Citation: Nikbakht Jarghouyeh, M., Mehrmanesh, H., & Hosseini, S. H. (2024). Designing a Measurement Model for Perceived Organizational Ruthlessness and Explaining Its Impact on Organizational Performance with a Strategic Approach (Case Study: Textile Industry of Isfahan Province). *Digital Transformation and Administration Innovation*, 2(1), 10-17.

Received: date: 2023-11-05

Accepted: date: 2023-12-22

Published: date: 2024-01-01



Designing a Measurement Model for Perceived Organizational Ruthlessness and Explaining Its Impact on Organizational Performance with a Strategic Approach (Case Study: Textile Industry of Isfahan Province)

Mohammad Nikbakht Jarghouyeh¹, Hasan Mehrmanesh², Seyed Hasan Hosseini³

2. Assistance Professor, Department of Industrial Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran

3. Associate Professor, Department of Management, Imam Ali University, Tehran, Iran

*Correspondence: has.mehrmanesh@iauctb.ac.ir

Abstract

This study aims to design a measurement model for perceived organizational ruthlessness and to explain its impact on organizational performance with a strategic approach in the textile industry of Isfahan Province. This study employs a mixed-methods approach. In the qualitative phase, 13 university professors and senior managers from the textile industry were selected through purposive snowball sampling. Open and semi-structured interviews were conducted, and data were analyzed using Strauss and Corbin's grounded theory method. In the quantitative phase, a sample of 344 individuals from a population of 2,554 was selected based on Cochran's formula. To test the model developed in the qualitative phase and examine its impact on organizational performance, research instruments (questionnaires) were used, and the data were analyzed using structural equation modeling (SEM) with LISREL software. The concepts were identified in six dimensions: factors influencing perceived organizational ruthlessness (causal conditions), the structure of perceived organizational ruthlessness (central phenomenon), contextual factors affecting perceived organizational ruthlessness (contextual conditions), intervening factors influencing perceived organizational ruthlessness (outcomes), forming the research model. The quantitative phase examined the impact of strategies for mitigating perceived organizational ruthlessness. The research was confirmed at a 95% confidence level. In other words, based on the research hypothesis, strategies for mitigating perceived organizational ruthlessness have a direct and positive impact on organizational performance in the textile industry of Isfahan Province.

Keywords: Perceived organizational ruthlessness, organizational performance, strategic approach, textile industry.

1. Introduction

The success of an organization appears to be dependent on the performance of its employees and elites. Bernardin et al. (1995) assert that performance should be defined as work outcomes, as these outcomes have the strongest linkage to strategic objectives, customer or client satisfaction, and financial revenues (Hera et al., 2024). Moreover, attracting and employing

^{1.} PhD Student in Industrial Management, Major Strategy, Department of Industrial Management, Central Tehran Branch, Islamic Azad University, Tehran, Iran

talented employees in appropriate positions can lead an organization to high performance and create a competitive advantage (Midhat, 2021). Effective human resources are the primary factor in sustaining success and achieving organizational goals. Human resources are considered the main asset in all organizations, whether manufacturing, service-oriented, or military. However, organizations focus on job satisfaction, high commitment, stakeholder satisfaction, and the quality of services provided. In the current competitive environment, where continuous change and innovation are the dominant features, only Page | 11 those organizations that recognize the strategic role of their human resources and possess skilled, knowledge-based, competent,

elite, and capable employees will achieve excellence (Rahimi et al., 2024).

Additionally, in the context of career progression, organizational support for development or backing refers to the programs, processes, and assistance that an organization provides to enhance the success of its employees' career advancement. Organizational efficiency is contingent on human resource efficiency, and human resource efficiency depends on employee training, knowledge and skill development, and perceived organizational support (Ebrahimi et al., 2012). Therefore, from a strategic perspective on human resource management, identifying the factors influencing effective relationships between managers and employees must be designed dynamically and flexibly according to organizational conditions and rapid environmental changes. Thus, this can be recognized as a crucial function in human resource management, playing a significant role in employee motivation and performance (Abbas & Kumari, 2023; Emon et al., 2024).

Currently, various concepts address the improper behavior of organizations toward employees, and a substantial body of literature has focused on unfair behaviors such as discrimination (Goldman et al., 2006), improper supervision (Tepper, 2007), insults, violence, and employee mistreatment (Aquino & Thau, 2009). These behaviors are referred to as the "dark aspects" of the employee-organization relationship (EOR) (Griffin & O'Leary-Kelly, 2004), emphasizing employees' negative perceptions of their relationship with their employer-particularly when employees perceive callousness and malevolence in their employer's behavior.

Research on the employee-organization relationship (EOR) is primarily based on social exchange theory and the norm of reciprocity, as well as the inducement-contribution model, which serve as foundations for describing and categorizing different EORs and their consequences for employees' attitudes and behaviors. A key takeaway from this research supports the claim that social exchange relationships (e.g., perceived organizational support, fulfillment of psychological contracts, overinvestment, and mutual employer investment approaches in EOR) yield positive benefits for individuals and organizations. However, a domain within EOR literature that has received significantly less theoretical and empirical attention is negative relationships, in which employees perceive their relationship with the organization as harmful (DiGirolamo & Tkach, 2019; Eisenberger et al., 1986; Seemann et al., 2020).

Several definitions of the term "ruthlessness" (or oppression) exist. However, the central theme across these definitions is the distress experienced, with two key characteristics: its unnecessary nature and its intentionality. When employees perceive behavior as deliberate, unnecessary, and harmful, they view the organization as ruthless (oppressive). Thus, perceived organizational ruthlessness (POC) can be defined as "employees' perception that the organization humiliates them, does not regard their personal dignity, and intentionally treats them in an inhumane manner."

The literature on perceived organizational ruthlessness (POR) and related constructs such as organizational cynicism and psychological contract breach has gained increasing attention in recent years. Topcu et al. (2017) explored the relationship between general and organizational cynicism among healthcare professionals. Their findings revealed that while healthcare professionals exhibited high general cynicism, their organizational cynicism scores were comparatively lower, with physicians reporting the highest levels of cynicism, followed by nurses and midwives (Sarvi et al., 2017). Aslam et al. (2016) investigated the destructive effects of perceived organizational ruthlessness on organizational change and organizational cynicism among employees in public sector organizations. Their results indicated that perceived organizational ruthlessness significantly influences withdrawal behaviors and job satisfaction, with notable interactive effects. In the Iranian context, no direct studies have addressed perceived organizational ruthlessness. However, related studies have explored overlapping constructs such as organizational cynicism, workplace injustice, and psychological contract breach (Aslam et al., 2016). Ameri Manesh and Ghorbani (2017) examined the relationship between organizational cynicism and employee performance in a specialized cardiovascular hospital, concluding that increased cynicism negatively affects employee performance. Sarvi et al. (2017)

studied the impact of organizational cynicism on resistance to change among municipal employees, showing significant effects on cognition, emotions, and behaviors, with cynicism being a major predictor (Ameri Manesh & Ghorbani, 2017).

The textile industry is considered a profitable and strategic sector in Isfahan Province. However, excessive imports, economic stagnation, value-added tax policies, high interest rates on loans, and banking penalties have severely impacted the industry, placing textile factories in a critical situation. This study expands the ontology of perceived organizational ruthlessness, an underexplored concept in organizational research. Additionally, it introduces a model based on indigenous Page | 12 organizational indicators for measuring perceived organizational ruthlessness in organizations. The study raises the question of whether it is time to pay more attention to this issue and consequently implement structural changes in organizations, altering the relationships between employees and employers in Iranian organizations. Alternatively, the study may help clarify the ambiguous boundaries of attention to this phenomenon and explain its dimensions.

Furthermore, this research develops a model for measuring perceived organizational ruthlessness using a qualitative approach and implements the proposed model to examine its impact on organizational performance. This aspect is particularly significant for managers in the textile industry in their strategic planning efforts. Additionally, the study aims to provide practical insights and offer applicable solutions that can be utilized for organizational benefits. Therefore, the need for research on this topic is evident. Accordingly, this study has been conducted to design a model for measuring perceived organizational ruthlessness and to explain the impact of strategies aimed at mitigating organizational ruthlessness on organizational performance in the textile industry of Isfahan Province.

2. **Methods and Materials**

The study of social phenomena in the social sciences is conducted through various methods, with the choice of each method depending on its paradigmatic characteristics. Given that the subject of this research is the design of a measurement model for perceived organizational ruthlessness and the explanation of its impact on organizational performance with a strategic approach (case study: textile industry of Isfahan Province), this study is classified as developmental in terms of outcome, applied in terms of purpose, and mixed-methods in terms of data type.

In this research, qualitative methods were employed to develop the measurement instrument, while quantitative methods were used to analyze the data. Accordingly, this study adopts a mixed-methods approach, integrating qualitative and quantitative methodologies. The qualitative phase involved the use of appropriate qualitative techniques, including open and semi-structured interviews and observations, to extract research components and measurement indicators. The quantitative phase was used to validate the measurement models and test the conceptual model. Mixed-methods research represents a strategic research methodology that integrates the collection, analysis, and synthesis of qualitative and quantitative data to enhance understanding of research issues during the study.

The qualitative data in this study were obtained through interviews with 13 university professors from the city of Kashan. These data were analyzed using grounded theory methodology. The objective of this method is to discover theories, categories, and theoretical concepts. Essentially, this method provides a testable conceptual and theoretical framework that can be used to design a questionnaire and validate the research findings. Based on this, a paradigmatic model and an emerging theory derived from qualitative data on digitalizing marketing were extracted. To achieve this, the collected interview data underwent coding, including open coding, axial coding, and selective coding. The purpose of open coding was to identify categories, components, and indicators that ultimately formed the core structure of the emerging theory and the model of organizational ruthlessness. By utilizing the identified categories and components, causal conditions, intervening conditions, contextual factors, consequences, and strategies and their relationships with the central category were determined.

In the quantitative phase, after verifying the content validity of the indicators and measuring variables, a questionnaire was designed accordingly. The statistical population in the quantitative phase included all managers, technical supervisors, production supervisors, and specialists in the textile industry of Isfahan, totaling 2,554 individuals. Based on Cochran's formula for a finite population, the sample size was determined to be 334 participants. After confirming the validity and reliability of the questionnaires, they were distributed among the sample participants. Finally, after data collection, structural modeling analysis was conducted using LISREL software.

Overall, in the qualitative phase, Strauss and Corbin's grounded theory approach was used to analyze interview data and develop the final model. In the quantitative phase, data analysis was performed using SPSS and LISREL software. The normality of data distribution was examined using the Kolmogorov-Smirnov test, and subsequently, research hypotheses were tested through structural equation modeling.

Page | 13 3. Findings and Results

Data analysis is a multi-stage process in which collected data are processed and analyzed to test hypotheses and answer the research question. Based on the analysis of research data and the grounded theory method, the identified concepts were categorized into two dimensions: one comprising three major categories (short-term, medium-term, and long-term) and the other comprising four categories (financial, customer, learning processes, and growth and learning).

Following the development of the conceptual model, a questionnaire was designed. After confirming content validity using the CVI index and verifying reliability through Cronbach's alpha and composite reliability tests, the questionnaire was distributed among the research sample. The collected data were then used to examine the measurement model and the structural model. Tables 1 and 2 present the results of the measurement models for the research variables. As observed, these models effectively measure the intended variables.

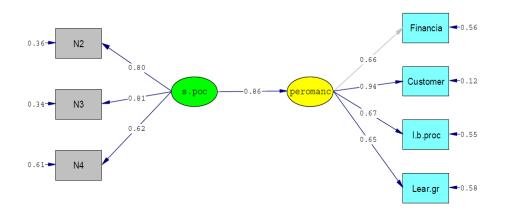
Table 1. Summary of Factor Analysis Results for the Model of Strategies to Mitigate Perceived Organizational Ruthlessness

Major Categories	Categories	Standard Coefficient	Significance Level	Result	
Short-Term	Perceptual Actions	0.62	8.91	Significant and Appropriate	
	Motivational Actions	0.65	11.22	Significant and Appropriate	
	Behavioral Actions	0.84	14.51	Significant and Appropriate	
	Participation	0.66	4.33	Significant and Appropriate	
Medium-Term	Focus on Training	0.82	16.02	Significant and Appropriate	
	Constructive Communication	0.68	10.45	Significant and Appropriate	
	Economic Security for Investment	0.69	10.63	Significant and Appropriate	
	Branding	0.60	5.08	Significant and Appropriate	
	Promoting Justice	0.64	5.01	Significant and Appropriate	
	Organizational Agility	0.62	4.58	Significant and Appropriate	
	Strengthening Liquidity	0.63	7.56	Significant and Appropriate	
Long-Term	Cultural Actions	0.63	6.96	Significant and Appropriate	
	Legal Actions	0.64	9.17	Significant and Appropriate	

Table 2. Summary of Factor Analysis Results for the Model of Organizational Performance

Categories	Standard Coefficient	Significance Level	Result
Financial	0.62	12.00	Significant and Appropriate
Customer	0.91	18.68	Significant and Appropriate
Internal Processes	0.60	11.40	Significant and Appropriate
Growth and Learning	0.61	11.70	Significant and Appropriate

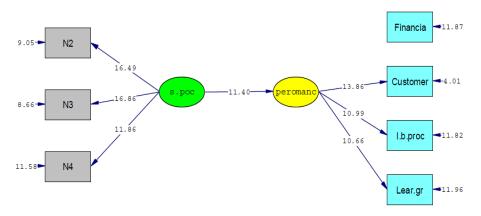
After confirming the measurement models for the variables, the structural model was estimated. Figures 1 and 2 illustrate the structural equation model of the research framework, presented in standard estimation and significance value formats, respectively.



Page | 14

Chi-Square=20.05, df=13, P-value=0.21809, RMSEA=0.028

Figure 1. Structural Equation Model of the Research Framework (Standard Estimation)



Chi-Square=20.05, df=13, P-value=0.21809, RMSEA=0.028

Figure 2. Structural Equation Model of the Research Framework (Significance Value)

Additionally, Table 3 summarizes the results of the structural equation model based on the software output. As observed, the normalized chi-square value falls within the range of 1 to 5, indicating an appropriate model fit. Furthermore, the p-value exceeds its optimal threshold (0.05), confirming the model's goodness of fit. The RMSEA value was obtained as 0.028, which is below 0.1, signifying an acceptable level of error in the model. The RMR index is 0.042, a small value that further supports the model's fit. Additionally, other goodness-of-fit indices are close to one, reinforcing the structural equation model's adequacy.

Path	Standard Coefficient	Significance Level	Result
Strategies to Mitigate Perceived Organizational Ruthlessness \rightarrow Organizational Performance	0.86	11.40	Significant

As shown in the table above, at a 95% confidence level, the relationships among the variables are confirmed. Consequently, the research model is validated at a 95% confidence level. In other words, based on the research hypothesis, strategies to mitigate perceived organizational ruthlessness have a direct and positive impact on organizational performance in the textile industry of Isfahan Province.

4. Discussion and Conclusion

The findings of this study confirm that perceived organizational ruthlessness (POR) significantly impacts organizational performance, aligning with the research hypothesis. The model derived from qualitative analysis was validated through structural equation modeling, demonstrating that strategies aimed at mitigating organizational ruthlessness positively influence

key organizational outcomes. Specifically, the results reveal that short-term interventions, such as perceptual, motivational, and behavioral actions, along with employee participation, effectively address immediate perceptions of organizational ruthlessness. Medium-term strategies, including training, constructive communication, economic security, branding, justice expansion, organizational agility, and liquidity enhancement, contribute to more sustainable improvements. Finally, long-term strategies, such as cultural and legal reforms, establish enduring structural changes that reduce perceived organizational Page | 15 ruthlessness and foster a healthier work environment. The empirical validation of this model suggests that organizations can

significantly enhance performance by systematically addressing and mitigating organizational ruthlessness. The results indicate that perceived organizational ruthlessness is not uniformly experienced by all employees but is influenced by various demographic and contextual factors. Furthermore, the findings reveal that organizational ruthlessness influences employees' psychological well-being and engagement, thereby affecting organizational knowledge-sharing

et al., 2019). The present study adds to this body of research by emphasizing the moderating role of mitigation strategies in reducing the negative consequences of perceived organizational ruthlessness. The results suggest that employees who perceive their organization as taking active steps to reduce ruthlessness experience improved job satisfaction and organizational commitment. This finding reinforces the importance of management accountability and the need for leadership to implement fair and supportive workplace policies.

behaviors. The study also corroborates the findings of Caesens et al. (2019), which linked abusive supervision to perceived organizational ruthlessness and its adverse effects on job satisfaction, affective commitment, and turnover intentions (Caesens

Additionally, the results highlight the role of organizational cynicism in shaping employees' perceptions of organizational ruthlessness. This aligns with the research of Topcu et al. (2017), who found that healthcare professionals with higher levels of general cynicism also exhibited cynicism toward their organizations (Topcu et al., 2017). The current study suggests that when employees perceive their organization as ruthless, they may develop cynicism, which negatively impacts performance. However, the implementation of strategic interventions, such as transparent communication, fair treatment, and ethical leadership, can reduce cynicism and foster a more engaged workforce.

Moreover, the findings suggest that perceived organizational ruthlessness contributes to resistance to change and workplace withdrawal behaviors, consistent with Aslam et al. (2016), who demonstrated that organizational ruthlessness negatively affects employees' attitudes toward change (Aslam et al., 2016). The present study further establishes that targeted mitigation strategies can alleviate these negative effects, facilitating a more adaptive and resilient organizational culture. By addressing employees' concerns and ensuring a supportive work environment, organizations can reduce resistance to change and enhance overall performance.

Furthermore, the findings align with Ameri Manesh and Ghorbani (2017), who identified a negative relationship between organizational cynicism and employee performance (Ameri Manesh & Ghorbani, 2017). The present study extends this understanding by showing that perceived organizational ruthlessness exacerbates cynicism, further deteriorating employee productivity. By implementing mitigation strategies, organizations can break this cycle and create a more positive and performance-oriented work environment. Sarvi et al. (2017) also demonstrated that organizational cynicism influences resistance to change (Sarvi et al., 2017), a finding that resonates with the current study's results. Addressing organizational ruthlessness can therefore enhance employees' adaptability and openness to organizational transformation.

Lastly, the study supports the research of Abbasi Khah and Behboudi Ganjeh (2016), who found that organizational cynicism negatively affects knowledge retention and engagement. The present study confirms that perceived organizational ruthlessness contributes to organizational disengagement and knowledge-hiding behaviors, reinforcing the importance of managerial efforts to cultivate a culture of trust and psychological safety. Organizations that actively address ruthlessness through fair policies and supportive leadership can foster a more collaborative and knowledge-sharing environment.

One of the primary limitations of this study is its focus on the textile industry in Isfahan Province, which may limit the generalizability of the findings to other industries and regions. The unique structural and economic characteristics of the textile sector may influence the way employees perceive organizational ruthlessness. Additionally, the study relies on self-reported data, which may introduce response biases such as social desirability or common method variance. Another limitation is the cross-sectional nature of the study, which prevents establishing causality between perceived organizational ruthlessness and organizational performance. Future research could adopt a longitudinal approach to better understand the long-term effects of

mitigation strategies. Finally, while this study utilized both qualitative and quantitative methods, the qualitative phase relied on interviews with a limited number of experts, which may not fully capture the complexity of perceived organizational ruthlessness across different organizational contexts.

Future research should explore perceived organizational ruthlessness across different industries and cultural contexts to enhance the generalizability of findings. Comparative studies between public and private sector organizations could provide deeper insights into how different organizational structures influence perceptions of ruthlessness. Additionally, future studies Page | 16 should examine the role of leadership styles in moderating the effects of organizational ruthlessness, as ethical and transformational leadership may mitigate its negative consequences. Longitudinal studies would be valuable in assessing the long-term impact of mitigation strategies on employee well-being and organizational outcomes. Another avenue for research could focus on the intersection between perceived organizational ruthlessness and digital transformation, exploring how technological advancements affect employees' perceptions of fairness and organizational justice.

Organizations should implement comprehensive strategies to mitigate perceived organizational ruthlessness by fostering transparent communication, promoting fairness, and ensuring ethical leadership practices. Short-term interventions such as training programs and employee support mechanisms can address immediate concerns, while medium- and long-term strategies should focus on structural reforms, including legal protections and cultural change initiatives. Managers should prioritize employee well-being by creating an inclusive and respectful work environment where employees feel valued and supported. Regular assessments of organizational climate and employee perceptions should be conducted to identify emerging issues and adjust policies accordingly. Additionally, organizations should invest in leadership development programs to equip managers with the skills necessary to build trust and engagement among employees. By addressing organizational ruthlessness proactively, businesses can enhance employee satisfaction, reduce turnover, and ultimately improve overall performance.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

Acknowledgments

Authors thank all participants who participate in this study.

Conflict of Interest

The authors report no conflict of interest.

Funding/Financial Support

According to the authors, this article has no financial support.

References

 $\mathbf{0}$

- Abbas, J., & Kumari, K. (2023). Examining the relationship between total quality management and knowledge management and their impact on organizational performance: a dimensional analysis. Journal of Economic and Administrative Sciences, 39(2), 426-451. https://doi.org/10.1108/JEAS-03-2021-0046
- Ameri Manesh, Z., & Ghorbani, M. (2017). Investigating the Relationship Between Organizational Cynicism and Employee Performance in Mashhad Specialty Hospital (Javad Al-Aemeh Cardiovascular Center). Third National Conference on New Research in Humanities and Social Studies of Iran, Qom. https://en.civilica.com/doc/654739/
- Aquino, K., & Thau, S. (2009). Workplace victimization: Aggression from the target's perspective. Annual review of psychology, 60, 717-741. https://doi.org/10.1146/annurev.psych.60.110707.163703
- Aslam, U., Ilyas, M., Imran, M. K., & Rahman, U. U. (2016). Detrimental effects of cynicism on organizational change: an interactive model of organizational cynicism (a study of employees in public sector organizations). Journal of Organizational Change Management, 29(4), 580-598. https://doi.org/10.1108/JOCM-12-2014-0231
- Caesens, G., Nguyen, N., & Stinglhamber, F. (2019). Abusive Supervision and Organizational Dehumanization. Journal of Business Psychology, 34, 709-728. https://doi.org/10.1007/s10869-018-9596-z
- DiGirolamo, J. A., & Tkach, J. T. (2019). An exploration of managers and leaders using coaching skills. Consulting Psychology Journal: Practice and Research, 71(3), 195-218. https://doi.org/10.1037/cpb0000138

Copyright: © 2024 by the authors. Published under the terms and conditions of Creative Commons Attribution-NonCommercial 4.0 International (CC BY-NC 4.0) License.

- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. Journal of Applied Psychology, 71(3), 500-507. https://doi.org/10.1037//0021-9010.71.3.500
- Emon, M. M. H., Khan, T., & Siam, S. A. J. (2024). Quantifying the influence of supplier relationship management and supply chain performance: an investigation of Bangladesh's manufacturing and service sectors. *Brazilian Journal of Operations & Production Management*, 21(2), 2015. https://doi.org/10.14488/BJOPM.2015.2024
- Goldman, B. M., Gutek, B. A., Stein, J. H., & Lewis, K. (2006). Employment discrimination in organizations: Antecedents and consequences. Journal of Management, 32(6), 786-830. https://psycnet.apa.org/record/2006-21460-002
- Page | 17 Griffin, R. W., & O'Leary-Kelly, A. (2004). *The dark side of organizational behavior*. Jossey-Bass. https://books.google.ch/books/about/The_Dark_Side_of_Organizational_Behavior.html?id=DGYLXaRps5cC&redir_esc=y
 - Hera, A., Al Rian, A., Faruque, M. O., Sizan, M. M. H., Khan, N. A., Rahaman, M. A., & Ali, M. J. (2024). Leveraging Information Systems for Strategic Management: Enhancing Decision-Making and Organizational Performance. *American Journal of Industrial and Business Management*, 14(8), 1045-1061. https://doi.org/10.4236/ajibm.2024.148054
 - Rahimi, E., Heidari, A., & Ghasemi, B. (2024). The Impact of Entrepreneurship-Based Branding on Startup Performance. International Journal of Innovation Management and Organizational Behavior (IJIMOB), 4(1), 100-106. https://doi.org/10.61838/kman.ijimob.4.1.12
 - Sarvi, M., Hosseinzadeh, A., & Pardel Rad, K. (2017). Examining the Impact of Organizational Cynicism on Resistance to Organizational Change among Employees of Mashhad Municipality. First International and Eighth National Conference on Urban Planning and Management, Mashhad. https://en.civilica.com/doc/646782/
 - Seemann, P., Stofkova, Z., & Binasova, V. (2020). Developing coaching skills of managers in global context. SHS Web of Conferences, https://doi.org/10.1051/shsconf/20207401030
 - Tepper, B. J. (2007). Abusive supervision in work organizations: Review, synthesis, and research agenda. *Journal of Management*, 33, 261-289. https://doi.org/10.1177/0149206307300812
 - Topcu, I., Unaldi, N., Eskin Bacaksiz, F., Tiryaki Sen, H., Karadal, A., & Yildirim, A. (2017). The Relationships between General and Organizational Cynicism: A Study among Healthcare Professionals. *International Journal of Caring Sciences*, 10(1), 216. https://www.internationaljournalofcaringsciences.org/docs/25_unaldi_original_10_1.pdf