed in the informed consent. We also provided information related to the scale being distributed. After that, we carried out the scoring process on the scale that has been completed.

**Table 4**  
*Distribution of Mindfulness Scale Items*

No	Aspect	Nomor Aitem		Total
		Favourable	Unfavourable	
1.	Attention	11	2,3,4,5,6,8,13	8
2.	Awareness	12	1,7,9,10,14	6
Total		2	12	14

**Table 5**  
*Goodness-of-Fit Index*

No	The Goodness of the Fit Index	Cut off Value
1	X <sup>2</sup> chi-square	$\leq \alpha$ .df (less than Chi-square table)
2	Probability	$\geq 0,05$
3	GFI	$\geq 0,90$
4	AGFI	$\geq 0,90$
5	CFI	$\geq 0,95$
6	TLI	$\geq 0,95$
7	CMIN/DF	$\leq 2,0$
8	RMSEA	$\leq 0,08$

## Data Analysis

To test the hypothesis, we used the Structural Equation Modeling (SEM) which was operated through the JASP program version 16. Modelling research through SEM allows a researcher to measure the indicators of a concept and measure the influence or degree of relationship between factors whose dimensions have been identified. Analysis of the research data was planned using descriptive statistical Analysis and inferential statistics.

We used a two-step technique to analyze the data. The first step was measuring the variables through the Confirmatory Factor Analysis (CFA) technique in order to obtain the fitness of the combination of the exogenous and endogenous constructs. The CFA model can be accepted if it has a good validity and reliability model data match. The second step was to measure the structure of the full SEM model by combining the CFA model from combined exogenous and endogenous constructs that were fit into one overall model (hybrid model) or full model for estimation and Analysis. The model is considered as good or fit if it satisfies the overall model fit test or Goodness of fit test (Haryono, 2016).

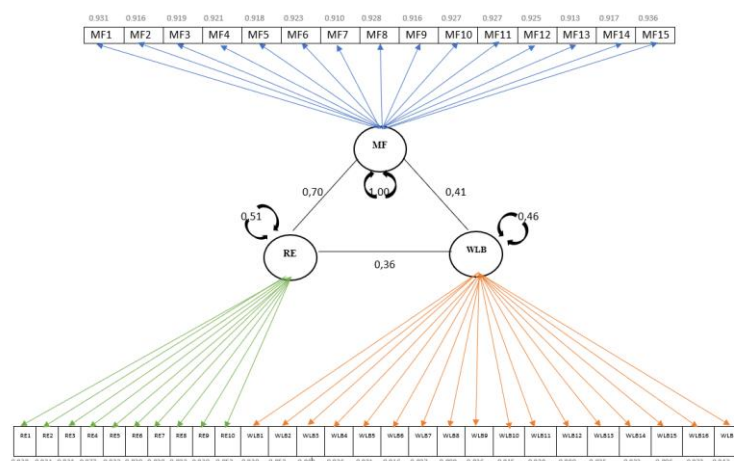
## Results

Based on the fit indexes presented in Table 5, it showed that the chi-square value was 1.000, the CFI value was 1.000, and the RMSEA was 0.0000, indicating that the model was fit. The results showed that mindfulness positively affects emotion regulation with a path coefficient value of 0.686 with a p-value <0.001. Thus, mindfulness has a positive and significant effect on emotional regulation at the air traffic controllers of Soekarno-Hatta International Airport. The results also showed that there are direct effects and indirect effect of mindfulness on work-life balance through emotional regulation. The magnitude of the direct effect of mindfulness on work-life balance was 0.41. Based on Nurbaiti (2022), we found that the magnitude of the indirect effect of mindfulness on work-life balance was  $0.70 \times 0.38 = 0.26$ . Meanwhile, the total effect of mindfulness on work-life balance was  $0.41 + 0.26 = 0.67$ .

A stronger relationship or a greater contribution to the results of the study was seen from the coefficients, where the direct effect was greater than the indirect effect. The magnitude of the path value of the direct effect of mindfulness on work-life balance was 41%, which was greater than the path value of the indirect effect that accounted for 0.26 with a contribution of 26%, so it can be concluded that the real influence was the direct effect. That is, there was a direct relationship between mindfulness and work-life balance.

**Figure 1**

*Path diagram based on SLF values and path coefficients*



The good nature of convergent validity is demonstrated by a standardised loading factor (SLF) value that surpasses 0.5, as recommended by Hair et al. (2010). The construct reliability (CR) measure is also a determining indicator that shows whether convergent validity is good or not. Hair et al. (2010) stated that a CR value  $\geq 0.7$  includes good reliability, while a CR value between 0.6 and 0.7 includes acceptable reliability, provided that the indicator variables show good validity. See Figure 1.

**Table 6**

*SLF Value Based on the Indicators on Mindfulness, Emotion Regulation, and Work-Life Balance Latent Variables*

Indicator	Standardized Loading Factor (SLF)
MF1	0.931
MF2	0.916
MF3	0.919
MF4	0.921
MF5	0.918
MF6	0.923
MF7	0.910
MF8	0.928
MF9	0.916
MF10	0.927
MF11	0.927
MF12	0.925
MF13	0.913
MF14	0.917
MF15	0.936
RE1	0.938
RE2	0.931
RE3	0.934
RE4	0.937
RE5	0.932
RE6	0.930
RE7	0.930
RE8	0.922
RE9	0.930
RE10	0.952
WLB1	0.930
WLB2	0.925
WLB3	0.943
WLB4	0.926
WLB5	0.921
WLB6	0.916
WLB7	0.927
WLB8	0.909
WLB9	0.936
WLB10	0.915

**Table 6**  
(Continued)

Indicator	Standardized Loading Factor (SLF)
WLB11	0.929
WLB12	0.890
WLB13	0.935
WLB14	0.922
WLB15	0.906
WLB16	0.923
WLB17	0.943

Notes: MF=Mindfulness, RE =Emotion Regulation, WLB= Work-Life balance

As presented in Table 6, it is known that the SLF value of all indicators of the latent variables of mindfulness, emotional regulation and work-life balance were above 0.5. This indicates all the latent were valid.

**Table 7**  
*Test the Significance of Direct and Indirect (Mediation) Influence*

Indicator	Standardized Loading Factor (SLF)	Error	SLF <sup>2</sup>	AVE	CR
MF1	0.931	0.134	0.867		
MF2	0.916	0.160	0.839		
MF3	0.919	0.155	0.845		
MF4	0.921	0.152	0.848		
MF5	0.918	0.158	0.843		
MF6	0.923	0.149	0.852		
MF7	0.910	0.172	0.828		
MF8	0.928	0.140	0.861	0.850	0.988
MF9	0.916	0.161	0.839		
MF10	0.927	0.141	0.859		
MF11	0.927	0.140	0.859		
MF12	0.925	0.144	0.856		
MF13	0.913	0.166	0.834		
MF14	0.917	0.159	0.841		
MF15	0.936	0.124	0.876		
RE1	0.938	0.119	0.880		
RE2	0.931	0.134	0.867		
RE3	0.934	0.128	0.872		
RE4	0.937	0.122	0.878		
RE5	0.932	0.132	0.869	0.871	0.985
RE6	0.930	0.135	0.865		
RE7	0.930	0.135	0.865		
RE8	0.922	0.151	0.850		
RE9	0.930	0.136	0.865		
RE10	0.952	0.094	0.906		
WLB1	0.930	0.134	0.865		
WLB2	0.925	0.145	0.856		
WLB3	0.943	0.111	0.889		
WLB4	0.926	0.143	0.857	0.853	0.990
WLB5	0.921	0.151	0.848		
WLB6	0.916	0.161	0.839		
WLB7	0.927	0.142	0.859		
WLB8	0.909	0.174	0.826		



**Table 7**  
(Continued)

Indicator	Standardized Loading Factor (SLF)	Error	SLF <sup>2</sup>	AVE	CR
WLB9	0.936	0.124	0.876		
WLB10	0.915	0.162	0.837		
WLB11	0.929	0.138	0.863		
WLB12	0.890	0.208	0.792		
WLB13	0.935	0.125	0.874	0.853	0.990
WLB14	0.922	0.149	0.850		
WLB15	0.906	0.178	0.821		
WLB16	0.923	0.147	0.852		
WLB17	0.943	0.110	0.889		

Notes: MF=Mindfulness, RE =Emotion Regulation, WLB= Work-Life balance

Hair et al. (2010) states that the AVE value  $\geq 0.5$  indicates adequate convergence. From the AVE measure, it is known that the AVE values of all scales were  $> 0.5$ , which means that those met the characteristics of good convergent validity. Meanwhile, based on the CR value, the CR values of all scales were  $> 0.7$ , which means that they met the characteristics of good convergent validity. See Table 7.

**Table 8**  
Overall Model Fit Test

Match size	Value	Benchmark value	Model fit data
P-Value Chi-Square	1.0000	$> 0.05$	Yes
RMSEA	0.0000	$< 0.1$	Yes
CFI	1.0000	$> 0.9$	Yes
NFI	0.956	$> 0.9$	Yes
RFI	0.954	$> 0.9$	Yes
SRMR	0.013	$< 0.1$	Yes

Based on Table 8, the results showed that the whole model has a good ability in terms of matching the sample data (i.e., good fit).

**Table 9**  
Test the Significance of Direct and Indirect (Mediation) Influence

Path	Path coefficient	P-value
MF -> RE	0.686	$< 0.001$
MF -> WLB	0.337	$< 0.001$
RE -> WLB	0.321	$< 0.001$
MF -> RE -> WLB	0.220	$< 0.001$

Notes: MF=Mindfulness, RE =Emotion Regulation, WLB= Work-Life balance

Table 9 showed that mindfulness has a positive and significant effect on emotion regulation, with the coefficient path value 0.686 ( $p < 0.001$ ) (hypothesis accepted). Mindfulness has a significant positive effect on work-life balance with a path coefficient value of 0.337 ( $p < 0.001$ ) (hypothesis accepted). Emotion regulation has a significant positive effect on work-life balance with a path coefficient value of 0.321 ( $p < 0.001$ ) (hypothesis accepted). The indirect path from mindfulness to work-life balance through emotional regulation was 0.220 ( $p < 0.001$ ); thus, emotional regulation mediates the

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relationship between mindfulness and work-life balance (hypothesis accepted). From the results of the data analysis, it is known that the R-Square value of emotional regulation was 0.487, which means that mindfulness was able to explain emotion regulation by 48.7%. Meanwhile, the R-Square value of work-life balance was 0.536, meaning that mindfulness and emotion regulation could explain work-life balance by 53.6%.

## Discussion

This study aims to test the effect of mindfulness on work-life balance through the mediation of emotion regulation. The results showed that mindfulness directly and indirectly affected work-life balance through emotional regulation. Align with Goleman (1998), mindfulness can be useful for identifying emotions and measuring them at a much deeper level of awareness (Brown et al., 2011). This indicates that ATC officers who are fully mindful would be able to process information cognitively and manage their emotions by thinking again before giving an emotional response to a certain situation. An ATC officer would be able to change their mindset before expressing their emotions and then act accordingly to the situation at hand. Those with a mindful condition would be able to express their emotions in accordance with the results of cognitive and emotional management that have been done before so that they can suppress excessive expressions that can appear in emotional conditions. They would be able to control their attention, which prevents them from having excessive emotional turmoil. With a mindful state, ATC officers also focus on solving current problems and not drag on negative emotions that arise. This would improve their performance because what is currently being done may be resolved quickly with focus and complete awareness, rather than repeating and remembering previous problems. Thus, ATC officers would be able to maximize their performance with mindful conditions and well-regulated emotions.

The results of this study support several previous studies that revealed that someone who has a high level of mindfulness would be able to observe better and display behaviour that is more appropriate to the situation at hand, not just in the form of an automatic response (Dzakiah & Widyasari, 2021). This is also in line with the results of a study conducted by Roemer et al. (2015), which showed a positive correlation between mindfulness and emotion regulation. When mindfulness increases, emotional regulation also increases, and vice versa. Individuals who practice mindfulness would have healthy emotional regulation, reduce distress intensity, restore emotional conditions, and direct the behaviour to be achieved.

Align with past research that found that individuals who practice mindfulness have a level of satisfaction with their work-life balance (Althammer et al., 2021), we found that mindfulness has a positive effect on work-life balance. This indicates that mindful ATC officers can consciously direct attention to overcome work distractions that are considered to interfere with personal life and vice versa. ATC officers will be able to deal with personal problems that can interfere with their role at work. Mindfulness, awareness, and attention are intertwined and related to one another to focus at one time and complete the demands of the ATC officers' role both in the work environment and other roles outside work.

In addition, ATC officers with a mindful condition would be able to direct their attention to maximizing personal abilities so that these abilities become resources that can be continuously updated to enrich individual work performance. Their full attention and awareness allow them to focus on utilizing personal skills and managing personal potential that can be utilized to support performance. And vice versa, a mindful ATC will consciously direct attention in doing work so that it has a good quality of work life and positively affects the quality of personal life. This is in line with previous research that found that individuals who do mindfulness activities for just five to ten minutes experience improvement in their well-being and health, including cognitive, neurological, and emotional aspects (Grunwald,

2018). Other studies have found mindfulness to be a critical issue, especially related to negative issues in the work environment, which can reduce employee performance in the field of customer service. The results of the study showed that employees with low mindfulness tend to have a strong relationship between work performance and feeling negative in their work environment (Babalola et al., 2019).

We also found that the regulation of emotions has a positive effect on work-life balance. This suggests that ATC officers with good emotional regulation abilities would be able to balance their work and personal lives. Those who are able to manage cognition and emotions would provide responses and expressions that are in accordance with the conditions of the role being faced, whether it is a role at work or other roles.

The ability to regulate emotions allows ATC officers to deal with problems that arise from both personal and work life. By practising emotional regulation, individuals can maintain a state of calmness when faced with challenges in their personal lives. This enables them to effectively address these issues without allowing them to impact their work life and vice versa negatively. ATC officers who are able to manage cognitively and provide appropriate responses and emotional expressions will continue to renew skills and potential to maximize roles at work and in their personal lives so that each role will enrich and benefit other roles. In other words, skills gained from work experience will benefit personal life and vice versa. This is in line with Poulouse & Susdarsan (2014) that good emotional regulation was associated with greater work-life balance. Other research conducted on women with multiple roles, namely housewives who also work as teachers, found that emotion regulation has a role in the quality of life of women with multiple roles. Women with the ability to regulate their emotions have a better work-life balance and quality of life (Siregar et al., 2019).

The results also showed that emotional regulation significantly mediates the relationship between mindfulness and work-life balance, indicating that ATC officers with a mindful condition will be able to direct their attention consciously to focus on the current situation and role. This will affect their ability to manage cognitively to provide emotional responses and express emotions according to the needs of the current situation in completing the role at hand. If all the roles encountered have been appropriately resolved, they can balance roles in work and others outside the work environment. With a mindful condition and a good emotional regulation process, every role faced has been completed and lived to the fullest so that no role can burden others.

The results of this study have implications on how organizations or counsellors can help employees maintain and improve their work-life balance by enhancing their ability to manage their emotions, particularly in facing conflicting roles between work and personal demands. Organization and counsellors can also assist ATC officer to improve their mindfulness to gain work-life balance in the first place. However, this study has limitations, including some items in all scales that might contain social desirability; for example, on the work-life balance scale, there is a statement mentioning that both at work and in an individual's personal life worsen because the two roles influence each other. On the emotion regulation scale, there is a statement mentioning an individual's emotional state when faced with a stressful situation. In addition, on the mindfulness scale, there is a statement that concludes that the individual does not focus on everything that is being done at the moment. Future researchers need to employ other data collection methods, such as interviews and observation, to confirm those items to avoid the tendency of participants to respond according to social or researcher expectations.

The other limitation was that this research was carried out within a limited period, so the researcher could not explore the real phenomenon at Soekarno-Hatta International Airport. Moreover, the research was only conducted at Soekarno-Hatta International Airport; thus limiting the generalisability of the results. Future studies could assess more diverse samples, such as ATC officers from different airports or employees at different companies or other professions. The majority of the subjects in this study were in the age range of 31-40

years, with a diploma level of education background and male sex, who had been married for 1-10 years and had worked for a period of 1 to 10 years. Compilation for different populations requires further research.

## Conclusion

Based on the study's results, it can be concluded that high mindfulness was associated with higher emotional regulation that, in turn, was related to work-life balance among ATC officers. Those with mindfulness will be able to regulate their emotions and consequently achieve a balance in their role both in the work environment and outside. Management can assist ATC officers in achieving work-life balance by enhancing their emotional regulation skills, particularly when confronted with negative work or personal or domestic obligations, or by fostering their mindfulness, which enables them to effectively balance their professional and personal lives.

## Acknowledgment

The authors express gratitude to the employees of Perum Airnav Indonesia for their participation in this study.

## Declarations

**Author contribution.** The first author contributed to designing the study, collecting data, and writing the draft manuscript. Second and third authors contributed to supervising study design, consulting data analysis, reviewing manuscripts, and finalizing manuscripts.

**Funding statement.** This research was conducted without external funding support

**Conflict of interest.** The authors declare no conflict of interest.

**Additional information.** No additional information is available for this paper.

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