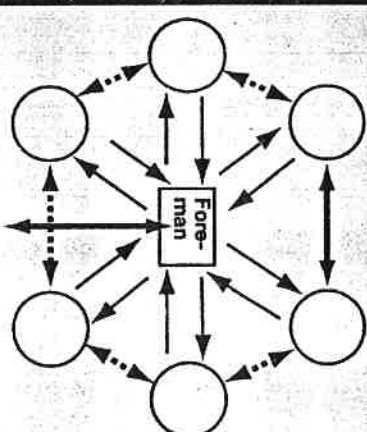


Matti Voritainen, Francesco Avallone, &
Neil Anderson (Editors)

Innovative Theories, Tools, and Practices in Work and Organizational Psychology



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and Neil Anderson (Editors)

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Preface

Work and organizational psychology is facing numerous challenges at the beginning of the new millennium. The environment is turbulent and evolving. The globalization of economies and businesses is increasing the number of boundaryless enterprises, creating multisite working in cross-cultural contexts. Small and medium-sized companies are networking to maintain their position in the marketplace. Global and local are meeting each other. Rapid progress in information and communication technologies is providing the technical basis for this globalization. Technological development is decreasing the need for manual jobs, resulting in unemployment in traditional industries. At the same time, jobs in the knowledge and service sector are on the increase. Evolving technologies are also creating pressure to develop new organizational structures and job contents. Mobile technologies are threatening to revolutionize working life totally by increasing the possibilities to work in any place and at any time. The number of networks and virtual organizations are increasing. Most people now work in groups and teams. Flexibility needs grow. Employees do work in projects, which have their own life cycles. An employee is a member of several groups simultaneously. (S)he must be able to change his/her tasks, roles, and attitudes flexibly. Competence and knowledge requirements are increasing in every job. At the same time, stress and exhaustion in jobs are rising. What are the limits of human resources? To what extent can they be extended and supported via social and technological support? For many companies, it is intellectual capital that explains their growth in stock markets. All this creates new challenges and possibilities, both for practitioners and researchers in the field of work and organization psychology. Is it possible to optimize the use of human resources in human ways? Can new and innovative organizational forms be detected by modeling activities of advanced companies, projects, and teams in turbulent contexts when they try to adapt and expand in the grey border area between the known and the unknown? Human resources professionals today have a historical chance to extend their role from personnel selection and training specialists to real strategic partners in companies' and other organizations' management boards.

"Innovations for Work, Organization and Well-Being" was the main topic in the 9th European Congress on Work and Organizational Psychology held in Helsinki-Espoo (Finland) 12–15 May 1999. Total number of participants was 567 from 31 different countries, mostly in Europe. The congress was organized by the European Association of Work and Organizational Psychology (EAWOP) in collaboration with the Finnish Institute of Occupational Health (FIOH) and the Work and Organizational Psychology Forum, and with the support of the Finnish Psychological Society, the Finnish Psychological Association, the Laboratory of Work Psychology and Leadership (Helsinki University of Technology) and Psykonet.

This book is a genuine reflection of the congress, and includes 21 selected articles from the congress contributions. The editors' main idea was to cover the topics discussed in the congress itself. We wanted papers from different parts of Europe. The topics of the papers should be interesting, and reflect European and international discussion in the field. At the same time, they should somehow be connected to each other. 67 candidate articles were received for the book. It was hard to decide which of them to include. This book is the result. Our writers are from different backgrounds. Some are experienced while others are just

starting their scientific and practical careers. We thank every author and would at the same time remind the critical reader that the contributors themselves are responsible for the content of their article and the quality of their English, although ultimately the composition of this volume is of course the sole responsibility of the editors.

The book starts by defining some concepts like "innovation" and "work pressure." Various tools take an important position in this book. They are the practical artifacts that scientists sometimes produce for practitioners in addition to concepts and theoretical models. For work and organizational psychology practitioners, tools and methods are of utmost importance. Tools and methods based on insightful psychological and social psychological research and facts are, in practitioners' hands, strong weapons in the analysis and development of work systems. The tools shown in this book include, for example, a new Nordic questionnaire for psychological and social factors at work (QPSNordic), simulation games for team building and team training and for organizational values dissemination.

Several articles deal with groups and teamwork. This reflects well the content of the congress itself; there were several sessions dealing with this topic. During the 1990s the number of groups and teams has increased enormously in Europe. It seems that forming and developing them provides a permanent challenge. There is still a lot to learn, such as how to use feedback and performance appraisal instruments, and their potential in enhancing and improving the performance and cooperation of work groups. Three articles deal with an interesting future challenge of work in virtual workplaces and how to support it with collaboration technology. The rest of the articles deal, for example, with the work socialization process with regards to newcomers and personally characteristics of small and medium-sized companies' founders. The book ends with a discussion of issues of learning and competence and the changing role of Human Resources Development as the future strategic partner.

We thank all the congress participants, and especially the contributors to this book, for their hard work and patience. This book would not have been possible without the financial support from EAWOP and the Laboratory of Work Psychology and Leadership at Helsinki University of Technology. Many thanks also to the layout designer, Ms. Satu Ilta.

Dear reader! The next EAWOP Congress will be in Prague, Czech Republic, in May 2001. Let's meet there!

March 2000

Matti Vartiainen Francesco Avallone Neil Anderson
Helsinki, Finland Rome, Italy London, Great Britain

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Creativity and Innovation at Work

Michael A. West

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Abstract

Creating conditions for innovation and creativity at work involves ensuring both high levels of threat and safety; giving people job security but making sure they don't stay in their jobs for long; having a high level of diversity amongst employees, along with integration; having high levels of cohesion while encouraging dissent. These paradoxical prescriptions for innovation and creativity at work neatly summarise both the challenges and the complexities of understanding human behavior in this area.

Keywords

Creativity, Organizational levels, Innovation

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The Validity of Affective Work Team Climates

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Abstract

The aim of the present study is to study the validity of affective work team climates in a sample of 33 health care work teams using a two-wave panel data design. The results obtained showed: (1) a high level of within-team agreement regarding the studied affective variables (satisfaction and commitment) and a satisfactory degree of discrimination among work teams' scores, (2) that within-team agreement in one dimension of work team climate (goal orientation) measured at time 1 was related to within-team agreement in satisfaction and commitment at time 2, (3) that aggregated work team support predicted aggregated work team satisfaction and commitment over time, and that change in the four aggregated cognitive climate dimensions (support, innovation, goal orientation and rule orientation) predicted change in aggregated satisfaction. The results obtained supported the validity of the affective work team climate concept.

Keywords

Organizational Climate, Work Team Climate, Affective Responses, Satisfaction, Commitment

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Introduction

Traditionally, work and organizational researchers have used the construct of climate at the team level to refer to work team perceptions shared by team members. These climates so-defined are cognitive climates because the sharedness is related to a cognitive product. But if the sharedness is related to affective reactions or emotional responses, other kinds of affective or emotional climates may be proposed. Thus, De Rivera (1992) proposed the concept of emotional climates to refer to the emotional reactions shared by a collectivity. And George (1990, p. 108) proposed the concept of affective tone of a group and defined it as "consistent or homogeneous affective reactions within a group". This concept is analogous to the traditional concept of work team climate, but while in the latter the sharedness is related to perceptions, in the former the sharedness is related to affective reactions. In the present study, the concept of affective work team climate is used to refer to affective reactions shared by work team members. The aim of the present paper is to test the validity of the concept of affective work team climate.

According to George (1990, 1996), theoretical justification for affective work team climates is provided by the attraction-selection-attrition (ASA) framework (Schneider and Reichers, 1983; Schneider, 1987), the group socialization and social influence literature, and similarity of group members' tasks and outcomes. The ASA framework suggests that people with similar personalities will tend to be attracted to and retained in a work group through a variety of mechanisms (George, 1990). This will result in some degree of similarity in personality within groups, which in turn will produce some degree of similarity in affective reactions within groups. The group socialization literature points out that socialization is an influence process which promotes some degree of consistency within groups regarding aspects such as group values, goals and standards (Fisher, 1986). Besides this, "it is likely that during the socialization process, group members learn an overall positive or negative orientation to the work situation that will be manifested in characteristic affect at work" shared by group members (George, 1990, p. 108). Finally, work team members often perform similar tasks and are exposed to similar outcomes, which probably will influence their affective experience. These influences will contribute to work team members experiencing similar affective reactions (George, 1996).

A fourth argument not considered by George (1990, 1996) for justifying the existence of affective work team climates stems from research on the climate-affective responses relationship. During the past few decades, many cross-sectional studies have provided empirical evidence supporting that individuals' perceptions of their work environments, i.e. psychological climate, influence their affective job responses such as job satisfaction (Friedlander and Margulies, 1969; Pritchard and Karasick, 1973; Lawler et al., 1974; Kozlowski and Hults, 1987; Jackofsky and Slocum, 1988; Day and Bedeian, 1991; Repetti and Cosmas, 1991). Recent longitudinal studies focused on clarifying the direction of the climate-job affective outcomes relationship have shown that this relationship is not reciprocal, but unidirectional with climate influencing upon job affective outcomes (González-Romá et al., 1996). If members of a work team have similar team perceptions, then, based upon the aforementioned relationship, it is likely that they experience similar affective reactions, and that the level of these shared affective responses is partially accounted for

by the level of shared cognitive perceptions. Thus, it is expected that cognitive work team climates predict affective ones.

Until now the empirical research on affective work team climates is still scarce (George, 1996) and cross-sectional. George (1990) obtained empirical evidence supporting the validity of affective work team climates in a sample of 26 work-groups. She found that: (1) there was substantial agreement among individual affective reactions within groups; (2) characteristic levels of two personality traits (positive and negative affectivity) within groups were significantly correlated with the affective climates of the groups; and (3) the affective climate of a workgroup predicted the group's pro-social and absenteeism behaviors. More studies are needed that show the role that cognitive work team climates play in the formation of affective work team climates.

The study sample was composed of Health Care Teams. These teams work isolated from each other and are managed by a team coordinator. These characteristics foster within-group socialization processes. Moreover, team members perform similar or interdependent tasks and report outcomes at the team level yearly. Stemming from these characteristics it was hypothesized that:

Hypothesis 1: Team members have similar affective work experiences.

Based upon the climate-affective responses relationship, it was hypothesized that:

Hypothesis 2: Within-team agreement in work team perceptions is related to within-team agreement in affective responses.

Hypothesis 3: Work teams' scores on cognitive climate dimensions predict work teams' scores on affective climate variables.

Considering that these relationships are dynamic in nature, a two-wave panel data design is used. Thus, the following questions are addressed: (1) Is within-team agreement in work team perceptions at time 1 related to within-team agreement in affective responses at time 2? (2) Do work teams' scores on cognitive climate dimensions at time 1 predict work teams' scores on affective climate variables at time 2? (3) Do work teams' scores on cognitive climate dimensions at time 1 predict change in work teams' scores on affective climate variables? and (4) Do changes in work teams' scores on cognitive climate dimensions predict changes in work teams' scores on affective climate variables?

The validity of the affective climate concept will be supported if the study validation hypotheses are confirmed.

Method

Sample

The study sample was composed of members of 23 Primary Health Care Teams (PHCTs) and 10 Mental Health Care Teams (MHCTs). PHCTs are composed of family physicians, pediatricians, nurses, social workers and auxiliary and administrative personnel. MHCTs are composed of psychiatrists, psychologists, nurses and auxiliary and

administrative personnel. In each of these 33 work teams, a health professional performed a team coordinator role. Work team size varied between 6 and 55 subjects with a mean of 28.5 ($SD=14.6$).

Questionnaires were distributed among the health care professionals by one of the authors who visited each of the 33 work teams twice, asking for cooperation and guaranteeing confidentiality of data. Questionnaires were returned by mail. In the first data gathering phase (time 1) 456 subjects responded to the study questionnaires. The response rate was 48.5%. 32.2% were male, 37.2% were female, and the remaining 30.6% did not respond to this question. Average age was 36.4 ($SD=7.2$) and average team tenure was 4.7 years ($SD=2.9$). Among PHCTs professionals 32.5% were family physicians and 32.3% were nurses. 30.4% of the MHCTs members were professionals with a college degree (psychiatrists or psychologists) and 21.7% were nurses.

The second data gathering phase was implemented one year later. Data from 366 subjects were collected. This represented a response rate of 39%. 26% were male, 33% were female, and the remaining 41% did not provide information regarding this variable. Average age was 36.9 ($SD=7.1$) and average team tenure was 5.6 ($SD=3.2$). 34.6% of the PHCTs members were family physicians and 34.4% were nurses. Among the MHCTs professionals 33.3% were psychiatrists or psychologists and 24.6% were nurses.

The fact that the subjects who made up the time 1 and time 2 samples were not the same is not an important concern for the present study. This study is focused on aggregate teamwork climates rather than individual responses over time, and this made it less important to collect data from the same subjects at both time points. Moreover, demographic data suggest that the composition of the two samples regarding relevant demographic variables is very similar.

Measures

Cognitive work team climate dimensions

The work team cognitive climate dimensions considered in this study were measured by means of the climate questionnaire developed by the FOCUS (First Organizational Climate/Culture Unified Search) international research group (van Muijen, 1994). The Climate/Culture Unified Search) international research group (van Muijen, 1994). The support, innovation, goal orientation and rule orientation sub-scales comprise 8, 12, 14 and 6 items respectively, e.g. "People with personal problems are helped", "New ideas about work are encouraged", "Individual appraisal is directly related to the attainment of goals", and "Communications follow the hierarchy", respectively. Response to each item is by means of a 6-point Likert-scale. Respondents were asked to describe, not evaluate, the climate within their work teams. The alpha coefficients estimated for the four sub-scales varied between 0.68 for rule orientation at time 2 and 0.86 for goal orientation at time 2, excepting the alpha computed for rule orientation at time 1 which was 0.49 (see Table 2).

Affective variables

The two affective variables used to study affective climates were satisfaction with the team and commitment to the team. Satisfaction and commitment are two of the affective work experiences, which have received more attention from researchers.

Satisfaction with the team. This variable was measured by means of a 7-item scale whose items refer to team functioning, team meetings, team coordination, participation in team decision making, recognition received by other team members, cooperation received from other team members, and work team effectiveness. Items were responded to using a 7-point Likert-scale ranging from "1. Very dissatisfied" to "7. Very satisfied". Alpha coefficients were 0.92 (time 1) and 0.91 (time 2).

Commitment to the team. This variable was measured by a 3-item scale whose items refer to team commitment based on identification and internalization (O'Reilly and Chatman, 1986). Two of the items were extracted from O'Reilly and Chatman's (1986) scale ("I am proud to tell others I am part of this work team", "The values that my work team supports are important to me"). The third item ("I share my work team's objectives") was developed by the authors. Items were responded to using a 5-point Likert-scale ranging from "1. Strongly disagree" to "5. Strongly agree". Alpha coefficients were 0.74 (time 1) and 0.80 (time 2).

Analysis

Within-team agreement on work team perceptions and affective work experiences was estimated by means of the James et al. (1984) coefficient ($r_{wg(j)}$), also called the interrater reliability (IRR) coefficient. Discrimination among teams' scores on each cognitive climate facet and each affective variable was investigated by means of a number of one-way ANOVAs. If the variation between work teams' scores is greater than the variation within work teams, then it can be concluded that shared perceptions and affective responses relate to the particular teamwork and not to a higher unit level (the Regional Health Care Service).

The impact of aggregated cognitive work team climates on aggregated affective work team climates over time was estimated by means of a series of regression analyses.

Results

Within-team agreement in affective responses

To test Hypothesis 1 the IRR coefficient was computed for each work team and each affective variable. The average and the median IRR values, and the percentage of computed IRR values above the critical point of 0.70 (Nunnally, 1978) for each affective variable considering both measurement times, were as follows: satisfaction with the

team: 0.85, 0.89, and 93.9%; commitment to the team: 0.77, 0.82, and 84.8%. Discrimination among teams' scores on each affective variable was investigated by means of one-way ANOVAs. The *F* ratios obtained for each affective variable in both measurement times (t1 and t2) were the following: satisfaction with the team: 2.26 ($p < 0.01$) and 3.05 ($p < 0.01$); commitment with the team: 1.83 ($p < 0.01$) and 2.22 ($p < 0.01$). These results supported aggregation of individual scores on affective variables at the work team level, and confirmed that shared affective responses could be related to a particular work team and not to a higher-level unit.

Correlations between within-team agreement measures

To tests Hypotheses 2 and 3 and to study the impact of aggregated work team cognitive climate on aggregated work team affective climate, firstly aggregation of individual cognitive climate scores must be justified. The average and the median IRR values, and the percentage of computed IRR values above the critical point of 0.70 (Nunnally, 1978) for each climate facet considering both measurement times, were as follows: support: 0.86, 0.89, and 97%; innovation: 0.94, 0.95, and 100%; goals orientation: 0.90, 0.93, and 95.4%; and rules orientation: 0.85, 0.87, and 93.9%. Discrimination among teams' scores on each cognitive climate facet was investigated by means of a number of one-way ANOVAs. The *F* ratios obtained for each climate facet in both measurement times (t1 and t2) were the following: support: 2.85 ($p < 0.01$) and 2.64 ($p < 0.01$), innovation: 1.26 ($p < 0.16$) and 1.60 ($p < 0.03$), goal orientation: 1.77 ($p < 0.01$) and 2.69 ($p < 0.01$), and respect for rules: 2.17 ($p < 0.01$) and 2.79 (0.01). Considering that Hays (1981) has suggested that minimum evidence for differences across teams would be an *F* ratio from an ANOVA greater than 1.00, all these results evidenced satisfactory levels of within-team agreement and between team discrimination. Thus, aggregation of individuals' cognitive climate scores at the team level was justified.

To test hypothesis 2, the IRRR coefficient was used to measure within-team agreement with regard to the study variables. Then, the correlations between within-team agreement in the four work team perceptions at time 1 and time 2 satisfaction and commitment were computed. The results obtained are shown in Table 1. Only within-team agreement in time 1 goal orientation showed statistically significant correlations

Table 1. Correlations between within-team agreement measures (IRR coefficients).

	IRR Satisfaction t2	IRR Commitment t2
IRR Support t1	.13	.24
IRR Innovation t1	.30	.14
IRR Goals t1	.76**	.53**
IRR Rules t1	-.39	.14

* $p < 0.05$; ** $p < 0.01$

with within-team agreement in time 2 satisfaction (0.76, $p < 0.01$) and commitment (0.51, $p < 0.01$).

Correlations among aggregated variables

Table 2 shows correlations among the study variables. Time 1 aggregated satisfaction and commitment presented statistically significant positive correlations with time 1 and time 2 aggregated support, innovation and goal orientation. Time 2 aggregated satisfaction showed statistically significant positive correlations with the four aggregated cognitive climate dimensions measured at time 2. Time 2 aggregated commitment presented significant positive correlations with time 2 aggregated support and innovation, but not with time 2 aggregated rule and goal orientation (see Table 2)

Influence of work teams' cognitive climates on work teams' affective climates

In order to study this relationship, a number of regression analyses were carried out. First, to determine if work teams' cognitive climates measured at time 1 predicted work teams' affective climates measured at time 2, each affective aggregated variable measured at time 2 was regressed onto the four aggregated cognitive climate dimensions measured at time 1.

Table 2. Correlations among aggregated study variables, descriptive statistics and alpha coefficients.

	mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Satisfaction t1	4.02	1.26	.92	.84*	.71**	.58**	.59**	.29	.55**	.64**	.60**	.40*	.46**	.10
2. Commitment t1	3.79	.77		.74	.63**	.59**	.56**	.28	.84**	.57**	.58**	.32*	.43*	.11
3. Support t1	3.28	.84			.79	.72**	.45**	.24	.49**	.52**	.80**	.36*	.31*	-.04
4. Innovation t1	2.75	.56				.71	.64**	.47**	.38*	.39*	.62**	.45**	.46**	.05
5. Goals t1	2.96	.70					.82	.65**	.27	.22	.37*	.24	.64**	.32
6. Rules t1	3.33	.69						.42	.31	.16	.34	.22	.66**	.62**
7. Satisfaction t2	4.11	1.15							.91	.80**	.65**	.62**	.56**	.44**
8. Commitment t2	3.81	.78								.81	.53**	.43*	.30	.24
9. Support t2	3.24	.77									.80	.42*	.52**	.29
10. Innovation t2	2.77	.62										.81	.46**	.06
11. Goals t2	2.97	.74											.86	.69**
12. Rules t2	2.79	.65												.68

* $p < 0.05$; ** $p < 0.01$ Cronbach's alpha coefficients are in the correlation matrix diagonal

The results obtained are shown in Table 3. Aggregated support in time 1 significantly predicted aggregated satisfaction with the team in time 2 ($b=0.51$, $p<0.04$) and commitment to the team at time 2 ($b=0.51$, $p<0.05$). Thus, the more support perceived by team members at time 1, the more satisfaction with the team and the more commitment to the team they will experience in time 2. None of the remaining aggregated cognitive climate dimensions showed statistically significant influences on aggregated affective variables.

To ascertain if: (a) time 1 aggregated cognitive climate dimensions predicted change in aggregated affective variables between time 1 and time 2, and (b) change in aggregated cognitive climate dimensions predicted change in aggregated affective variables, a series of stepwise regression analyses were performed. In these analyses, each aggregated affective variable measured at time 2 was considered as the dependent variable. Stepwise regression involved entering into the regression equation the corresponding aggregated affective variable in time 1 as step 1. In step 2, one of the four aggregated cognitive climate dimensions measured at time 1 was entered into the regression equation. The beta coefficient associated to this variable was used to determine whether the time 1 measure of the aggregated cognitive climate dimension predicted change in the dependent aggregated affective variable (Plewis, 1985). In step 3, the time 2 measure of the aggregated cognitive climate dimension introduced in the previous step, was entered into the equation. The beta coefficient associated to this variable was used to determine whether change in the implied aggregated cognitive climate dimension predicted change in the involved aggregated affective variable (Plewis, 1985). This set of analyses was repeated for each aggregated affective variable and each aggregated cognitive climate dimension. The results obtained are shown in Tables 4 and 5.

Aggregated support at time 1 did not predict change in aggregated satisfaction with the team (see the Step 2 column of Table 4, $b=0.21$, $p>0.05$). But change in aggregated support between time 1 and time 2 predicted change in aggregated satisfaction with the team (see the Step 3 column, $b=0.67$, $p<0.01$). Thus, in those work teams in which aggregated support increased between time 1 and time 2, aggregated satisfaction with the team also increased. The same pattern of relationships was observed for the remaining aggregated cognitive climate dimensions. Aggregated innovation, aggregated goal orientation and aggregated rule orientation measured at time 1 did not predict change in aggregated satisfaction with the team (see the corresponding values in the Step 2 column). But the

Table 3. Regression analyses of time 2 aggregated satisfaction with the team and aggregated commitment to the team onto time 1 aggregated cognitive climate dimensions.

PREDICTORS (time 1)	Aggregated satisfaction time 2	Aggregated commitment time 2
Aggregated support	.51*	.50*
Aggregated innovation	-.04	.05
Aggregated goals	-.12	-.08
Aggregated rules	.29	.07
R2	.29*	.28*

* $p<0.05$; ** $p<0.01$

values continued in the Step 3 column point out that change in aggregated innovation ($b=0.50$, $p<0.01$), in aggregated goal orientation ($b=0.58$, $p<0.01$), and in aggregated rule orientation ($b=0.47$, $p<0.02$) did predict change in aggregated satisfaction with the team.

Table 4. Regression analyses of time 2 aggregated satisfaction with the team onto time 1 aggregated satisfaction, and time 1 and time 2 aggregated cognitive climate dimensions.

PREDICTORS	Step 1	Step 2	Step 3
Aggregated satisfaction time 1	.55**	.40	.35
Aggregated support time 1		.21	-.29
Aggregated support time 2			.67**
R2		.30	.48
R2 change		-.02	.16
d. f.	1.31	2.30	3.29
F	13.25**	7.09**	9.07**
Aggregated satisfaction time 1	.55**	.49*	.39*
Aggregated innovation time 1		.10	-.06
Aggregated innovation time 2			.50**
R2	.30	.31	.50
R2 change	-.01	.01	.19
d. f.	1.31	2.30	3.29
F	13.25**	6.62**	9.49**
Aggregated satisfaction time 1	.55**	.60**	.52**
Aggregated goals time 1		-.08	-.40*
Aggregated goals time 2			.58**
R2	.30	.30	.50
R2 change	-.00	.00	.2*
d. f.	1.31	2.30	3.29
F	13.25**	6.54**	9.6**
Aggregated satisfaction time 1	.55**	.50**	.54**
Aggregated rules time 1		.17	-.13
Aggregated rules time 2			.47*
R2	.30	.33	.46
R2 change	-.03	.03	.13
d. f.	1.31	2.30	3.29
F	13.25**	7.27**	8.31**

* $p<0.05$; ** $p<0.01$

Table 5. Regression analyses of time 2 aggregated commitment to the team onto time 1 aggregated commitment, and time 1 and time 2 aggregated cognitive climate dimensions.

PREDICTORS	Step 1	Step 2	Step 3
Aggregated commitment time 1	.57**	.41*	.38
Aggregated support time 1		.26	.09
Aggregated support time 2			.24
R2	.33	.37	.39
R2 change	–	.04	.02
d. f.	1,31	2,30	3,29
F	15.16**	8.82**	6.18**
Aggregated commitment time 1	.57**	.53**	.50**
Aggregated innovation time 1		.08	-.03
Aggregated innovation time 2			.29#
R2	.33	.33	.40
R2 change	–	.00	.07
d. f.	1,31	2,30	3,29
F	15.16**	7.48**	6.41**
Aggregated commitment time 1	.57**	.65**	.63**
Aggregated goals time 1		-.14	-.24
Aggregated goals time 2			.18
R2	.33	.34	.36
R2 change	–	.01	.02
d. f.	1,31	2,30	3,29
F	15.16**	7.77**	5.44**
Aggregated commitment time 1	.57**	.57**	.59**
Aggregated rules time 1		.00	-.17
Aggregated rules time 2			.28
R2	.33	.33	.38
R2 change	–	.00	.05
d. f.	1,31	2,30	3,29
F	15.16**	7.34**	5.85**

#p<0.09; *p<.05; **p<.01

So, in those work teams in which aggregated innovation, aggregated goal orientation and aggregated rule orientation increased between time 1 and time 2, aggregated satisfaction with the team also increased.

The results of the regression analyses, in which aggregated commitment to the team at time 2 was the outcome variable, are shown in Table 5. These results revealed that none of the aggregated cognitive climate dimensions measured at time 1 predicted change in aggregated commitment (see the Step 2 column of Table 5). Only change in aggregated innovation showed a marginal statistically significant impact on change in aggregated commitment to the team ($b=0.29$, $p<0.09$, in the Step 3 column).

Discussion

The aim of the present study was to test the validity of the concept of affective work team climate. The results obtained supported the validity of this concept since the validation hypotheses were confirmed. Regarding *Hypothesis 1*, it was observed that health professionals belonging to the same team had similar levels of satisfaction and commitment. Moreover, there were significant differences among work teams' satisfaction and commitment scores. This between-teams differentiation supported that shared affective responses could be related to a particular work team and not to a higher-level unit.

According to *Hypothesis 2*, it was expected that within-team agreement in work team perceptions was related to within-team agreement in affective responses. This relationship was supported in the case of the cognitive climate facet of goal orientation. Although the computed correlations were affected by a strong range restriction (85% of the IRR coefficients were equal or greater than 0.70), the results obtained point out that within-team agreement in work team perceptions is associated with the within-team agreement in affective responses observed one year later.

With regard to *Hypothesis 3*, it was confirmed that work teams' scores on cognitive climate dimensions predict work teams' scores on affective variables. Specifically, it was observed that aggregated support predicted aggregated satisfaction and commitment over time, and that change in the four aggregated cognitive climate dimensions predicted change in aggregated satisfaction.

George (1990, 1996) suggested that within-team similarity in affective responses stems from attraction-selection-attrition processes (Schneider and Reichers, 1983; Schneider, 1987), group socialization and social influence processes, and similarity of group members' tasks and outcomes. Based upon the climate-affective job outcomes research, in the present study it was suggested that similarity in affective responses is also rooted in within-team similarity in team perceptions, and that shared affective responses are partially accounted for shared cognitive perceptions. The results obtained supported this fourth basis for within-team homogeneity in affective experiences, and demonstrated that work teams' cognitive climates predicted work teams affective climates. It is probable that within-team similarity in team perceptions is an intervening variable between the processes mentioned by George (1990, 1996) and within-team similarity in affective responses, since those processes are also influential on cognitive

climate formation (e.g. Schneider and Reichers, 1983).

Future studies should address the question raised here using different affective responses (Warr, 1990). George (1990, 1996) used positive affect and negative affect to describe group affective tone, and stated that "the group affective tone construct, in a sense, captures the overall collective well-being levels of groups" (George, 1996, p. 90). However, we believe that the use of more specific affective well-being indicators can become more fruitful for research and practice.

During the last decades, different kinds of climates have been proposed in the literature (Rousseau, 1988). Some of them have raised some controversies and polemics (Payne, 1990; Jackofsky and Slocum, 1990; González-Romá et al., 1999). When new proposals are made, it is necessary to study their validity and usefulness in improving our understanding of organizational behavior. Research on the validity of the affective climate concept is still scarce and of cross-sectional nature. For this reason, we believe our study makes a relevant contribution on the addressed topic.

Finally, a caution must be made. Although the validity of affective work team climates has been supported, this does not imply that within-team agreement regarding affective responses should always exist (George, 1996). When the processes suggested by George (1990, 1996) are constrained in some way or are not able to operate, and when there is no within-team agreement in work team perceptions, within-team similarity in affective responses is less probable.

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