STUDYING WORKGROUP EMOTIONAL CLIMATE (WEC) IN THE KNOWLEDGE-BASED COMPANIES OF IRAN (CASE STUDY: NORTH KHORASAN PROVINCE)

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ABSTRACT

This study was conducted with the purpose of studying Workgroup Emotional Climate in the Knowledge-Based Companies of Iran. In this study, academic and management experts with expertise in human resource management, occupational psychology, and organizational structure of knowledge-based companies of North Khorasan Province (Iran) were considered as the statistical population. The sampling method of the study was the judgment (expert) sampling method (30 persons). A total of 37 working groups were studied in 22 knowledge-based companies. These companies were involved in various fields such as ICT, mechanical engineering, chemical engineering, electronic engineering, medical engineering, and nanotechnology. Three research made questionnaires were used for data gathering in this study. Also, to identify and screening items phase, descriptive analysis methods such as mean±SD were used. In order to perform calculations of this analysis, Excel and SPSS software applications were used, and for the prioritize ways of improving the Positive WEC and reduce Negative WEC, the analytical hierarchy process was used. In order to perform the calculations of this process, the Expert Choice software was used. Finally, this research identified 14 Antecedents of WEC and 14 Ways to improve the positive (or reduce the Negative) WEC, then prioritized them.

Keywords: *Workgroup Emotional Climate (WEC), Knowledge-Based Companies, Human resource management, Productivity.*

INTRODUCTION

Considering the disheveled economic and social conditions in Iran and the wave of international sanctions against the country, the macro policies of the country have significantly shifted towards utilizing the value creation potentials of knowledge-based companies since Iranian politicians and economists believe that by supporting knowledge-based companies and helping them grow, Iran can neutralize the majority of technological sanctions and pave the way for economic growth and increased employment. Therefore, Iran needs major studies and research on factors affecting the performance and productivity of knowledge-based companies and this topic is an integral research subject. One of the newly-emerged concepts in the field of human resources is the emotional climate of workgroups. Previous research suggests that this variable can improve the productivity of human resources, effectively improving the productivity of companies and organizations.

While there is abundant research on identifying factors that make teams effective (Guzzo and Dickson, 1996), when discussing this question, a very limited number of researchers have

considered the emotional aspect of workgroups (Afshar Jalili and Salemipour, 2019). Nevertheless, at the organizational level, Carr, *et al.*'s (2003) meta-review of >50 distinct investigations showed that the affective aspect of organizational climate had a stronger correlation with the psychological wellbeing and performance of the members of the organization than the instrumental or cognitive components of organizational climate. Therefore, recently, more attention has been given to studying workgroup emotional climate (WEC) or the perception of affect and affective exchanges, which characterize a workgroup (Gamero *et al.*, 2008;; Tse *et al.*, 2008). The idea is that these perceptions have important outcomes for members of the group (Hartel *et al.*, 2006 and 2008). Although there are a few studies with the objective of evaluating and discussing WEC (e.g. Hartel *et al.*, 2006), there is still no rigorous measure and structure of WEC, which limits the development of the WEC theory. For instance, because of the lack of a conventional measure for WEC, researchers utilized the Team Climate Inventory, which is a climate measure for workgroup innovations, as a poor alternative to measuring affective team climate in their research. Gamero *et al.* (2008) measured and integrated the affective well-being of team members to measure effective team climate. Tse *et al.* (2008) measured effective team climate using a 5-item scale. Menges, *et al.* (2011) evaluated organizations' positive effective climate using 4 positive effect items extracted from a work-related effective well-being inventory. Hartel *et al.* (2006) developed a WEC Scale (WECS), but it is unidimensional with 5 items and measures only positive WEC. Another limitation of group-level emotion studies is sampling, which is done from Western cultural groups and its applicability in other cultures has not been tested (Elfenbein and Shirako, 2006).

On the other hand, through a detailed review of previous research in Iran, it is clear that there has never been any study in Iranian knowledge-based companies with regards to the emotional climate of workgroups in such companies and this important organizational variable has so far been neglected. This is while the organizational structure and the working system of such companies are often based on group projects and teamwork, and paying attention to the group and team relations must be one of the most important concerns of managers of knowledge-based companies. Therefore, it seems that through a detailed understanding of the facets and indicators of the variable of WEC and evaluating and improving it in knowledge-based companies, we can help promote the performance and productivity of such companies. Hence, the current study tries to focus on Iranian knowledge-based companies in order to propose a model for assessing WEC to help bridge the current gap in the literature. Accordingly, the present study is seeking to answer the following main question: "In knowledge-based companies if North Khorasan Province (Iran): What are the antecedents of WEC? How can improve the positive WEC and reduce the negative WEC?"

Background Research

Workgroups are social entities that create a history of shared events or experiences over time. According to the theory of effective events (Weiss & Cropanzano, 1996), these events or experiences provoke emotional reactions in the workgroup, which have consequences for the behaviors and attitudes of the workgroup. Furthermore, according to the theory of intergroup emotions (Philsoophian *et al.*, 2016), objects or events that affect the ingroup are evaluated for their emotional relevance, and then specific evaluation patterns generate emotional reactions that arise from the group membership and identification (Shen *et al.*, 2017). Workgroup

members develop shared emotions while carrying out their tasks (Sandelands & St Clair, 1993). At the same time, effective experiences at the individual level combine to form the group's effective compositions (Ma et al., 2016). This combinatorial process happens as effective experiences at the individual level are spread and shared among other members through explicit and implicit manners. This effective sharing is the basis for workgroup members' evaluation of the emotional exchange that characterizes their workgroup (Willis et al., 2017).

Workgroup climate perception is the employees' shared perception of their workgroup that is essential for validity in the performance of organizations and also the role behaviour of group members. Climate evaluation has been carried out by focusing on various facets e.g. climate of fear, climate of diversity, climate for service, climate for innovation, and climate for safety. Meanwhile, several investigations have traditionally evaluated individual-level phenomenon as a group-level structure (Liu *et al.*, 2014).

Team efficiency is a function of design and environmental factors, group psychosocial traits, and group processes (Mathieu *et al.*, 2008). WEC is an essential group psychosocial characteristic that may affect group performance. Various reasons exist for our position. First, the relationship between performance and climate has been somewhat discussed. A stronger organizational climate helps performance by eliciting behaviors in line with organizational goals (Bowen & Ostroff, 2004). Second, there is a significant link between effective job performance and climate (Ostroff, 1993) and effective climate can have a considerable variance in individual job performance (Carr *et al.*, 2003). Also, there is a significantly positive association between the team emotional climate and its performance (Pirola-Merlo *et al.*, 2002). Third, groups often converge in the desire of individuals to experience certain emotional states, which usually has consequences for teams (; Fernandes, 2016).

The WEC dimensionality could be classified as 4 dimensions: ego-focused and positive WEC, ego-focused and negative WEC, other-focused and positive WEC, and other-focused and negative WEC (Liu *et al.*, 2014).

This study used these dimensions to evaluate the WEC and its effect on workgroup efficiency indicators including group conflict, organizational citizenship behaviour (OCB), and performance.

Several scholars have evaluated a multidimensional structure underlying emotional states for the classification of emotions (Russell, 1983). These studies have found 2 highly robust dimensions: positive vs. negative activation and evaluation. However, another dimension often appears as social-engagement-disengagement (Lingard et al., 2019).

In this study, we used the interpersonal and valence dimensions.

Valence (pleasantness): pleasure and displeasure (referred to as negative and positive). Russell (1991) states that a universal aspect of an effective experience is hedonic quality. Valence is an organizing dimension of emotion lexicons though cultures differ on the desired state on that dimension (Russell, 1983; Tsai *et al.*, 2006). Researchers et al. refined valence and concluded that both state and trait effects consist of 2 continua, not a single continuum ranging between negative and positive (Teng et al., 2020).

- Interpersonal dimension. Emotions are not just personal or private bodily states; they also are social phenomena (Willis et al., 2017). Emotions are differentiated as ego-

focused (associated with interpersonal disengagement and private states) and other-focused (associated with interpersonal engagement). The ego-focused emotions (e.g. frustration, anger, pride, etc.) have the internal attributes of the individual (their own abilities, desires, goals, or needs) as the main referent, and so create and foster independence. The other-focused emotions (e.g. love or sympathy) have another person's attributes, as the primary referent and thus foster one's interdependence (Wlike et al., 2018). Other-focused emotions focus people's attention on social worth and belonging to their relationships with others (Mesquita, 2001).

There is evidence of the value and validity of conceptualizing the emotion's social dimension (Lingard et al., 2019). Research suggests that emotions are different in the degree to which they either engage/disengage one in social/interpersonal relationships (Elfenbein & Shirako, 2006). Many scholars have provided evidence for the emotion's interpersonal/social dimension (Triandis & Suh, 2002; Mesquita, 2001;;), although it has various names and interpretations (e.g., "trustful versus untrustful," Dittman, 1972; "interpersonal relatedness," Block, 1957). De Rivera (1992) classified the nation's emotional climate using 2 dimensions: one relates to ideals, (e.g. instability, stability, confidence, depression, hope, despair, satisfaction, and dissatisfaction), and the other relates to others (e.g. solidarity (willingness to sacrifice), hostility (polarization), security (trust), and fear (isolation)).

Some scholars reported findings showing that emotional workgroup climate improves group efficiency. Patterson, *et al.* (2004) stated that a positive organizational climate is related to the productivity of the company. Also, Dawson, *et al.* (2008) found that the good welfare of employees is related to the overall performance of the organization. Mengnes *et al.* (2011) reported that the organization's positive emotional climate is positively related to the overall job performance behavior and productivity of employees. Liu *et al.* (2014) reported that a positive workgroup climate has a positive correlation with the group's performance and OCB. OCB is "individual behaviours that are discretionary, not explicitly or directly recognized by the formal reward system, and promote the organization's effective functioning". Isen & Baron (1991) proposed that positive emotions can lead to a general tone or "culture" of usefulness in the organization. Therefore, the workgroups' positive emotional climate can facilitate the OCB of the group. Menges *et al.* (2011) reported that the positive effective climate of organizations is positively correlated with aggregate OCB. Studies show that relationship conflict has a positive correlation with negative emotions of group members, like anxiety and stress and employees' job tension(Jehn & Mannix, 2001). Evidence shows that high levels of task conflict are positively correlated with unhappiness and tension (Jehn & Mannix, 2001). Group members in an emotionally negative climate tend to experience more task and relationship conflicts.

Research Questions
Based on the objectives of the study, research questions are devised as follows:
1. What are the antecedents of WEC in knowledge-based companies of North Khorasan Province (Iran)?
2. What are the ways to improve the Positive (or reduce the Negative) WEC in knowledge-based companies of North Khorasan Province (Iran)?
3. How the identified items (antecedents and ways) are prioritized?

MATERIALS AND METHODS

Research Phases

To realize the study objectives, two general phases were considered:

- Phase One: Identifying the antecedents of WEC in knowledge-based companies of North Khorasan Province (through a detailed review of theoretical concepts as well as interviews with experts in this field). In this phase, ways to improve the Positive WEC and reduce Negative WEC will be Identify (through a detailed review of theoretical concepts as well as interviews with experts in this field). It is expected that a range of factors will be identified during this phase.
- Phase two: Prioritize ways to improve the Positive WEC and reduce Negative WEC in knowledge-based companies of North Khorasan Province using mathematical methods in multi-criteria decision-making (MCDM).

Statistical Population

In this study, academic and management experts with an expertise in human resource management, occupational psychology, and organizational structure of knowledge-based companies of North Khorasan Province (Iran) are considered as the statistical population. The sampling method of the study is the judgment (expert) sampling method (30 persons). Table 1 shows how these people are distributed:

Table 1. Distribution of statistical population

Type of Activity	Number
Academic	10
Executive	14
Consultant	6

It should be noted that in this study, 37 working groups were studied in 22 knowledge-based companies. These companies were involved in various fields such as ICT, mechanical engineering, chemical engineering, electronic engineering, medical engineering, and nanotechnology.

Methods and tools for data collection

In general, the methods for gathering the required data in the current study can be divided into the two following general categories:

- Library studies and internet-based research in order to review the literature and background of the study;
- Field method (in particular, using questionnaires) in order to gather the required data from the statistical population of the study.

In this study, the following three questionnaires are used for data gathering:

- The first questionnaire is designed in a semi-open format whose objective is to identify the antecedents of WEC and identify ways to improve the Positive WEC and reduce Negative WEC in knowledge-based companies of North Khorasan Province (Iran);

- The second questionnaire is a closed questionnaire designed based on the identified items in the previous questionnaire. The main objective of this questionnaire is to perform a type of screening to reach a consensus on the identified items in the previous stage;

- The third questionnaire is designed based on the finalized items in the second stage and it is based on a pairwise comparison methodology. The objective of this questionnaire is to prioritize ways of improving the Positive WEC and reduce Negative WEC in knowledge-based companies of North Khorasan Province (Iran).

Methods and tools for analyzing data

In this study:

- For the identifying and screening items phase, descriptive analysis methods such as mean and standard deviation are used. It is worth mentioning that in order to perform calculations of this analysis, Excel and SPSS software applications are used.

- For the prioritize ways of improving the Positive WEC and reduce Negative WEC, the analytical hierarchy process (AHP) is used. In order to perform the calculations of this process, the Expert Choice software is used.

RESULTS AND DISCUSSION

Identification Step

In the first step, we tried to identify the antecedents of WEC and ways to improve the positive (or reduce the negative) WEC. To this end, Questionnaire (No.1) was distributed among the experts. The results of the first step implementation are presented in below.

Antecedents of Workgroup Emotional Climate (WEC):

- Relational leadership style (A1)
- Intense environmental competition (A2)
- Managers coaching style (A3)
- Organizational Culture (A4)
- Teamwork atmosphere (A5)
- In-service training on the emotional climate (A6)
- Staff personality (A7)
- The amount of organizational conflict (A8)
- Empathy among employees (A9)
- Staff goals (personal and organizational) (A10)
- Education level of staff (A11)
- Staff work experience (A12)
- Organizational Citizenship Behavior (OCB) (A13)
- Management by objective (MBO) (A14)

Ways to improve the Positive (or reduce the Negative) Workgroup Emotional Climate (WEC):

- Practical behavior of corporate executives should be a symbol of a positive emotional climate. (B1)
- Speech by corporate executives should be a symbol of a positive emotional climate. (B2)
- Corporate managers must show in practice that they are supportive of employees. (B3)
- A culture of empathy must be institutionalized in companies. (B4)
- A culture of integrity must be institutionalized in companies. (B5)
- The culture of "supporting one another" must be institutionalized in companies. (B6)
- Encourage teamwork in the company. (B7)
- Company managers must have coaching behaviors with their subordinates. (B8)
- In training courses, the importance, dimensions, and indicators of the workgroup emotional climate must be explained to staff. (B9)
- When selecting employees, their emotional characteristics (in working groups) must be taken into account. (B10)
- Managers should try to hold down their level of organizational conflict. (B11)
- Employee goals and goals of the organization should be aligned. (B12)
- Strengthen organizational citizenship behavior among employees. (B13)
- Use management by objective style so that employees can be more involved in goal setting. (B14)

Screening Step

In this step, it was attempted to screen the cases identified in the previous step. For this purpose, Questionnaire (No.2) was designed and distributed among the experts. The data from this questionnaire were entered into the SPSS software, and descriptive analysis and one-sample t-test were performed. The following **Tables 2and** 3 are the outputs of these measures.

Table 2. Descriptive Statistics

	N	Mean	SD	Std. Error Mean
A1	30	3.9333	.98027	.17897
A2	30	3.7667	1.00630	.18372
A3	30	4.0000	.87099	.15902
A4	30	3.7000	1.05536	.19268
A5	30	3.6667	1.21296	.22145
A6	30	3.6333	1.27261	.23235
A7	30	3.7667	.89763	.16388
A8	30	3.7000	1.14921	.20982
A9	30	3.8000	1.15669	.21118
A10	30	4.0667	.78492	.14331
A11	30	3.7000	1.02217	.18662

A12	30	3.8000	.84690	.15462
A13	30	3.5333	1.13664	.20752
A14	30	3.7667	1.13512	.20724
B1	30	3.5000	.97379	.17779
B2	30	3.7333	.90719	.16563
B3	30	3.5333	1.04166	.19018
B4	30	3.5000	1.04221	.19028
B5	30	3.7667	1.16511	.21272
B6	30	3.5000	1.00858	.18414
B7	30	3.5667	1.00630	.18372
B8	30	3.8333	.74664	.13632
B9	30	3.8333	.91287	.16667
B10	30	3.5333	1.00801	.18404
B11	30	3.6667	.95893	.17508
B12	30	3.5667	.93526	.17075
B13	30	3.5000	.86103	.15720
B14	30	3.5000	1.04221	.19028

Table 3. One-Sample T-Test

Test Value = 3

	t	df	Sig. (2-tailed)	Mean	95% CI	
					Lower	Upper
A1	5.215	29	.000	.93333	.5673	1.2994
A2	4.173	29	.000	.76667	.3909	1.1424
A3	6.289	29	.000	1.00000	.6748	1.3252
A4	3.633	29	.001	.70000	.3059	1.0941
A5	3.010	29	.005	.66667	.2137	1.1196
A6	2.726	29	.011	.63333	.1581	1.1085
A7	4.678	29	.000	.76667	.4315	1.1018
A8	3.336	29	.002	.70000	.2709	1.1291
A9	3.788	29	.001	.80000	.3681	1.2319
A10	7.443	29	.000	1.06667	.7736	1.3598
A11	3.751	29	.001	.70000	.3183	1.0817
A12	5.174	29	.000	.80000	.4838	1.1162
A13	2.570	29	.016	.53333	.1089	.9578
A14	3.699	29	.001	.76667	.3428	1.1905
B1	2.812	29	.009	.50000	.1364	.8636
B2	4.428	29	.000	.73333	.3946	1.0721
B3	2.804	29	.009	.53333	.1444	.9223
B4	2.628	29	.014	.50000	.1108	.8892
B5	3.604	29	.001	.76667	.3316	1.2017
B6	2.715	29	.011	.50000	.1234	.8766
B7	3.084	29	.004	.56667	.1909	.9424

B8	6.113	29	.000	.83333	.5545	1.1121
B9	5.000	29	.000	.83333	.4925	1.1742
B10	2.898	29	.007	.53333	.1569	.9097
B11	3.808	29	.001	.66667	.3086	1.0247
B12	3.319	29	.002	.56667	.2174	.9159
B13	3.181	29	.003	.50000	.1785	.8215
B14	2.628	29	.014	.50000	.1108	.8892

As shown in the table, the Sig. of all items was less than (0.05). Also, the t-statistic of all cases is positive. This means that all items have a higher than average importance and therefore none will be omitted during the screening phase.

Prioritization Step
At this stage, it was intended to prioritize identified and screened cases in the earlier stages. For this purpose, Questionnaire (No.3) was designed and distributed among the experts. This questionnaire was designed based on paired comparisons. Data from this questionnaire were entered into the ExpertChoice software. And on them, a hierarchical analysis process (AHP) analysis was performed. The results are presented in the following figures:
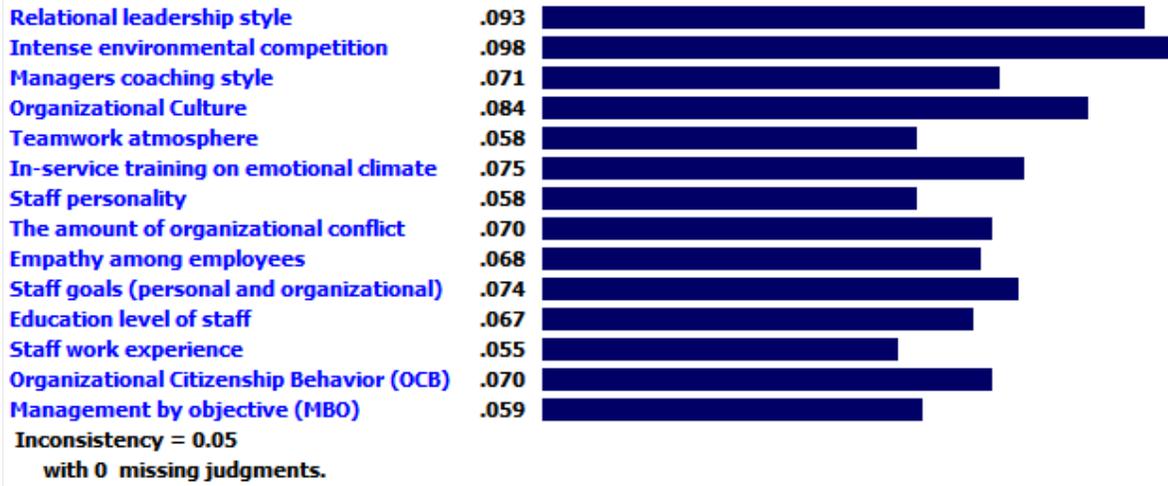

Figure 1. Relative weights of antecedents of WEC
(ExpertChoice Software Output)

As can be seen in **Figure 1**, the inconsistency of this analysis is (0.05), and since this value is less than (0.1), its reliability is confirmed.
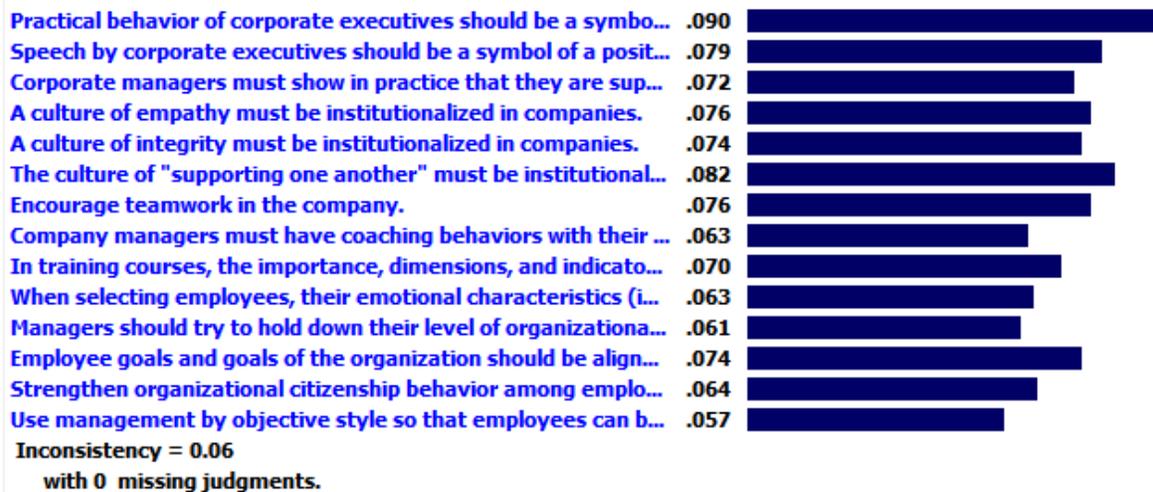
Practical behavior of corporate executives should be a symbo...	.090
Speech by corporate executives should be a symbol of a posit...	.079
Corporate managers must show in practice that they are sup...	.072
A culture of empathy must be institutionalized in companies.	.076
A culture of integrity must be institutionalized in companies.	.074
The culture of "supporting one another" must be institutional...	.082
Encourage teamwork in the company.	.076
Company managers must have coaching behaviors with their ...	.063
In training courses, the importance, dimensions, and indicato...	.070
When selecting employees, their emotional characteristics (i...	.063
Managers should try to hold down their level of organizationa...	.061
Employee goals and goals of the organization should be align...	.074
Strengthen organizational citizenship behavior among emplo...	.064
Use management by objective style so that employees can b...	.057

Inconsistency = 0.06
    with 0 missing judgments.

Figure 2. Relative weights of ways to improve the Positive (or reduce the Negative) of WEC (ExpertChoice Software Output)

As can be seen in **Figure 2,** the inconsistency of this analysis is (0.06), and since this value is less than (0.1), its reliability is confirmed.

CONCLUSION

Answer to the 1st research question

The 1st research question asked was: "What are the antecedents of WEC in knowledge-based companies of North Khorasan Province (Iran)?". The answer to this question is below.
Antecedents of Workgroup Emotional Climate (WEC):

- Relational leadership style
- Intense environmental competition
- Managers coaching style
- Organizational Culture
- Teamwork atmosphere
- In-service training on the emotional climate
- Staff personality
- The amount of organizational conflict
- Empathy among employees
- Staff goals (personal and organizational)
- Education level of staff
- Staff work experience
- Organizational Citizenship Behavior (OCB)
- Management by objective (MBO)

Answer to the 2nd research question

The 2nd research question asked was: "What are the ways to improve the Positive (or reduce the Negative) WEC in knowledge-based companies of North Khorasan Province (Iran)?". The answer to this question is below.

Ways to improve the Positive (or reduce the Negative) Workgroup Emotional Climate (WEC):

- Practical behavior of corporate executives should be a symbol of a positive emotional climate.
- Speech by corporate executives should be a symbol of a positive emotional climate.
- Corporate managers must show in practice that they are supportive of employees.
- A culture of empathy must be institutionalized in companies.
- A culture of integrity must be institutionalized in companies.
- The culture of "supporting one another" must be institutionalized in companies.
- Encourage teamwork in the company.
- Company managers must have coaching behaviors with their subordinates.
- In training courses, the importance, dimensions, and indicators of the workgroup emotional climate must be explained to staff.
- When selecting employees, their emotional characteristics (in working groups) must be taken into account.
- Managers should try to hold down their level of organizational conflict.
- Employee goals and goals of the organization should be aligned.
- Strengthen organizational citizenship behavior among employees.
- Use management by objective style so that employees can be more involved in goal setting.

Answer to the 3rd research question

The third research question asked was: " How are identified items (antecedents and ways) prioritized?". The answer to this question is in **Tables 4 and 5**:

Table 4. Answer to the third research question (Ranking Antecedents of WEC)

Antecedents of Workgroup Emotional Climate (WEC)	Weight	Rank
Relational leadership style	.093	2
Intense environmental competition	.098	1
Managers coaching style	.071	6
Organizational Culture	.084	3
Teamwork atmosphere	.058	13
In-service training on the emotional climate	.075	4
Staff personality	.058	12
The amount of organizational conflict	.070	7
Empathy among employees	.068	9
Staff goals (personal and organizational)	.074	5

	.067	10
Education level of staff	.067	10
Staff work experience	.055	14
Organizational Citizenship Behavior (OCB)	.070	8
Management by objective (MBO)	.059	11

Table 5. Answer to the third research question (Ranking Ways to improve the Positive (or decrease the Negative) of WEC)

Ways to improve the Positive (or decrease the Negative) Workgroup Emotional Climate (WEC)	Weight	Rank
Practical behavior of corporate executives should be a symbol of a positive emotional climate.	.090	1
Speech by corporate executives should be a symbol of a positive emotional climate.	.079	3
Corporate managers must show in practice that they are supportive of employees.	.072	8
A culture of empathy must be institutionalized in companies.	.076	5
A culture of integrity must be institutionalized in companies.	.074	7
The culture of "supporting one another" must be institutionalized in companies.	.082	2
Encourage teamwork in the company.	.076	4
Company managers must have coaching behaviors with their subordinates.	.063	11
In training courses, the importance, dimensions, and indicators of the workgroup emotional climate must be explained to staff.	.070	9
When selecting employees, their emotional characteristics (in working groups) must be taken into account.	.063	12
Managers should try to hold down their level of organizational conflict.	.061	13
Employee goals and goals of the organization should be aligned.	.074	6
Strengthen organizational citizenship behavior among employees.	.064	10
Use management by objective style so that employees can be more involved in goal setting.	.057	14

The most important limitation of this research is its generalizability to all knowledge-based companies. Because this research was conducted on knowledge-based companies in North Khorasan province of Iran.

Future researchers are suggested to do similar research on knowledge-based companies in other countries of the world and compare their results with those of this study. Future researchers are also suggested to use qualitative methods such as meta-analysis and theme analysis in the research process.

References

Afshar Jalili, Y. and Salemipour, F. (2019), "Group organizational citizenship behavior and knowledge sharing: The moderating role of workgroup emotional climate", *VINE Journal of Information and Knowledge Management Systems*, Vol. 50 No. 1, pp. 117-135. https://doi.org/10.1108/VJIKMS-12-2018-0117

Block, J. (1957). Studies in the phenomenology of emotions. *Journal of Abnormal and Social Psychology, 54*(3), 358-363.

Bowen DE, Ostroff C. Understanding HRM–firm performance linkages: The role of the "strength" of the HRM system. Academy of management review. 2004 Apr 1;29(2):203-21.

Carr, J. Z., Schmidt, A. M., Ford, J. K., & DeShon, R. P. (2003). Climate perceptions matter: A meta-analytic path analysis relating molar climate, cognitive and affective states, and individual level work outcomes. *Journal of Applied Psychology, 88*(4), 605-619.

Dittman, A. T. (1972). *Interpersonal messages of emotion*. New York, NY: Springer.

Elfenbein, H. A., & Shirako, A. (2006). An emotion process model for multicultural teams. In B. Mannix, M. Neale, & Y. R. Chen (Eds.), Research on managing groups and teams: *National culture and groups*. Amsterdam, The Netherlands: Elsevier. 9, 263-297.

Fernandes, G. M. (2016). Organizational climate and child welfare workers' degree of intent to leave the job: Evidence from New York. *Children and Youth Services Review, 60*(1), 80–87.

Gamero, N., González-Romá, V., & Peiró, J. M. (2008). The influence of intra-team conflict on work teams' affective climate: A longitudinal study. *Journal of Occupational and Organizational psychology*, *81*(1), 47-69.

Guzzo, R. A., & Dickson, M. W. (1996). Teams in organizations, recent research on performance and effectiveness. *Annual Review of Psychology, 47*(1), 307-338.

Hartel, C. E., Gough, H., & Hartel, G. F. (2006). Service providers' use of emotional competencies and perceived workgroup emotional climate to predict customer and provider satisfaction with service encounters. *International Journal of Work Organisation and Emotion*, *1*(3), 232-254.

Hartel, C. E., Gough, H., & Härtel, G. F. (2008). Work-group emotional climate, emotion management skills, and service attitudes and performance. *Asia Pacific Journal of Human Resources*, *46*(1), 21-37.

Jehn, K. A., & Mannix, E. (2001). The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance. *Academy of Management Journal, 44*(2), 238-251.

Lingard, H., Zhang, R.P. and Oswald, D. (2019), "Effect of leadership and communication practices on the safety climate and behaviour of construction workgroups", *Engineering, Construction and Architectural Management*, Vol. 26 No. 6, pp. 886-906.

Liu, X. Y., Härtel, C. E., & Sun, J. J. M. (2014). The workgroup emotional climate scale: Theoretical development, empirical validation, and relationship with workgroup effectiveness. *Group & Organization Management*, *39*(6), 626-663.

Ma, E., Qu, H. and Wilson, M. (2016), "The affective and dispositional consequences of organizational citizenship behavior: a cross-cultural study", Journal of Hospitality and Tourism Research, Vol. 40 No. 4, pp. 399-431.

Mathieu, J., Maynard, M. T., Rapp, T., & Gilson, L. (2008). Team effectiveness 1997-2007: A review of recent advancements and a glimpse into the future. *Journal of management*, *34*(3), 410-476.

 Menges, J. I., Walter, F., Vogel, B., & Bruch, H. (2011). Transformational leadership climate: Performance linkages, mechanisms, and boundary conditions at the organizational level. *The Leadership Quarterly*, *22*(5), 893-909.

Mesquita, B. (2001). Emotions in collectivist and individualist contexts. *Journal of Personality and Social Psychology, 8*0(1), 68-74.

Patterson, M., Warr, P., & West, M. (2004). Organizational climate and company productivity: The role of employee affect and employee level. *Journal of Occupational and Organizational Psychology, 77*(2), 193-216.

Philsoophian, M., Akhavan, P., Ghorbani, S. and Afshar, Y. (2016), "The Delphi method for selection of KM strategies based on the level of KM maturity: a case of OICO, Iran", Journal of Knowledge Management, Vol. 14 No. 4.

Russell, J. A. (1980). A circumplex model of affect. *Journal of Personality and Social Psychology, 39*(6), 1161-1178.

Russell, J. A. (1983). Pancultural aspects of the human conceptual organization of emotions. *Journal of Personality and Social Psychology, 45*(6), 1281–1288.

Russell, J. A. (1991). Culture and the categorization of emotions. *Psychological Bulletin, 110*(3), 426-450.

Sandelands, L. E., & St Clair, L. (1993). Toward an empirical concept of group. *Journal for the Theory of Social Behavior, 23*(4), 424-453.

Shen, Y., Ju, C., Koh, T., Rowlinson, S. and Bridge, A. (2017), "The impact of transformational leadership on safety climate and individual safety behavior on construction sites", International Journal of Environmental Research and Public Health, Vol. 14 No. 1, pp. 1-17, doi: 10.3390/ijerph14010045.

Teng, C.-C., Lu, A.C.C., Huang, Z.-Y. and Fang, C.-H. (2020), "Ethical work climate, organizational identification, leader-member-exchange (LMX) and organizational citizenship behavior (OCB): A study of three star hotels in Taiwan", *International Journal of Contemporary Hospitality Management,* Vol. 32 No. 1, pp. 212-229. https://doi.org/10.1108/IJCHM-07-2018-0563

Triandis, H. C., & Suh, E. M. (2002). Cultural influences on personality. *Annual Reviews of Psychology, 53*(1), 133-160.

Tsai, J. L., Knutson, B., & Fung, H. H. (2006). Cultural variation in affect valuation. *Journal of Personality and Social Psychology, 9*0(2), 288-307.

Tse, H. H. M., Dasborough, M. T., & Ashkanasy, N. M. (2008). A multi-level analysis of team climate and interpersonal exchange relationships at work. *The Leadership Quarterly, 19*(2), 42-53.

Weiss, H. M., & Cropanzano, R. (1996). Affective events theory, a theoretical discussion of the structure, causes and consequences of affective experiences at work. Research in Organizational Behavior. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior: An annual series of analytical essays and critical reviews, Vol. 18* (p. 1–74). Elsevier Science/JAI Press.

Willis, S., Clarke, S. and O'Connor, E. (2017), "Contextualizing leadership: transformational leadership and management-by‑exception-active in safety-critical contexts", Journal of Occupational and Organisational Psychology, Vol. 90 No. 3, pp. 281-305.

Wilke, D. J., Radey, M., King, E., Spinelli, C., Rakes, S., & Nolan, C. R. (2018). Multi-level conceptual model to examine child welfare worker turnover and retention decisions. *Journal of Public Child Welfare*, *12*(2), 204–231.