

## Indirect Effect of Quality of Work Life on the Relationship Between Safety Climate and Absenteeism: The Case of University Hospital \*

<sup>1</sup>Mesut Ardiç, <sup>2</sup>Nilüfer Ceren Aydın, <sup>3</sup>Merve Can-Develi

### ABSTRACT

#### Keywords:

*Safety Climate,  
Absenteeism,  
Quality Of Work Life,  
Health Workers,  
Health Management.*

This study aims to determine the relationship between the safety climate perceptions of health workers, and their absenteeism, with the mediating role of the quality of work life. This relational study was conducted in a university hospital in Tokat, Turkey its sample consisted of 252 healthcare professionals. The data were collected by convenience sampling method and online questionnaire and analyzed through statistical programs. Within the scope of the purpose of the research, the perception of the security environment makes a positive contribution to the explanation of the quality of work and life ( $B=.607$ ), the established H1 hypothesis was supported. The negative contribution of the quality of work life to the explanation of absenteeism at work ( $B = -.547$ ), the established H2 hypothesis was supported. The negative contribution of the security environment to workplace absenteeism ( $B = -.097$ ) the established H3 hypothesis that it does this has not been supported. As the most important finding, the mediating role of work life quality in the effect of health workers' perceptions about the security environment on their absences ( $\beta = -.338$ ) has been determined. The H4 hypothesis put forward in this context has also been supported. To reduce the absenteeism behavior, it has been recommended to make improvements to increase the safety climate perceptions and work life quality of the employees.

### INTRODUCTION

It has been acknowledged that one of the most basic elements that make organizations successful is human power. Therefore, it is noteworthy that employees act in parallel with the aims of the organisation in terms of achieving organisational goals. However, depending on individual or organizational factors, employees may exhibit behaviours contrary to the goals of the organization. These behaviours can lead to a decrease in employee performance, absenteeism or the thought of leaving the job (Şahin, 2011). These negative situations

\* This article is an extended version of the oral paper presented at the “5th International 15th National Health and Hospital Management” Congress held on October 13-15, 2022.

<sup>1</sup> Assistant Professor, Erbaa Faculty of Health Sciences, Tokat Gaziosmanpaşa University, Department of Health Management. Tokat, Turkey Email: [mesut.ardic@gop.edu.tr](mailto:mesut.ardic@gop.edu.tr) (Corresponding Author)

<sup>2</sup> Lecturer, Erbaa Faculty of Health Sciences, Tokat Gaziosmanpaşa University, Erbaa Vocational School of Health Services, Department of Medical Services and Techniques, Email: [niluferceren.aydin@gop.edu.tr](mailto:niluferceren.aydin@gop.edu.tr)

<sup>3</sup> Lecturer, Erbaa Faculty of Health Sciences, Tokat Gaziosmanpaşa University, Erbaa Vocational School of Health Services, Department of Medical Services and Techniques, Email: [merve.candeveli@gop.edu.tr](mailto:merve.candeveli@gop.edu.tr)

contradict the basic objectives of organizations, such as make a profit, growth, efficiency and sustainability. It has been determined that employees exhibiting absenteeism behavior in particular may cause serious problems in organizations.

The shortest definition of the concept of absenteeism is not coming to work (Robbins & Judge, 2021). In other words, it is defined as not being present at the place of study for a planned study (Kristensen et al., 2006). This situation is an important source of anxiety that exposes service recipients and employees to stress in health institutions (Donovan et al., 2008). According to the studies conducted on this topic, two types of absenteeism behaviours emerge: excused and nonexcused (Birioukov, 2015; Driver & Watson, 1989; Ramsey et al., 2008; Steers & Rhodes, 1978). Excused absence from work is a situation in which the excuse offered by the employee to not come to work is accepted by the organization. Health problems can be considered an example of this type of absenteeism. It is known that in the case of absenteeism without excuse, motivation and job satisfaction, which are important determinants of employees' emotional states, decrease (Ramsey et al., 2008).

A security one can characterize the climate as a reflection of the holistic perception of the employees about the organization for which they work and the common perception of managerial approaches related to security (Zohar, 1980). The concept can be described as employees' perceptions of the security existing in the organization when they feel at risk (Ceyhun, 2014). In addition, the concept of work life quality, which expresses the general satisfaction levels of employees in their work and life, emphasizes the improvement and development of not only the material needs of employees but also the intangible needs of employees (Martel & Dupuis, 2006). Work quality significantly contributes to organizations by increasing employee satisfaction, reducing absenteeism, and helping employees better manage changes and transitions in the organization (Saraji & Dargahi, 2006). Increasing the quality of work life and ensuring the safety of the working environment, especially in labour-intensive health institutions, are crucial for employees to provide more careful, high-performance and quality health services (Catak & Bahcecik, 2015).

As a matter of fact, numerous studies have been conducted to understand the reasons behind employee absenteeism. Although previous studies have reached a certain level, it has been determined that some antecedents of absenteeism, especially in health institutions, have not yet been taken into account in the literature reviews. Within this context, it was predicted in this study that the perception of the safety climate in the organization and the quality of work life would be the determinants of absenteeism. The reasons for this prediction are related to

past studies that address the concepts of safety climate, quality of work life and absenteeism separately and in limited numbers as binary variables (Demir, 2011; İsmail & Nyarko, 2014; Stefano et al., 2014)).

The relationships envisaged in terms of the conceptual model of the research are to determine how the effect of the perceptions of safety climate on the absenteeism of individuals working in health institutions is realised through the variable of quality of work life. The theoretical point of view in determining this model is that there has been a considerable need within the scope of the studies that examine the related concepts holistically in terms of direct and indirect relations. There are some issues in the background of the construction of relevant research models specific to health institutions. The first of these issues is that health institutions are institutions that have a high probability of occupational accidents and include the risk of life safety due to infectious diseases or physical attacks. Second, the work carried out in health institutions is vital because of the situation, and therefore, there is no chance of delay or postponement related to the work.

This study was planned to contribute to the working life of safety climate, quality of work life and absenteeism variables in healthcare organizations. Based on this, the research problem is stated as; “How do high-risk work environments in healthcare organizations and the effects of these environments on the perception of safety climate affect the absenteeism rates of employees?” In particular, it was investigated to determine the mediating role of health care workers' perception of safety climate and quality of work life on absenteeism behaviors, and in this context, what are the effective strategies and practices to reduce absenteeism and improve quality of work life in health care institutions.

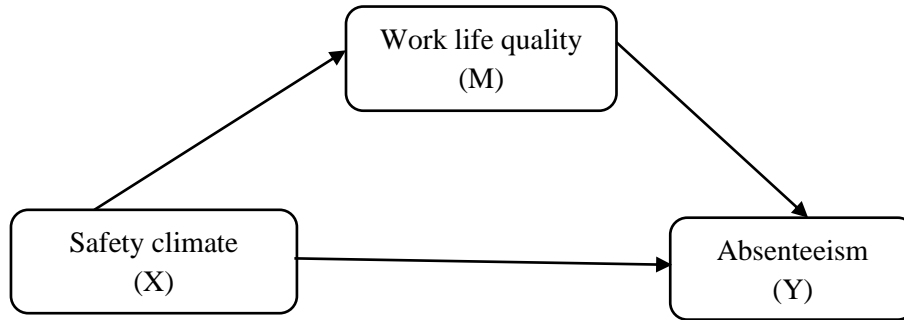
As a result, the study's research question is whether there is a direct or indirect relationship between the perception of safety climate, quality of work life and absenteeism. The research hypotheses created in the context of this research question are as follows:

**H<sub>1</sub>:** The perception of safety climate contributes positively to explaining quality of work life.

**H<sub>2</sub>:** Quality of work life contributes negatively to explaining absenteeism.

**H<sub>3</sub>:** The perception of safety climate contributes negatively to explaining absenteeism.

**H<sub>4</sub>:** The quality of work life has a mediating role in the effect of safety climate perception on absenteeism.



Source: Authors Developed

## METHODOLOGY

### *Sample*

The research was carried out in a university hospital in Tokat period May 2022 - August 2022. The population of the research consisted of workers who were affiliated with a university hospital (n = 470). In this study, all healthcare workers were tried to be reached before calculating the sample and the sample consisted of 252 healthcare workers (n = 252) who agreed to study (53.61%). As a general rule, variable movements are at least 5 times or even 10 times their own size (Karagöz& Kösterelioğlu 2008; Büyüköztürk, et al., 2014; Tavşancıl, 2006).

### *Tools for collecting data*

Participant information form, which constitutes the first part of the study, consists of 5 questions including demographic characteristics (age, gender, educational status, tenure, etc.). In this study, the Absenteeism Perception Scale which was developed by Dubey and Dasgupta (2015) was used to measure the perception of absenteeism (Dubey & Dasgupta, 2015). The scale consists of 18 items and a 5-point Likert-type scale was used (1 = Strongly disagree, 5 = Strongly agree). The Turkish adaptation of the scale was conducted by Avcı (2019) (Avcı, 2019). Within the framework of this study, reliability and validity analyses were conducted by the researchers and Cronbach's alpha coefficient was found to be 0.86. Another scale within the scope of the study is the quality of work life scale created by Walker et al. (2009), which consists of 15 items and Turkish adaptation studies were conducted by Aba (2009) (Walker et al., 2009; Aba, 2009). Cronbach's alpha coefficient is 0.86. Within the scope of this study, validity and reliability analyses were performed by the authors. The last measurement tool of the study, the Safety Climate Scale, was developed by Choudhury et al. (2009) and adapted into Turkish by Türen et al. (2014) (Choudhry et al., 2009; Türen et al., 2014). The Safety Climate Scale consists of a total of 14 items on a 5-point Likert-type scale.

In this study, Cronbach's alpha value was found to be 0.94. Within the scope of the study, validity and reliability analyses were performed by the authors.

### **Statistical analysis**

Validity analyses of Absenteeism Scale, Quality of Work Life Scale and Safety Environment Scale were performed. Reliability analysis was performed for internal consistency analysis. Correlation and regression analyses were performed for hypothesis testing. Descriptive statistics were used to analyse individual characteristics. The absenteeism scale consists of 18 statements and as a result of the second level confirmatory factor analysis (CFA), the statements (statements 1, 2 and 7) that violated the fit index were removed from the scale. The quality of life scale is a structured questionnaire consisting of 15 items and three sub-dimensions, and as a result of the first level confirmatory factor analysis (CFA), the statements that disrupted the fit index (statement 2) were removed from the scale.

### **Evaluation of the Measurement Model**

The results of the second level confirmatory factor analysis strategies for absenteeism, quality of working life and safety climate in the health sector as a whole are given in Table 1. Table 1 shows the statistical values evaluating the consistency of the second-order confirmatory factor analysis model and its excellence in the sample of healthcare workers. As a result of the second-order confirmatory factor analysis (CFA), the only statement (statement 11) that violated the fit index in the Safety Climate scale was removed from the scale. Table 1 Model Fit Indexes.

**Table 1 Model Fit Indexes**

Compatibility Index	Acceptable Indexes	Model Indexes
CMIN	Minimum	1411,626
DF	-	783
$\chi^2/df$	$X^2/DF \leq 3$	1,803
IFI	$0,90 \leq IFI < 0,95$	,903
CFI	$0,90 \leq CFI < 0,95$	,902
RMSEA	$0,05 < RMSEA < 0,08$	,057
SRMR	$0,05 \leq SRMR \leq 0,08$	,076

Notes: ( $\chi^2$  and  $\chi^2/df$ ) = chi-square statistics; IFI = incremental fit index; RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardized root mean square residual (Karagöz, 2016).

## ANALYSIS

### *Findings Related to the Correlation Analysis*

In this study, correlation analysis was used to determine the relationship or severity of the relationships between safety climate and absenteeism and quality of work life. The results obtained are summarized in Table 2. According to the table, there is a significant and negative relationship between safety climate and absenteeism ( $r = -0.437$ ) and between safety climate and work life quality ( $r = 0.563$ ). There was a significant negative relationship between absenteeism and quality of work life ( $r = -0.656$ ).

**Table 2 Correlation Coefficients For Variables**

	1	2	3
1- Safety Climate	1		
2- Absenteeism	-437**	1	
3-Work Life Quality	563**	-656**	1

Notes: \*\*Correlation is significant at the 0.01 level (2-tailed).

### **The Mediating Role of Work Life Quality in the Relationship between Safety Climate and Absenteeism**

To test whether quality of work life plays a mediating role in the effect of the safety environment on absenteeism, bootstrap regression analysis was performed with the SPSS Process Macro module, and the results of the analysis are shown in Table 3.

**Table 3 Bootstrap Regression Analysis Findings With The Process Module**

	Work Life Quality (M)			Absenteeism (Y)		
	B	LLCI	ULCI	B	LLCI	ULCI
Model						
Safety Climate (X)	.607***	.496	.717	-.097	-.208	.014
Work Life Quality (M)	-	-	-	-.547***	-.651	-.444
Model summary	$R^2 = .317$			$R^2 = .436$		
	$F_{(sd = 1.250)} = 116.265, p < .001$			$F_{(sd = 2.249)} = 96.393, p < .001$		
Safety Climate → Absenteeism (Total Effect)	$\beta = -.043, \%95 \text{ BCA CI } [-.539, -.319]$					
Safety Climate → Absenteeism (Direct Effect)	$\beta = -.097, \%95 \text{ BCA CI } [-.208, .014]$					
Safety Climate → Absenteeism (Indirect Effect)	$\beta = -.332, \%95 \text{ BCA CI } [-.455, -.220]$					
Safety Climate → Absenteeism (Special Indirect Effect)	$\beta = -.338, \%95 \text{ BCA CI } [-.449, -.235]$					

Notes: ULCI (Upper limit of confidence interval), LLCI (Lower limit of confidence interval), B (Nonstandardized B).

The study tested whether quality of work life was a mediating variable by a four-stage multiple regression analysis method. In this analysis, first, the effect of the independent variable on the mediator variable was examined.

In the second step, the relationship between the independent variable and the dependent variables is examined. In the third stage, the independent variable and the mediator variable are jointly analyzed, and the impact on the dependent variables is scrutinized, if the outcomes are significant in the first two stages. The variable in the model is regarded as an intermediate variable if the independent variable's influence on the dependent variable has either vanished or has diminished. (Zhao et al., 2010).

The analysis revealed that safety climate significantly and negatively affected absenteeism ( $b = -0.4290$ , 95% CI [LLCI = -0.5391, ULCI = -0.3189],  $t = -7.6746$ ,  $p < 0.01$ ). According to the results of this analysis, the total effect of safety climate on absenteeism was 43% ( $R^2 = 0.4290$ ). The direct effect of Safety Climate on Absenteeism was 54%, and this effect was significant and negative ( $b = -0.097$ , 95% CI [LLCI = -0.2083, ULCI = -0.0145], Boot,  $p < 0.01$ ).

Because of the bootstrap regression analysis performed to test whether quality of work life plays a moderating function in the effect of Safety Climate on absenteeism, since the 95% confidence interval of the indirect effect bootstrap method does not contain zero (0), Safety Climate has revealed that quality of work life has a significant mediating role in its effect on absenteeism (Table 3). ( $b = -0.332$ , 95% CI [BootLLCI = -0.455, BootULCI = -0.220],  $p < 0.01$ ). The mediation effect is close to high ( $R^2 = -0.338$ ). In light of these findings, H4 was accepted. Regarding the effect size of the mediator variable, Preacher and Kelley, a fully standardized effect value close to 0.34 indicates a high effect, close to 0.9 shows a medium effect, and close to 0.1 indicates a low effect (Preacher & Kelley, 2011).

## DISCUSSION

The study was carried out with the thought that quality of work life may be a mediating variable in the effect of the perception of safety climate on absenteeism. In fact, significant results were obtained in the examinations. In other studies investigating the reasons for absenteeism, the lack of a safe environment at work has been shown to be one of the reasons for absenteeism (Kandemir, 2014). Within the scope of the purpose of the research, the perception of the security climate contributes positively to explaining the quality of work and life ( $B = .607$ ); the established H<sub>1</sub> hypothesis was supported. This result is similar to that of a study that tested the same research hypothesis in the literature (Ismail & Nyarko, 2014). The

negative contribution of quality of work life to the explanation of absenteeism at work ( $B = -.547$ ) and the established  $H_2$  hypothesis were supported. Again, this result is the result of a study that tested the same research hypothesis (Stefano et al., 2014). On the other hand, regarding the negative contribution of the security climate to absenteeism at work ( $B = -.097$ ), the established  $H_3$  hypothesis that he did this has not been supported. This result differs from the results of some studies in the literature (Bronkhorst & Vermeeren, 2016).

The results of the analysis revealed the mediating role of quality of work life in the impact of health workers' perceptions of the security climate on their absenteeism ( $\beta = -.338$ ).  $H_4$ , which was established in this context, was supported. As a unique result of the study, this study showed that the perception of an increasing security climate will also increase the quality of work life and reduce the absenteeism of employees.

Considering that this study consists of people working in a university hospital in a province of Turkey, it is obvious that there are limitations in generalizing the results of this study to all employees in the health sector. In addition, in future studies to be conducted within the scope of this subject, the use of observation and interview techniques in addition to the survey technique as a data collection method will help to obtain deeper and more valuable information.

In this study, it was determined that quality of work life has a mediating role in the effect of health workers' perceptions of safety climates on their absenteeism. From this point of view, to reduce absenteeism behaviour, which causes significant losses in organizations, managers need to engage in activities that increase employees' perceptions of safety climate and work quality. In this respect, occupational health and safety training can be given to employees at certain intervals in the organization. Working conditions should be improved, especially considering the intense tempos and long working hours in the healthcare sector. Solutions such as flexible working hours or shift arrangements may be considered. Improving personal relationships in the work environment can help employees feel safer at work. Communication and support systems within the team should be strengthened. Reviewing wages and leave policies can improve employees' quality of work life. Fair compensation and adequate leave periods can increase employee satisfaction and retention. Regular surveys and feedback can be collected to determine employees' perceptions of the safety climate and working condition. Managers must play an active role in the conditions of the safety climate. It is important to listen to employees' concerns, create a safe environment, and adopt a management style. Motivational and stress-reducing programs for employees can improve the quality of work



life. Psychological support services or stress management programs can be offered. Such measures can reduce absenteeism rates and provide a healthier work environment by improving both employees' perception of safety and overall quality of work life. Steps taken in this regard can increase the efficiency of healthcare institutions and employee satisfaction in the long run and may further improve healthcare workers' perception of safety climate and quality of work life, thus providing a broader approach to reducing absenteeism rates.

## REFERENCES

- Aba, G. (2009). *The relationship between quality of work life and motivation: An application in the health sector* [Unpublished master's thesis], Akdeniz University Institute of Social Sciences.
- Avcı, M., (2019). *Regarding flexible working arrangements of employees, the effect of attitudes on perceptions of attention to work* [Unpublished Master's Thesis], Gazi University Social Sciences Institute.
- Birioukov, A. (2015). Beyond the excused/unexcused absence binary: classifying absenteeism through a voluntary/involuntary absence framework. *Educational Review*, 68(3), 340-357. <https://doi.org/10.1080/00131911.2015.1090400>
- Bronkhorst, B., & Vermeeren, B. (2016). Safety climate, worker health and organizational health performance. *International Journal of Workplace Health Management*, 9(3), 270-289. <https://doi.org/10.1108/ijwhm-12-2015-0081>
- Büyükoztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2008). Bilimsel araştırma yöntemleri. Ankara: Pegem Akademi
- Catak, U., & Bahcecik, D. (2015). Determination of nurses' quality of work life and influencing factors. *Journal of Marmara University Institute of Health Sciences*, 5(2), 85-95. <https://doi.org/10.5455/musbed.20150309010354>
- Ceyhun, G. Ç. (2014). The impact of safety climate and work-family conflict on fatigue: a survey on Turkish marine pilots. *Journal of Business Research Turk*, 6(2), 91-105
- Choudhry, R. M., Fang, D., & Lingard, H. (2009). Measuring Safety Climate of a Construction Company. *Journal of Construction Engineering and Management*, 135(9), 890-899. [https://doi.org/10.1061/\(asce\)co.1943-7862.0000063](https://doi.org/10.1061/(asce)co.1943-7862.0000063)
- Demir, M. (2011). Relationships between Employees' Perceptions of Quality of Work Life, Intent to Remain with the Organization and Employee Absenteeism. *Ege Academic Review*, 11(3), 453-464.
- Donovan, T. L., Moore, K. M., & VanDenKerkhof, E. G. (2008). Employee absenteeism based on occupational health visits in an urban tertiary care Canadian hospital. *Public Health Nurs*, 25(6), 565-575. <https://doi.org/10.1111/j.1525-1446.2008.00744.x>
- Driver, R. W., & Watson, C. J. (1989). Construct validity of voluntary absenteeism. *Journal of Business and Psychology*, 4 (1): 109-118
- Dubey, K., & Dasgupta, P. (2015). A study on absenteeism & its correlation with job satisfaction with special reference to it sector. *Global Journal of Commerce & Management Perspective*, 4(3), 23-38.
- Ismail, U. F. F., & Nyarko, M. A. K. (2014). Safety climate as a predictor of quality of worklife: An empirical study among miners in Ghana. *European Journal of Business and Management*, 6(18), 107-116.
- Kandemir, A. (2014). *Investigation of absenteeism and absenteeism behavior among hospital workers due to health problems and the factors affecting its cost*. [Unpublished Master's Thesis], Hacettepe University Institute of Social Sciences

- Karagöz, Y. & Kösterelioğlu İ. (2008). İletişim Becerileri Değerlendirme Ölçeğinin Faktör Analizi Metodu İle Geliştirilmesi. *Dumlupınar Üniversitesi Sosyal Bilimler Dergisi*, 21, 81-97.
- Karagöz, Y. (2016). *SPSS and AMOS applied scientific research methods and publication ethics*. Nobel Publication.
- Kristensen, K., Jørn Juhl, H., Eskildsen, J., Nielsen, J., Frederiksen, N., & Bisgaard, C. (2006). Determinants of absenteeism in a large Danish bank. *The International Journal of Human Resource Management*, 17(9), 1645-1658. <https://doi.org/10.1080/09585190600878527>
- Martel, J.-P., & Dupuis, G. (2006). Quality of Work Life: Theoretical and Methodological Problems, and Presentation of a New Model and Measuring Instrument. *Social Indicators Research*, 77(2), 333-368. <https://doi.org/10.1007/s11205-004-5368-4>
- Preacher, K. J., & Kelley, K. (2011). Effect size measures for mediation models: quantitative strategies for communicating indirect effects. *Psychol Methods*, 16(2), 93-115. <https://doi.org/10.1037/a0022658>
- Ramsey, J., Punnett, B. J., & Greenidge, D. (2008). A social psychological account of absenteeism in Barbados. *Human Resource Management Journal*, 18(2), 97-117. <https://doi.org/10.1111/j.1748-8583.2007.00053.x>
- Robbins, S. P. & Judge, T. A. (2021). *Organizational behavior*. (Updated eighteenth edition). Pearson.
- Şahin, F. (2011). The predictors, consequences, and importance of absenteeism for organizations. *Niğde University Journal of the Faculty of Economics and Administrative Sciences*, 4(1), 24-39.
- Saraji, G. N., & Dargahi, H. (2006). Study of quality of work life (QWL). *Iranian Journal of Public Health*, 35(4), 8-14.
- Steers, R. M., & S. R. Rhodes. (1978). Major influences on employee attendance: A process model. *Journal of Applied Psychology*, 63(4), 391-407.
- Stefano, N. M., Vergara, L. G. L., Godoy, L. P., & Freitas, M. C. D. (2014). Quality of work life (QWL) and absenteeism index (AI) in a small business. *Latin American Applied Research*, 44(4), 363-367.
- Tavşancıl, E. (2006). *Tutumların ölçülmesi ve SPSS ile veri analizi*. (3. Baskı). Ankara: Nobel.
- Türen, U., Gökmen, Y., Tokmak, İ., & Bekmezci, M. (2014). The reliability and validity of safety climate scale. *Suleyman Demirel University Journal of Faculty of Economics & Administrative Sciences*, 19(4), 171-190.
- Walker, B., Cheney, D., & Stage, S. (2009). The validity and reliability of the self-assessment and program review: Assessing school progress in schoolwide positive behavior support. *Journal of Positive Behavior Interventions*, 11(2), 94-109. <https://doi.org/10.1177/1098300708322445>
- Zhao, X., Lynch Jr, J. G., Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), 197-206. <https://doi.org/10.1086/651257>
- Zohar, D. (1980). Safety climate in industrial organizations: Theoretical and applied implications. *Journal of Applied Psychology*, 65(1), 96-102. <https://doi.org/10.1037/0021-9010.65.1.96>