Proceedings of the 12th IAMB Conference  
Spring 2012  
Manuscripts listed alphabetically by first Author  

(or back to Main Menu)

Abaza, Wasseem  
Lecturer  
Case Western Reserve University  
Cleveland, Ohio, USA  
*Goal Implications of Socially Constructed International Institutional Identities*  
Author(s): Wasseem Abaza

Abaza, Wasseem  
Lecturer  
Case Western Reserve University  
Cleveland, Ohio, USA  
*A Contingency Framework for a Working Theory of Implementation*  
Author(s): Wasseem Abaza

Abril, Carmen  
Associate Professor  
Department of Marketing  
Complutense University  
Madrid, Spain  
*The Transfer of Sports Values to Sponsor Brands*  
Author(s): Carmen Abril, Sanchez Joaquin, Jose-Manuel Ponzoa, Victor Molero

Akhondzadeh, Elham  
Department of Industrial Engineering  
Tarbiat Modares University  
Tehran, Iran  
*Mining the Cause of Complaints by using a Two-Phase Association Rule Technique*  
Author(s): Elham Akhondzadeh, Amir Albadvi

Akin, Mahmut  
Assistant Professor  
The Faculty of Economics and Business Administration  
Bozok University  
Yozgat, Turkey  
*The Influence of Workplace Exclusion on Workplace Deviance Behaviors: The Role of Employee’s Regulatory Focus*  
Author(s): Mahmut Akin, Mahmut Ozdevecioğlu
Antunes, Ludmila
Professor Adjunct
Universidade Federal Fluminense
Niterói, Rio de Janeiro, Brasil
*Participation and Public Policies in Brazil Participatory Budget Experiences in Rio De Janeiro State Cities with Financial Resources Derived from Oil Royalties*
Author(s): Ludmila Antunes

Atay, Erhan
Assistant Professor
Suleyman Sah University
Istanbul, Turkey
*High Performance Work Systems and Organizational Performance in Korea*
Author(s): Erhan Atay

Bhatia, Sushil
Professor and Executive in Residence
Suffolk University
Boston, MA, USA
*Innovating in a Borderless World*
Author(s): Sushil Bhatia

Boiral, Olivier
Professor
Université Laval
Quebec, Canada
*Comparing Sustainability Performance Indicators from GRI Reports*
Author(s): Olivier Boiral

Boru, Deniz
Associate Professor
Marmara University
Istanbul, Turkey
*Ethical Climate, Organizational Trust and Organizational Commitment*
Author(s): Deniz Boru, Guler Islamoglu, Melek Birsel, Serra Yurtkoru

Burgess, Kevin
Senior Research Fellow
Cranfield University
Swindon, Wiltshire, United Kingdom
*Open Innovation within Defence Acquisition*
Author(s): Kevin Burgess
Chang, Heidi H.
Assistant Professor
Department of Hospitality Management
I-Shou University
Kaohsiung, Taiwan
*Crisis Management in the Hospitality Industry in Taiwan*
Author(s): Heidi H. Chang, Shun-Wang (Jackson) Hsu, Hsin-I (Carol) Chang

Cherchem, Mohamad
Professor
Faculty of Economic Sciences and Management
Laboratory LAMEOR
University of Oran
Oran, Ouahran, Algeria
*The Impact of the Imitation and Innovation Marketing in Services: The Case of the Banks and Insurance*
Author(s): Mohamad Cherchem

Chudzicka-Czupala, Agata
Department of Psychology
University of Silesia
Katowice, Poland
*A Comparison of the Multidimensional Work Ethic Profile across Two Countries*
Author(s): Agata Chudzicka-Czupala, Irina Cozma, Damian Grabowski, David Woehr

Chudzicka-Czupala, Agata
Department of Psychology
University of Silesia
Katowice, Poland
*Ethical Ideology as a Predictor of Ethical Decision Making*
Author(s): Agata Chudzicka-Czupala

De-Luis, Pilar
Profesora Titular
Universidad de Zaragoza
Zaragoza, Spain
*Gender Diversity in Top Positions: Is it Profitable?*
Author(s): Pilar de-Luis, Estrella Bernal, Maria-Jose Vela, Manuela Perez

Dool, Richard
Associate Professor
Seton Hall University
South Orange, NJ, USA
*Leaderocity: Leading at the Speed of Now*
Author(s): Richard Dool
Emirza, Emin
Assistant Professor
Faculty of Economics and Administrative Sciences
Meliksah University
Kayseri, Talas, Turkey
The Use of Social Media in Network Marketing and Its Effects on Job Satisfaction: An Application on Amway Distributors
Author(s): Emin Emirza, Banu Serin, Yusuf Hakan İştahlı

Fazlagić, Jan
Vice Rector, Associate Professor
Institute of Management
Vistula University
Warsaw, Poland
Knowledge Sharing in Polish Law Firms
Author(s): Jan Fazlagić, Marek Gmusowski

Firth, Michael
Professor
Lingnan University Hong Kong
Hong Kong, China
Pay Incentives and Firm Efficiency in a Socialist Capitalist System
Author(s): Michael Firth, T. Y. Leung, O. M. Rui

Galin, Amira
Professor
Faculty of Management
Tel Aviv University
Tel Aviv, Israel
Negotiating with Your Employee: Salary Negotiations and the Endowment Effect
Author(s): Amira Galin, Maya Nissan

Gavilan, Diana
Departamento de Comercialización e Investigación de Mercados
Universidad Complutense de Madrid
Madrid, Spain
Are Employees Committed to the Brand? Developing a Measurement Tool
Author(s): Diana Gavilan, Maria Avello, Francis Blasco, Susana Fernandez

Golonka, Monika
Kozminski University
Warsaw, Poland
Emerging Asian ICT Global Players: Natural Born Collaborators or Stuck With Aliens?
Author(s): Monika Golonka
Granger, Mary
Professor
Department of Information Systems
George Washington University
Washington, DC, USA
*Software Configuration Management in Organizations*
Author(s): Mary Granger, Ross Hoffner

Harrison, Elgloria
Ph.D. Student of Management
University of Maryland University College
College Park, Maryland, USA
*Global Leadership Competencies Hinge on Soft Skills*: An Examination of Cultural and Emotional Intelligence*
Author(s): Elgloria Harrison

Hensler, Philipp A.
Case Western Reserve University
New York, NY, USA
*Learning from Disruptive Market Events: A Study of Financial Advisor Behavior*
Author(s): Philipp Hensler, Sheri Perelli, Sheri Perelli

Himam, Fathul
Associate Professor
Department of Psychology
Universitas Gadjah Mada
Yogyakarta, Indonesia
*Spiritualism: Hidden Survival Values Among Indonesian Women Entrepreneurs*
Author(s): Fathul Himam

Hsiung, Dao-Tien
Graduate Student
Graduate Institute of Global Business and Strategy
Taipei, Taiwan
*Strategic Alliance and Firm Growth: The Effect of Alliance Capability*
Author(s): Dao-Tien Hsiung, Min-Ping Kang

Hys, Katarzyna
Politechnika Opolska
Opole, Poland
*Corporate Social Responsibility Reporting*
Author(s): Katarzyna Hys, Liliana Hawrysz
Jamro, Konrad
University of California
Irvine, CA, USA
Cross-Cultural Study of a Multifoci Approach to Citizenship Behavior
Author(s): Konrad Jamro, Pablo Cardona, Marisa Aguirre Nieto, Esther Akinnukawe, Ricardo Aparicio, et al

Kalinowska-Beszczynska, Olga
University of Exeter Business School
Exeter, Devon, United Kingdom
Uncovering the Social Development Role of The Venture Capital Process: In the Context of Economies in Transition in Central and Eastern Europe
Author(s): Olga Kalinowska-Beszczynska

Karadal, Himmet
Associate Professor
Aksaray University
Aksaray, Turkey
The Influence of Perceived Organizational Justice on Social Loafing: The Mediating Role of Employee’ Self Control
Author(s): Himmet Karadal, Cemile Çelik, Mahmut Ozdevecioğlu

Kaygısız, Esra Gokcen
Lecturer
Oğuzeli Vocational Higher Education School
Gaziantep, Turkey
Organizational Cynicism Level of Primary School Teachers and Managers: Example of Sahinbey in Gaziantep
Author(s): Esra Gokcen Kaygısız, Mehmet Çağrı Doğan

Kaygısız, Esra Gokcen
Lecturer
Oğuzeli Vocational Higher Education School
Gaziantep, Turkey
Corporate Citizenship and Corporate Social Responsibility on web sites: Comparing Emirates and Turkish Airlines
Author(s): Esra Gokcen Kaygısız

Kühlmann, Torsten
Professor
University of Bayreuth
Bayreuth, Bavaria, Germany
Inpatriates as Transferors of Knowledge
Author(s): Torsten Kühlmann, Miriam Busse
Kulkarni, Jaikumar
Associate Professor
ASM Group of Institutes
Pune, India
*Complexity Management- Major Challenge For Global Business.*
Author(s): Jaikumar Kulkarni

Lee, Jangwoo
Professor
Kyungpook National University
Daegu, South Korea
*The Policy of Win-Win Growth between Large and Small Enterprises - A South Korean Model*
Author(s): Jangwoo Lee, Minjae Kim, Junseok Heo

Lin, Chih-Hua
Graduate Student
Graduate Institute of Global Business and Strategy
National Taiwan Normal University
Taipei, Taiwan
*The Configuration of Top Managers and Types of Corporate Venturing Portfolio*
Author(s): Chih-Hua Lin, Shu-Jou Lin

Lin, Szu-Yin
National Sun Yat-Sen University
Kaohsiung, Taiwan
*Entrepreneur's Vision - The Role of Future Imagination*
Author(s): Szu-Yin Lin, I-Heng Chen, Yun-Ping Lee, Hsin-I Chang

Luethege, Denise
Chair
Department of Management
Northern Kentucky University
Highland Heights, Kentucky, USA
*Corporate Social Disclosure in Japan*
Author(s): Denise Luethege, Guohong Han, Huaiyu Chen

Lupina-Wegener, Anna
Professor
School of Business and Engineering
Ecole d’ingénierie et de Gestion du Canton de Vaud (HEIG-VD)
Yverdon-les-Bains, Vaud, Switzerland
*Identity Construction Processes: A Longitudinal Study of a German Merger in Mexico*
Author(s): Anna Lupina-Wegener
**Mahatha, Manish**  
Solution Architect  
Ericsson Global Services Center (GSC)  
Cyber Citi, Gurgaon, India  
*Value Proposition of Cloud Offerings to Small and Medium Enterprises*  
Author(s): Manish Mahatha, N.P. Singh

**Martinez-Sanchez, Angel**  
Professor  
University of Zaragoza  
Zaragoza, Spain  
*Work-Family Enrichment & Work-Family Conflict: A Study in Relationships*  
Author(s): Angel Martinez-sanchez, Robert Daniel Jijena-Michel, Manuela Perez-Perez

**Martinez-Sanchez, Angel**  
Professor  
University of Zaragoza  
Zaragoza, Spain  
*Telework and Work-Life Balance: A Moderator Role for Organizational Performance*  
Author(s): Angel Martinez-Sanchez, Manuela Perez-Perez, Maria-Jose Vela-Jimenez, Silvia Abella-Garces, Pilar de-Luis-Carnicer

**Mathisen, John Erik**  
Doctoral Candidate  
BI The Norwegian Business School  
Oslo, Norway  
*Entrepreneurial Mindsets: Theoretical Foundations and Empirical Properties of a Mindset Scale*  
Author(s): John Erik Mathisen, Jan Ketil Arnulf

**Matis, Bryan**  
Ph.D. Student  
Fordham University  
Bronx, New York, USA  
*Do Shareholders Penalize Bank Boards & Management for the Financial Crisis?*  
Author(s): Bryan Matis

**Methe, David T.**  
Professor  
Kwansei Gakuin University  
Nishinomiya, Hyogo, Japan  
*Risk Perception, and High Technology Entrepreneurship in Japan*  
Author(s): David Methe
Miranda, Sandra
Associated Professor
Instituto Politécnico de Lisboa
School of Communication and Media Studies
Lisbon, Portugal
*The Dark Side of Organizational Change: The Moderating Role of Political Behavior and Organizational Cynicism*
Author(s): Sandra Miranda, Angelo Vicente, Ana Antunes, Bruno Rodrigues, Teresa D’Oliveira

Miranda, Sandra
Associated Professor
Instituto Politécnico de Lisboa
School of Communication and Media Studies
Lisbon, Portugal
*Contributions to Political Leadership: Antecedents, Consequences, Mediators and Moderators Variables*
Author(s): Sandra Miranda

Miyamoto, Takuya
Associate Professor
Kurume University
Kurume, Japan
*A Research on Networks within and across the Industrial Cluster in Tsubame*
Author(s): Takuya Miyamoto

Mushtaq, Rabia
Department of Business Administration
International Islamic University
Islamabad, Punjab, Pakistan
*Pakistani Doctors at Risk of Job Burnout, Diminishing Performance and Smoking Habits*
Author(s): Rabia Mushtaq, Abida Ellahi

Öğütveren Gönül, Özlem
Instructor
College of Business Administration
Başkent University
Ankara, Turkey
*Constructing an Organizational Learning and Development Model for Management Education Programs*
Author(s): Özlem Öğütveren Gönül
Omowunmi, Wale-Okusi
Ph.D. Student
Olabisi Onabanjo University
Ago Iwoye, Ogun State, Nigeria
The Conceptualisation of Educational Measurement Held by some Secondary School Teachers
Author(s): Wale-Okusi Omowunmi

Palawongse, Rapeepat
Siam University
Bangkok, Thailand
The Marketing Relationships between Security Service Factors, Customer Satisfaction, and Customer Loyalty in Housing and Accommodation Business
Author(s): Rapeepat Palawongse, Narongsak Thongpapanl

Pasini, Margherita
Associate professor
University of Verona
Verona, Italy
The Relationship between Leader-members Exchange and Different Perceptions on Safety Climate in the Work Group
Author(s): Margherita Pasini, Maria Milena Città, Barbara Giacominelli, Margherita Brondino

Pellet, Pedro F.
H. Wayne Huizenga School of Business and Entrepreneurship
Nova Southeastern University
Fort Lauderdale, Florida, USA
Spirituality in Economics: National and Global Reform Strategic Planning Recommendations
Author(s): Pedro F. Pellet, Mario E. Delgado, Maria I. Mendez

Pon, Kevin
Enseignant Chercheur
ESC Saint-Etienne
Saint-Etienne, France
The Effect of Transnational Education on Mainstream Internationalisation at the Home Campus: A Case of Universities’ Foreign Campuses Contributing to the Home Campus Internationalisation Strategy
Author(s): Kevin Pon
Prengel, Dominique  
International University of Applied Sciences Bad Honnef, IUBH  
Koblenz, NRW, Germany  
Authentic Leadership and Employee Psychological Well-Being: The Role of Psychological Capital and Psychological Empowerment  
Author(s): Dominique Prengel

Rakowski, Joanna  
Ph.D. Student  
Benedictine University  
Northbrook, Illinois, USA  
Managing Organizational Change in Turbulent Times: A Positivistic Approach to Achieving Sustainability  
Author(s): Joanna Rakowski

Ral-Trebacz, Arkadiusz  
Doctoral Candidate  
Department of International Management  
International Graduate School Zittau (IHI Zittau)  
Zittau, Saxony, Germany  
Nonlinear Internalization Effects - The Relationship between firms’ Multinationality and their Performance  
Author(s): Arkadiusz Ral-Trebacz

Reis, Zaida C.  
Doctorate Student  
Universidade de Caxias do Sul  
Caxias do Sul, Rio Grande do Sul, Brazil  
Individual, Collective Leadership and Spiral of Knowledge Creation in Organisations  
Author(s): Zaida C. Reis, Cristine H. Nodari, Eric C. H. Dorion

Riguelle, France  
Researcher  
HEC School of Management, University of Liège  
Liège, Belgium  
Toward a Taxonomy of Key Success Factors for SME’s in a Changing Environment: The Case of the Luxury Industry  
Author(s): France Riguelle, Didier Van Caillie
Rodriguez-Donaire, Silvia  
Assitant Lecturer  
UPC - BarcelonaTECH  
Terrassa, Catalonia, Spain  
*Participatory Micro-Retailer’s Business Model Emergence: Rethinking and Adapting Micro-Retailer’s Business Model by means of Social Media*  
Author(s): Silvia Rodriguez-Donaire

Roy, Marie-Josée  
Professor  
Faculty of Administrative Sciences  
University Laval  
Quebec city, Québec, Canada  
*Developing Performance Evaluation Systems for Corporate Boards*  
Author(s): Marie-Josée Roy

Serra, Teresa  
Area Chair  
IE Business School  
Madrid, Spain  
*Store Brand Types as a Moderating Factor of the Relationship Between SB Loyalty and SB Share*  
Author(s): Teresa Serra, Alberto Maydeu-Olivares, Roberto Manzano

Sisodiya, Sanjay R.  
Assistant Professor of Marketing  
University of Idaho  
Moscow, Idaho, USA  
*The Role of Resources in NPD*  
Author(s): Sanjay R. Sisodiya, Jean L. Johnson, Stephen M. Wagner

Smyczek, Slawomir  
Professor  
University of Economics in Katowice  
Katowice, Poland  
*Consumer Trust to E-Banking in CEE Markets during Global Economic Crisis*  
Author(s): Slawomir Smyczek, Mario Glowik

Sobirin, Achmad  
Associate Professer  
University Islam Indonesia  
Yogyakarta, Indonesia  
*Assessing Entrepreneur’s Business Model of Family Firm within the Context of Batik Industry*  
Author(s): Achmad Sobirin
Soni, Mayank Jyotsna
Doctoral Student
Department of FPM, Marketing
Indian Institute of Management Ahmedabad
Ahmedabad, Gujarat, India
*Impact of Time Scarcity and Quantity Scarcity: The Role of Need for Uniqueness and Deal Proneness*
Author(s): Mayank Jyotsna Soni, Abraham Koshy

Srimai, Suwit
Lecturer
Prince of Songkla University
Surat Thani Campus
Muang, Surat Thani, Thailand
*Delivering Accountability and Performance: In Search of the Mechanisms via Measurement*
Author(s): Suwit Srimai

Sulejewicz, Aleksander
Professor
Department of
Warsaw School of Economics
Warsaw, Poland
*BRIC: The Career of a Concept in International Business Studies*
Author(s): Sulejewicz Sulejewicz

Tahsini Araghi, Sara
Business Architect
Behpardaz Jahan
Tehran, Iran
*A Collaboration Framework for Inter-Organizational Business Processes Management*
Author(s): Sara Tahsini Araghi

Tepe Kucukoglu, Mubeyyen
Department of Business Management
Institute of Social Sciences
Istanbul University
Istanbul, Turkey
*The effect of CRM's Critical Success Factors on Company Performance*
Author(s): Mubeyyen Tepe Kucukoglu, R. Ibrahim Pinar
Van Moorsel, Hans
Consultant
Thaesis B.V.
Utrecht, The Netherlands
Exploring the “Innovator’s Solution” to Disruptive Changes in the Dutch Publishing Industry
Author(s): Hans van Moorsel, Theo Huibers

Vardi, Yoav
Associate Professor
Department of Labor Studies
H. Gordon Faculty of Social Sciences
Tel Aviv University
Tel Aviv, Israel
Measurement Dilemmas in Organization (Mis)Behavior Research
Author(s): Yoav Vardi, Ely Weitz

Yang, Szu-Chi
Ph.D. Student
Business school
University of Huddersfield
Huddersfield, United Kingdom
The Mediating Effects of Defense Mechanism on Student Satisfaction
Author(s): Szu-Chi Yang, Suechin Yang, Chiayu Tu Tu

Yüksel, Müberra
Kadir Has University
Istanbul, Turkey
Framing Culturally Sustainable Organizations: A Comparative Analysis
Author(s): Müberra Yüksel

Zeffane, Rachid
Associate Professor
University of Sharjah
Sharjah, United Arab Emirates
The Influence of Personal Traits on Entrepreneurial Orientation: An Empirical Study from the United Arab Emirates
Author(s): Rachid Zeffane

Zhang, Lu
Assistant Professor
Benedictine University
Lisle, Illinois, USA
Leader Models for Sustainable Leadership
Author(s): Lu Zhang
Zhang, Lu  
Assistant Professor  
Benedictine University  
Lisle, Illinois, USA  
Composing Strategies  
Author(s): Lu Zhang

Zhongwei, Luo  
Professor  
Institute of Industrial Economics  
Chinese Academy of Social Science, CASS  
Beijing, China  
Author(s): Luo Zhongwei, Wang Tao

(back to Main Menu)
The Relationship between Leader-Members Exchange and Different Perceptions on Safety Climate in the Work Group

Margherita Brondino*, Margherita Pasini, Barbara Giacominelli, Maria Milena Città
University of Verona, Verona, Italy
Mail to: margherita.brondino@univr.it.

Abstract
From the end of nineties leader–member exchange theory has been considered one of the most useful approaches for studying links between leadership and organizational outcomes and particularly with safety outcomes (Zohar, 2002; Hofmann and Morgenson, 1999). The studies of Zohar and Hofmann & Morgenson suggested to integrate leadership, and in particular leader–member exchange, and safety climate (SC) as crucial factors of occupational safety. In this study leadership style is connected with the organizational-level safety climate (OSC), i.e. shared perceptions about management priorities about safety, and with group-level safety climate, considering group’s supervisor as a climate agent (supervisor safety climate, SSC), i.e. shared perceptions about supervisor’s priorities about safety. OSC and SSC are considered from two different points of view: supervisor’s perceptions, and his/her group members’ perceptions. Agreement degree about level of OSC/SSC perceived from group members and level of OSC/SSC perceived from supervisor (i.e. his/her psychological OSC, and self-evaluation of his/her safety commitment in the case of SSC) depends on LMX level, and can mediate the effect of LMX level on safety behaviours. The aim of the present work is to study the relationship between LMX level and safety behaviours, specifically safety compliance, and the mediation role of agreement degree about OSC/SSC among supervisor and his/her group members. Data collection involved 508 blue-collars belonging to 3 Italian manufacturing companies. Safety climate was measured at the organizational level (OSC) and at the group level (SSC). The same measures were gathered also on their supervisors (22 team managers). The agreement degree was computed as the difference between supervisors' and their workers' scores. Results confirmed the hypothesis of the relationship between LMX scores and safety compliance: the higher the LMX scores, the higher the safety compliance. Furthermore, the mediation role of agreement degree has been verified showing a total mediation. This means that the impact of LMX on safety compliance depends on the distance between supervisor's and his/her members' perceptions about the real importance of safety, at the organizational and at the group level.

An important implication of this result is that organizations should develop effective exchange relationships between supervisor and work group, to improve safety at work.

Introduction
Safety climate and culture research developed successfully since the inquiry into Chernobyl disaster identified inadequate safety culture as a major underlying factor for the accident (IAEA, 1986). However, the most important seminal paper on this topic was
proposed by Zohar in 1980, some years before the disaster. In this paper Zohar offered a great contribution on the definition and operationalization of safety climate, showing how this construct is related to the general safety level in the organizations and, in particular, how “management commitment to safety is a major factor affecting the success of safety programs in industry” (1980, p. 101).

The ensuing success of this approach to safety is indicated by later studies, which show how safety climate is a robust predictor of safety subjective outcomes, such as safety behaviour, and of objective outcomes, such as accidents and injuries (Christian, Bradley, Wallace and Burke, 2009). Safety climate has been one of the most frequently studied antecedents of safety performance since nineties. Safety climate is usually defined as the shared perceptions of the employees on policies, procedures, and practices relating to safety. It can be investigated at two hierarchical levels: group level, and organizational level. At the group level, safety climate usually refers to the role of supervisor (e.g. Zohar, 2000; Zohar & Luria, 2005; Wallace, & Chen, 2006, Melià & Sesè, 2007), but recent research has highlighted the importance of co-workers’ role as well (Brondino, Silva, Pasini, in press). Leadership was recognized as an important antecedent of safety climate (Zohar and Luria, 2004; Mullen and Kelloway, 2009). Leader – member exchange theory (LMX) has evolved in the past few years as one of the most useful approaches for studying hypothesized links between leadership and organizational outcomes (Schriesheim, Castro, & Cogliser, 1999). Taking into account that LMX quality refers to an interaction process through which leaders exert demands and give resources to workers, recent study have claimed LMX is related with safety behaviour (Hofman, Morgeson & Gerras, 2003). Hofmann and Morgenson (1999) provided the first attempt to study leadership as a predictor of safety outcomes. Results showed that quality of relationships between group leaders and their supervisors (i.e., leader-member exchange – LMX – level) predicted injuries in work groups, through the mediating effects of some safety climate dimensions (safety communication and management commitment). Zohar (2002) suggested a mediation model in which leadership style influences safety-climate perceptions in the group and hence the group's safety performance.

In this framework, safety climate perception has a central role in the safety performance. However, the impact of agreement degree about organizational and group level safety climate between supervisors and members of their work group, on safety behaviours, has not been investigated yet. This agreement should depend on leadership style: closer, higher-quality relationships between supervisor and group members could lead to higher agreement degree about safety climate.

The aim of the present work is to study the relationship between LMX level and the agreement degree about safety climate (considering organizational level and group level, i.e. OSC and SSC) between supervisors and members of their work group. Furthermore, the study explores the mediating role of the agreement degree between LMX and safety compliance.

Discussion and hypothesis

Leader-member exchange theory is a useful approach for studying link between leadership and organizational outcomes. Group members in a context of high-quality relationships with their supervisor show higher level of resources, given the trust and the emotional support they receive from their leader (Uhl-Bien, Graen, & Scandura, 2000). Quality of relationships between supervisor and members also predict safety performance as accidents and injuries (Hofmann & Morgeson, 1999). Thus, a high level of quality of relationship between supervisor and his/her members should predict high level of safety behaviours.
Hypothesis 1: LMX will be positively related to safety behaviours.

Quality of relationships between supervisor and members is positively related to safety climate (Zohar, 2002), a leading indicator of safety performance. Climate implies a dynamic of social interactions. Complex environments present many confusing cues conducive to a collective interpretation process that makes an environment more understandable. Unit members communicate and discuss their understanding of work environment events, and develop a shared interpretation of that environment. According to this social-interaction approach, events can thus be understood homogeneously if subordinates communicate with one another (socially interact) while attempting to understand those events. One of the ways to reach consensus in a group can be social group interactions (Gonzalez-Roma, Peirò, Tordera, 2002; Klein, Conn, Smith, Sorra, 2001). Quality of members’ interaction affects climate strength, a sort of agreement degree among members about environmental cues. All these studies have considered the role of agreement degree among peers (members), but no study considers agreement degree between supervisor and group members. Taking into account that leader-member exchange quality refers to an interaction process, high level of quality of relationship between supervisor and his/her members should predict high level of agreement degree about climate.

Hypothesis 2a: LMX will be positively related to agreement degree about Organizational Safety Climate.

Hypothesis 2b: LMX will be positively related to agreement degree about Supervisor Safety Climate.

The present study explores the underlying mechanism linking LMX to safety performance. The hypothesis is that this relationship is mediated by the agreement degree about climate between supervisor and his/her members. A different evaluation about safety priorities between supervisor and members could be connected with incoherent cues for worker, which could affect their safety performance.

Hypothesis 3a: Agreement degree about Organizational Safety Climate will mediate the relationship between LMX and safety behaviours.

Hypothesis 3a: Agreement degree about Supervisor Safety Climate will mediate the relationship between LMX and safety behaviours.

Procedure for collecting data

Data collection involved 508 blue-collars and their supervisors (22 team managers) belonging to 3 Italian metal-mechanical companies. A one-level design was used, considering the work-group level. All data was collected at individual level. Considering the whole sample, 98% of the participants were male; 74% had an educational level from 5 to 13 years of school; 82% of the participants had been working in the company for more than 10 year; all the participants had a permanent contract.

Measures

LMX is measured with the 7-item LMX measure provided by Graen and Uhl-Bien (1995). The items asked workers the extent to which they had high-quality exchanges with
their supervisor. Higher scores reflected higher quality exchanges. Items are accompanied by a 7-point rating scale ranging from 1 (not at all) to 7 (to a very large extent). Alpha reliability of this scale was .93.

Agreement degree on organizational safety climate (OSC) and supervisor's safety climate (SSC). The agreement degree consisted of the absolute difference between supervisors' and their workers' scores of OSC and SSC; higher values of this absolute difference means lower agreement degree (higher disagreement degree). OSC and SSC are measured with the Integrated Organizational Safety Climate Questionnaire by Brondino, Pasini, Silva (2011). OSC is measured with a 12-item scale in which the target of the safety climate judgement given by the worker is the entire organization. Each item of OSC scale is connected to one of the four domains identified by Griffin & Neal (2000, personal communication): Management values, Safety systems, Safety communication, and Safety training. Items are accompanied by a 7-point rating scale, ranging from 1 (never) to 7 (always). Alpha reliability of this scale was .95. SSC is assessed by a 10-item scale in which the workers had to judge the real importance given to safety by their direct supervisor in the work-group. Each item of SSC scale refers to two domains identified as supervisor reaction to the workers' safety behaviours and supervisor's own safety behaviour and effort to improve safety. Items are accompanied by a 7-point rating scale, commensurate with the organizational level scale. Alpha reliability of this scale was .96.

Safety behaviours are measured with a 4-item scale which refers to individual performance of safety compliance. The scale is an adjusted version of Griffin & Neal scale about safety behaviour (2000, personal communication). Responses were given on a 7-point Likert scale, from 1 = “not at all” to 7 = “very much”. Alpha reliability of this scale was .80.

Procedure

Few days before administering the questionnaire, either the top management organized an ad hoc meeting with unions, the Safety Commission and the safety officer or a trade-union meeting was held and workers were told that they were part of a larger sample of workers involved in a research supported by INAIL, and received information about the research program. Participants were informed that the questionnaire was anonymous, and all data were collected and conserved by the research group. They were also ensured that only aggregate results would be given to the management of the company.

All participants answered the questionnaire during working hours, at the end or at the beginning of their work shift, and were asked to answer as sincerely as possible. They were told that items concerned with their perception of organizational management, direct supervisor, and work-group co-workers about safety at works, they were told that, in case they found difficult to answer to an item, due to ignorance of something regarding, for instance, organizational policy, they should choose the answer which was closest to their perception. At the end of the questionnaire participants were asked to answer questions about some socio-demographic data. Researchers were available during all time, to help participants, if necessary. The duration of the whole procedure was about 20 minutes.

Results

Descriptive statistics of the scales (means and standard deviations) and Bravais-Pearson’s r correlation index among the variables are reported in Table 1. As expected, the correlation matrix showed that LMX is positively related with safety behaviours ($r=.19; p<.001$), supporting hypothesis 1 that the higher the leader-member exchange, the higher the safety behaviours. LMX negatively correlates with disagreement degree about OSC and SSC: a high quality of relationship between supervisors and their members lead to a lower
disagreement degree about safety climate perceptions, supporting hypotheses 2a and 2b. All correlation coefficients are significantly different from zero.

Table 1 - Descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. LMX</td>
<td>25.2</td>
<td>11.0</td>
<td>-</td>
<td>-.37**</td>
<td>-.68**</td>
<td>.19**</td>
</tr>
<tr>
<td>2. Disagreement degree - OSC</td>
<td>1.5</td>
<td>1.1</td>
<td>-</td>
<td>-</td>
<td>.63**</td>
<td>-.30**</td>
</tr>
<tr>
<td>3. Disagreement degree - SSC</td>
<td>2.3</td>
<td>1.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.24**</td>
</tr>
<tr>
<td>4. Safety behaviours</td>
<td>5.8</td>
<td>1.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

** = p value < .01

To test the hypothesised mediational models shown in Figure 1, two path analyses were conducted, one considering agreement about OSC, and one considering agreement about SSC. Standardized path coefficients of the first model are shown in Figure 1.

Hypothesis 3a predicted that agreement degree about OSC mediated the relationship between LMX and safety behaviours. The path coefficient from LMX to disagreement degree about OSC was negative and statistically significant (β = -.37, p < .001), i.e. higher LMX scores are connected with a lower disagreement degree about organizational safety climate between supervisors and their members. In turn, disagreement degree about OSC exerted a negative significant effect on safety behaviours (β = -.27; p < .001), suggesting that a high agreement between supervisor and members about organizational safety climate leads to high safety behaviours. The direct path running from LMX to safety behaviours does not significantly differs from zero (β = 0; n.s). The model explains 10% of variance in safety behaviours. In order to test the mediating role, we examined the significance of each indirect effect. In support to our hypothesis, the results showed that LMX had a significant indirect association, via agreement degree about OSC, with safety behaviours (standardized indirect effect = .10) and that agreement degree about OSC fully mediated this relationship, supporting hypothesis 3a.

Looking at agreement about supervisor’s safety climate, similar results are found: The path coefficient from LMX to disagreement degree about SSC was negative and statistically significant (β = -.68; p < .001), showing that high leader-member exchange scores lead to low disagreement between supervisors and members. Similarly, disagreement degree about SSC has a negative significant effect on safety behaviours (β = -.21; p < .001): higher disagreement degree corresponds to lower safety behaviours. Furthermore, agreement degree about SSC fully mediated the relationship between LMX and safety behaviours (standardized indirect effect = .14), supporting hypothesis 3b.
Conclusions

The aim of this study was to explore the relationship between LMX level and safety behaviours, specifically safety compliance, and the mediation role of agreement degree about OSC/SSC among supervisor and his/her group members. The hypothesized relationship between LMX scores and safety behaviour was found, and this result is consistent with results described by Hofmann and Morgeson (1999). However, this relationship seems to be fully mediated by agreement on safety climate. This variable is an indicator of how much supervisors’ and their group members’ perceptions of policies, procedures and practices about safety are similar. Quality of relationships between group leaders and their supervisors (i.e., leader-member exchange level) leads similar level of safety climate, which in turn lead to higher safety behaviour level.

International and managerial implications

Organizational psychology increasingly interested in the role that organizational factors can play in the safety field. This study suggest that employees that have high quality relationships with their supervisor show higher agreement degree about organizational and supervisor's safety climate. This agreement degree, in turn, is strongly related to safety behaviour. This suggests the importance to encourage the development of effective exchange relationships between supervisor and work group members. Positive relationships are in fact related to agreement and sharing about safety policy and values, and, in long run, this can contribute to the success of safety programs implementation.

Figure 1. Hypothesized models with path coefficients, considering agreement about organizational safety climate (1a) and agreement about supervisor safety climate (1b). (n=508; *** = p<.001)
This study is a first attempt to join together leadership style, safety climate and safety behaviours, considering the level of agreement about safety climate shared by supervisors and group members. Safety behaviours has been measured as safety compliance, and it should be interesting to explore whether this full mediation model should be valid with safety participation as well, which could be more directly influenced by leadership style.

References


**Aknowledgment**

We gratefully acknowledge the financial support by INAIL Vicenza (OSH national institution of Italy) and FIM, FIOM and UILM Veneto (by the three main Italian union federations of metal workers). We thank all workers of the companies for their participation.