

AMERICAN UNIVERSITY OF BEIRUT

DESIGN, DEVELOPMENT, AND VALIDATION OF AN
ORGANIZATIONAL CLIMATE SURVEY AT AUBMC

By
LAYAL ZAKARIA ABOU SHAAR

A project submitted in partial
fulfillment of the requirement
for the degree of Masters of Human Resource Management
to the Suleiman S. Olayan School of Business
at the American University of Beirut

Beirut, Lebanon
April 2018

AMERICAN UNIVERSITY OF BEIRUT

DESIGN, DEVELOPMENT, AND VALIDATION OF AN
ORGANIZATIONAL CLIMATE SURVEY AT AUBMC

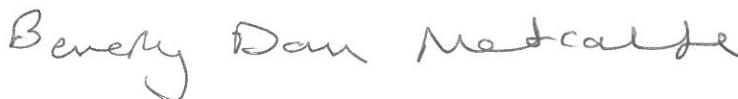
By
LAYAL ZAKARIA ABOU SHAAR

Approved by:



Dr. Lina Daouk-Oyry; Assistant Professor, PhD
Suliman S. Olayan School of Business

First Reader



Dr. Beverly Dawn Metcalfe; Associate Professor
Suliman S. Olayan School of Business

Second Reader

Date of project presentation: April 19, 2018

ACKNOWLEDGMENTS

I would like to express my sincere gratitude and appreciation for my direct supervisor Dr. Lina Daouk Oyry and for my second reader Dr. Beverly Dawn Metcalfe.

I would like to thank them for their continuous support, for their patience and motivation throughout my research period. Their worthy experience and profound knowledge made the content of the project very rich and I was able to learn a lot from their continuous feedback and support.

AN ABSTRACT OF THE PROJECT OF

Layal Zakaria Abou Shaar for Masters of Human Resource Management
Major: Human Resource Management

Title: Design, Development, and Validation of an Organizational Climate Survey at AUBMC

Creating a positive patient experience has been the focus of healthcare management literature, among others, emphasizing the need to hire, train, and retain competent healthcare employees who are able and willing to provide excellent service. The onus, however, is on the organization to provide the climate that fosters positive work relations, attitudes, and behaviors among healthcare workers. Additionally, there has been little focus on the concept of employee experience, even though the concept of patient experience strongly dominates the current healthcare management issues and has long replaced patient satisfaction. This paper aims at creating a tool that would assist management in addressing areas in the organizational climate issues that require interventions in order to improve their overall work experience of healthcare workers. This is operationalized through the 1) development of an Organizational Climate Survey based on a review of the existing literature and 2) validation among a sample of healthcare workers at a large teaching hospital in the Middle East region.

The survey was administered to 2800 employees across American University of Beirut Medical Center (AUBMC), with a response rate of 14% (n=409). The survey tests employee perceptions of climate in relation to diverse dimensions of the institution. Following factor analyses, the dimensions of climate included in the survey were reduced to 6 namely, Teamwork, Communication, Employee-Supervisor Relationship, Feedback and Recognition, Employee Development, and Autonomy. The final questionnaire consisted of 52 items. Shifting and omission of items is discussed within the paper in addition to managerial implications.

CONTENTS

	Page
ACKNOWLEDGEMENTS	v
ABSTRACT	vi
LIST OF ILLUSTRATIONS	ix
LIST OF TABLES	x
Chapter	
I. INTRODUCTION.....	1
II. LITERATURE REVIEW	3
A. Organizational Climate.....	3
B. Organizational Climate and Culture	4
C. Importance of Organizational Climate	5
D. Dimensions of Organizational Climate	6
E. Organizational Climate Measures.....	10
III. RESEARCH METHODOLOGY.....	16
A. Research Objective.....	16
B. Phase 1: Theoretical Foundation – Dimensions from Literature Review	17

C. Phase 2: Tool Development – Dimensions Identified Crucial for AUBMC	20
D. Phase 3: Validation	21
1. Sample	21
2. Procedure	22
IV. DISCUSSION.....	23
A. Results	23
1. Demographical Results.....	23
2. Factor Analysis: Descriptives.....	24
3. Factor Analysis: Extraction	26
4. Factor Loadings	26
5. Omission of Items.....	28
6. Shifting of Items	30
7. Dominating Factor.....	31
8. Reliability	32
B. Descriptive Statistics (Mean and Standard Deviation).....	33
C. Discussion.....	33
D. Limitations and Recommendations	35
REFERENCES	37

ILLUSTRATIONS

Figure	Page
4.1. Scree Plot	25

TABLES

Table	Page
3.1. Summary of Dimensions from Key Papers in Literature Review	18
4.2. Job Category	23
4.3. Age.....	24
4.4. Years of Service.....	24
4.5. KMO and Bartlett's Test	25
4.6. Distribution of items across 6 factors	27
4.7. Descriptive Statistics.....	33

CHAPTER ONE

INTRODUCTION

Organizational climate as a concept has been studied by researchers for several years (e.g. Litwin and Stringer, 1968, Payne and Pheysey, 1971, Glick, 1985, Moran & Volkwein, 1992, Patterson et al, 2005). However, the importance of this concept as part of HRM strategy has grown recently as managing an organization climate has been linked to organization effectiveness. (Goleman, 2000) mentioned in his study that when employees perceive climate as being positive, the company will encounter improved performance and elevated efficiency. In addition, Rahimic (2013) mentions that positive climates in companies result in raised levels of efficiency, effectiveness, productivity and staff satisfaction. Consequently, HRM practitioners and scholars are reviewing the characteristics of an organization and are exploring ways to support employee engagement, employee development and long term sustainable growth. Managing organization climate is a key concern for organizations that aim to attract and retain their talents.

Today's fast changing working environment has made it difficult for companies to preserve an eminent status in their industries. Organizations are continuously developing human resources as part of overall strategies to build organization capabilities. Employees too, are continuously seeking jobs that enable them to exploit their talents in the workplace and they are seeking employers who provide them with the highest earnings, benefits, as well as career opportunities. To be able to retain proficient employees and to sustain competitive advantage in their industries,

companies are examining the dynamics of the employment relationship (Altmann, 2000).

The notion of “organizational climate” has been explored since the 1970s; however there has been much debate over its actual definition. The concepts of “organizational climate” and “organizational culture” were used interchangeably for many years as it was difficult to differentiate between them; However distinguishing between the two concepts is vital as they address diverse areas of organizational studies (Torres, 2013). According to Malloy et al (2009), organizational culture refers to employees’ perceptions of norms, values, and principles. On the other hand, they define organizational climate as employee perceptions that are linked to measurable working circumstances that can be altered with time.

The concept of organizational climate has captured the interest of many researchers e.g. Campbell, Dunnette, Lawler, and Weick, 1970, Martins and Von der Ohe, 2003, Monika & Mehta, 2013. Yet, there are few well validated and well established measures of the concept. Many studies have been based on private sector businesses, and very few have focused on the health sector. This study aims at developing an organizational climate survey for AUBMC by building on established climate surveys and filling the gap among different existing surveys.

CHAPTER TWO

LITERATURE REVIEW

A. Organizational Climate

Organizational climate is a concept that relates the context of an organization to the behavior of its employees; it addresses ways in which employees experience and perceive their organizations. Although the notion of organizational climate has been generally explained as the perceptions of employees in regards to their organizations, yet its true definition suffered from inconsistencies for many years. The most dominant definition of climate is the employees' common perceptions of organizational practices, policies, guidelines and strategies (Patterson, West, Shackleton, Dawson, Lawthom, Maitlis, Robonson & Wallace 2005). Many definitions have been used to describe the concept of organizational climate. According to Hamidianpour, Esmaeilpour, Alizadeh and Dorgoee (2015), organizational climate refers to the employees' perceptions of the company's rewards and recognition systems, integrity of leadership, organizational policies and procedures and finally it includes the sense of belonging within the organization.

Organizational climate refers to the perception of employees concerning career ladder opportunities, leadership styles, the opportunity to participate in decision making, and a work climate that is inclusive (Padmaja, 2014). According to Litwin and Stringer (1968), organizational climate refers to the employees' perceptions of the factors that characterize their work environment and the effect of such factors on employee behaviors.

Climate refers to the employee perceptions of features of the company and its structure and it revolves around ways in which organizations manage their employees and the overall human resource philosophy. Organizational climate summarizes the collective view of employees in respect to the nature of environment they work in. Organizational climate constitutes of a mixture of systems, cultures, organizational structures, managerial behaviors and needs of staff (Monika & Mehta, 2013).

B. Organizational Climate and Culture

Studies about organizational climate and organizational culture are numerous and there is a continuous debate on differentiating between the two concepts as each tackles diverse aspects of the organization. The concepts of climate and culture are similar as both relate to experiences of employees within their companies. Having a rough discrimination between the two notions is not facile as they are related to each other and are linked in several ways (Patterson et al, 2005).

According to Kangis et al (2000), both concepts grew in parallel; they have been studied by researchers from different angles and using different methods. According to Schneider (2000), organizational climate explores the workexperiences that employees go through in their company and corresponds with various patterns of employee behaviors. The notion of organizational culture emerges when members are requested to give their feedback on why such behavioral patterns exist; their response which relates to their shared assumptions, common values, norms and beliefs is what defines organizational culture.

According to Svyantek and Bott (2004), organizational culture consists of the common values, beliefs and attitudes that shape and guide employees' interactions with

each other. On the other hand, organizational climate consists of ways in which employees perceive their organizational practices and policies along with the patterns of behaviors they demonstrate in support to their perceptions.

Both culture and climate influence employees' attitudes in the workplace. Glisson and James (2002) referred to organizational culture as values and expectations about how people interact and behave in a company. Values are promoted by the organization in terms of the work environment they want to create and are often expressed in mission statements. Organizational climate is defined by perceptions of staff and their emotional reactions to aspects of their job environment.

C. Importance of Organizational Climate

The significance of organizational climate is increasing as many empirical studies have proved that organizations in which climate is perceived positively by employees tend to have higher levels of efficiency, effectiveness, productivity and staff satisfaction. The nature of perception of staff in regards to organizational climate is highly capable of influencing innovation, employee learning, communication processes, and motivation within organizations. After interpreting the correlation between organizational climate and job satisfaction, it was proved that the ways in which employees perceive climate considerably influence job satisfaction (Rahimic, 2013). Pritchard and Karisick (1973) confirmed that when employees perceive climate as being positive, departmental success, staff satisfaction levels and employee commitment increase within the company. Other studies confirm the relationship between a positive perception of organizational climate and the emergence of other factors, such as

creativity and change. It is crucial for all managers to comprehend the impact of the way employees perceive organizational climate on financial outcomes in companies.

When employees perceive organizational climate as being positive, this serves as a driver for elevated performance; it is directly related to company's profitability, revenues and efficiency (Goleman, 2000). Many studies have examined the strong connection between positive perceptions of organizational climate and high performance and customer satisfaction (Torres, 2013).

In organizations where climate is perceived positively by employees, there are higher levels of commitment, performance, job satisfaction and engagement; on the other hand, this triggers lower levels of absenteeism, turnover and intention to leave. Companies with positive organizational climates are those where employees perceive a high sense of teamwork, they have strong relationships with their supervisors, they feel like they have an acceptable autonomy level, have clear career development opportunities, etc... This concludes that in companies where organizational climate is perceived as being "positive" by employees there are lower turnover rates and lower stress levels (Spector, 1986).

D. Dimensions of Organizational Climate

Organizational climate is an aspect that differentiates one organization from the other. It is formed as a result of employees' interactions and it influences behaviors demonstrated in the company. As a concept, it represents the shared perceptions of employees in regards to diverse dimensions such as support, justice, innovation, recognition, trust, teamwork and autonomy (Moran & Volkwein, 1992). Since organizational climate pertains to collective perceptions of staff in relation to several

aspects of the organization and its environment, companies might have diverse climates depending on their practice and processes. A challenging feature of the climate concept is the identification of proper dimensions. Many studies aimed at identifying certain factors or dimensions that seem to have direct impact on organizational climate (Jyoti, 2013).

Organizational climate has been studied and evaluated from several dimensions. Campbell, Dunnette, Lawler, and Weick (1970) identified support, autonomy and structure as dimensions of climate. A separate study conducted by Litwin and Stringer (1968) indicated that organizational climate can include dimensions of structure, responsibility, risk, conflict, identity, standard, reward, warmth and support. Schulte, Ostroff, Shmulyian, & Kinicki (2009) studied dimensions in relation to both strategic and supportive climates. Based on their findings, strategic climate includes employees' perceptions of policies and practices that aim at attaining strategic objectives. On the other hand, supportive climate is related to perceptions in regards to employee relations and employee wellbeing (e.g. teamwork and managerial behavior and support). The effectiveness of organizational outcomes is related to how high or how low the company is in dimensions of supportive and strategic climates. The dimensions included in their survey include management, vision, organizational change, training, career opportunities, recognition, rewards, teamwork, and communication. In his attempt to test organizational climate, Rahimic (2013) tackled and studied diverse dimensions and categories that include employees' perceptions on quality of work, sense of belonging to the institution, company's structure, firm's mission and vision, communication across the company, management support, interpersonal relationships, employee skills and conditions, motivation and opportunities for growth and

advancement. James and James (1989) indicated that autonomy and level of challenge of a particular job, managerial cooperation, team collaboration and finally job stress are work aspects that constitute dimensions of organizational climate.

After reviewing a number of studies, including that of Litwin and Stringer (1968), Monika & Mehta (2013) were able to identify twelve dimensions of organizational climate. They argue that the core orientation of a company is crucial in establishing organizational climate. If the main concern of the organization lies in following preset regulations, then this describes a “control” driven climate; if the company’s orientation leans towards excelling in performance, then the climate is perceived to be driven by achievement. Another dimension of climate is the interpersonal relations in the organization which is demonstrated by the formation of informal groupings. Groups can be formed for the purpose of defending common concerns and this will lead to the emergence of a “control” climate. On the other hand, the formation of informal relations between employees and their respective managers results in emergence of a climate of reliance. Supervisory or managerial practices are often considered crucial dimensions that might influence the climate of organizations. Supervisors can play a major role in supporting their respective employees and they can assist in development and progression of staff. A fourth dimension of climate is problem solving at organizations. Problems in a company can be addressed solely by managers or some supervisors might incorporate their employees in solving the problem; in some organizations, problems are directly escalated to upper management. Those multiple ways of dealing with problems can impact organizational climate. Innovation is a critical dimension of climate; perceptions of employees in regards to how changes are made how and innovation is supported might have a solid influence on

organizational climate. Risk taking is another dimension of climate as it addresses degree to which risk is accepted and supported in an organization. As indicated in many previous literatures, rewards systems constitute a major dimension of organizational climate as they are capable of supporting certain behaviors and attitudes. A critical dimension tackled is trust; the presence of trust among members of an organization or even between employees and management is highly capable of impacting climate. Decision making is considered to be an additional dimension of organizational climate whereby the degree to which employees are involved in decision making and are aware of the decisions that are taken has a huge effect of organizational climate. A key dimension of climate is communication within the organization. This dimension is related to the overall flow of information in the company; this includes the direction in which the information flows, the type of information relayed and the manner in which the information is transmitted. Process by which companies manage conflicts is also critical to the organizational climate because it indicates whether companies prefer to resolve conflicts or cover them for the purpose of maintaining a specific image. Finally, the ways in which managers and supervisors deal with employees' mistakes has a significant impact on climate; supervisors might tolerate employees' mistakes and assist them in correcting errors or they might demonstrate a punitive approach towards mistakes.

Several studies have looked into the dimensions of organizational climate and it is noticeable that there is no consensus on the "best" dimensions that shape and characterize climates. There are several dimensions that correspond to diverse aspects of the work environment and the institution as a whole. Fundamental organizational dimensions will vary from one organization to the other since as discussed previously,

organizational climate tackles perceptions of employees in relation to their specific work environments and organizational practices.

E. Organizational Climate Measures

Measurements of organizational climate usually rely on well-known general climate surveys or customized surveys that encompass questions about specific work environments. It is difficult to decide what surveys are best as the concept of organizational climate is highly variable and differs among organizations (Altman, 2000).

Glick (1985) reviewed several studies on dimensions of organizational climate and deduced that climate can be measured by several factors including communication process, managerial support and trust, manager's psychological distance, open-mindedness, risk orientation, and equity. Many organizational climate scales have developed after Glick's review (Patterson et al, 2005). Payne and Pheysey (1971) developed the "Business Organization Climate Index". They modified a measure that was previously developed by Stern ("Organizational Climate Index") in order to understand organizational climate not only from a psychological perspective but from different dimensions that relate to the organization's structure. They constructed scales around specific dimensions of the whole organization. They used items of the Organizational Climate Index that was developed by Stern but they reframed them in a way that enables them to measure climate from an organizational perspective rather than a psychological one. Payne and Pheysey tried to fill the gap in Stern's measurement by restructuring items in a way that tackles climate from a general organizational perspective. After thorough analysis, they divided dimensions into six main categories

that include authority, self-discipline, personal relationships, work interest, routine, and wider community. The study of Payne and Pheysey was then reviewed in 1992 to include missing dimensions such as culture aspects and concern for customer service (Patterson et al, 2005).

Variation in climate dimensions that are used in diverse measures results from the lack of solid theoretical basis of many organizational climate tools. The fact that many climate instruments are not validated results in discrepancies in climate measures and leads to the inability to draw clear conclusions related to organizational climate. One of the famous climate measures is that developed by Litwin and Stringer (1968). Their measure (“Organizational Climate Questionnaire”) consists of fifty items that study nine different dimensions. Muchinsky(1976) argued that including six dimensions as opposed to nine is more accurate and he mentioned that the existing nine different scales revealed poor split half reliability. Rogers, Miles and Biggs (1980) illustrated that most studies on organizational climates relied on six dimensions however there was no agreement on what factors were best. They deduced that the Organizational Climate Questionnaire was unreliable and it lacked validity (Patterson et al, 2005).

Many questionnaires that intend to measure culture can actually be seen as measures of climate because they tackle exterior manifestations of cultural aspects. Many of those instruments lack validity and are not based on strong theoretical information; many instruments are based on small sample sizes for their development (Patterson et al, 2005).

Organizational climate measures suffer from methodological weaknesses that include vague or unspecific description of items. Every item in climate surveys should focus on the collective unit being studied (whether it is a department or the whole

organization). In many studies, participants are not asked to focus their attention on a specific unit, but rather they are requested to indicate their perceptions to their “work environments”. This might lead to different individuals describing diverse parts of the organization; some might respond in relation to their own department and other might provide feedback on their perceptions of the whole organization (Schneider & Reichers 1983).

Another issue of concern in organizational climate surveys is the kind of participants included in the study. Organizational climate is a concept that covers the whole organization and thus it is critical that researchers engage all types of members in the study. Questionnaires shall include members from different departments, employees in different positions and different hierarchies (Wilderom, Glunk, and Maslowski, 2000). In addition, It is crucial that survey items are written in a way that is comprehensible by all employees since the major concern of the questionnaire is to study perceptions and experiences of employees across all the organization (Patterson et al, 2005).

Martins and Von der Ohe (2003), built on the climate questionnaire that was developed by Martinas and Martins (2001), however after conducting interviews with concerned parties, they added several dimensions that include leadership styles, fairness of procedures and policies and diversity. They perceived those added dimensions as being of important to address the climate of the changing work environment of their organization. They grouped survey questions into thirteen dimensions and the survey items were validated and displayed high reliability. After conducting a second order factor analysis, they were able to identify subcategories which can aid organizations in

measuring areas related to trust, role of upper management, equality, equity, discipline and control, work life balance, communication, and coaching.

In their turn, Harmon et al (2003) composed and validated a survey to tackle work climate. In their survey, they tackle items related to communication, goal alignment, teamwork, training, empowerment and support, trust, rewards and creativity. Several studies, including the study that was conducted by Manning, Davidson, and Manning (2004), used psychological climate survey items that were derived by Jones and James (1979). Jones and James underwent a thorough literature review to identify dimensions that can affect organizational climate. They developed a “Psychological Climate Questionnaire” that embedded thirty five potential dimensions of climate. Concepts were related to four main categories that include job and role related characteristics, leadership aspects, work group features and system and organizational level attributes. James and Jones deducted dimensions that were labeled as “ambiguity and conflict, job challenge and importance, managerial support, work group collaboration and cooperation, friendliness and warmth, professional and organizational esprit and job standards” (Manning, Davidson, and Manning, 2004).

Many organizational climate measures have several limitations. On one hand, some studies include a large number of variables that are so specific and this makes it harder for researches to interpret their results. However it is worth mentioning that several instruments include a proper numbers of dimensions that can be applied to the whole organization. Another limitation of many instruments lies in the fact that they address specific aspects of the organization without providing a clear explanation as to how those aspects are related to each other and to the climate of the entire organization.

After reviewing several studies, Hellriegel and Slocum (1974) deduced that most organizational climate instruments are characterized by common dimensions and features. These dimensions include “support, consideration, autonomy, structure, reward and warmth”. They argue that although those dimensions are common among many studies, yet the number of dimensions differs between instruments.

Finally, a very well-known climate survey is the “Organizational Climate Measure (OCM)” that was developed by Patterson et al (2005). After a thorough review of literature and a wide exposure to several climate dimensions, they developed the OCM by using the “Competing Values Model” which offers a framework of values that characterize climates in organizations. The model suggests that managerial and leadership philosophies and ideologies along with outcomes that are valued in the organization fall under four broad domains. Those domains consist different models or approaches under which climate can be studied; they include the “human relation approach (associated with norms, values and human relations), internal process approach (associated with control and stability), open systems approach (associated with change and flexibility) and rational goal approach (associated with organizational objectives and achievements)” (Patterson et al, 2005). They were able to create well validated and reliable scales or dimensions that fall under the four broad domains mentioned above.

Under the “human relations approach”, they developed climate dimensions that include employee welfare (degree to which organizations care for their employees), participation and decision making (involvement of staff in decision making), communication (extent of information sharing across organization), training opportunities (support for staff development), support from supervisors (degree to

which employees are exposed to support from their direct manager) and trust and cooperation between departments.

Dimensions under the “internal process model” include formalization (concern in regards to formal policies and procedures) and tradition (which describes the perceived value of previously set and established methods doing things).

Under the “open systems model”, they focused on dimensions that include flexibility (direction toward change), innovation (support for original ideas), outward focus (degree to which a company is quick to respond to clients’ needs) and reflexivity (review of strategies, goals and procedures to adapt to the broad organizational environment).

Finally, under the “rational goal approach”, they identified dimensions such as feedback on performance, pressure to perform (degree to which members are pushed to achieve goals), quality of procedures, efficiency and productivity of employees, effort (extent to which employees work hard to achieve goals) and clarity of objectives of the organization (Patterson et al, 2005).

CHAPTER THREE

RESEARCH METHODOLOGY

A. Research Objective

The forgoing discussion highlighted the importance of managing organizational climate, as positive employee perceptions of the work environment and employee policies can lead to higher levels of performance. The majority of studies however, have focused on western private sector companies. This study will address a key knowledge gap in the literature, namely measuring organization climate in a leading private health organization in Lebanon.

The aim of this study is to develop an organizational climate survey for the American University of Beirut Medical Center in order to measure the perceptions of AUBMC employees in regards to several aspects of the institution that include: Teamwork, employee supervisor relationship, recognition, feedback, autonomy, clarity of goals, employee development and communication. The study aims at creating a solid and reliable tool that can be used by HR professionals at AUBMC to identify areas of improvement in the work environment and to work on future action plans that address identified aspects in order to improve employee well-being. The AUBMC HR division has reported concerns about employees' perception of lack of clear communication, their limited involvement in designing job tasks, limited training opportunities, etc... and accordingly the survey items are present to address all concerns that were raised. It is hoped that this survey will be able to accurately identify the areas of improvement in AUBMC's work environment and will assist the HR team in addressing those aspects

by amending the existing HR policies and creating new strategies that will influence employee satisfaction and motivation.

The study will build on previously established and validated climate surveys and will work on addressing methodological and conceptual gaps that were identified in the literature review. The study aims at including survey items that are relevant to the core dimensions of organizational climate. The measure is designed based on a thorough review of organizational climate aspects and it will target all AUBMC staff.

B. Phase 1: Theoretical Foundation – Dimensions from Literature Review

In this phase, all dimensions that were extracted from key papers in the literature review are grouped in a table (Refer to Table 3.1). Those dimensions will then be compared to those identified as vital to the tool development at AUBMC.

Table 3.1. Summary of Dimensions from Key Papers in Literature Review

Dimensions	Moran & Volkwein, 1992	Campbelle, Dunnette, Lawler & Weick, 1970	Litwen & Stringer, 1968	Schulte, Ostroff, Shmulyian & Kinicki, 2009	Rahimic, 2013	James & James, 1989	Monika & Mehta, 2013	Glick, 1985	Payne & Phyeusey, 1971 (BOC)	Martins & Von der Ohe, 2003	Harmon et al, 2003	Jones & James, 1979	Hellriegel & Slocum, 1974	Patterson et al, 2005 (OCM)
Ways Supervisors Deal with Mistakes							Y	Y						
Manager's Psychological Distance								Y						
Open-mindedness								Y						
Equity										Y				
Authority									Y					
Self-Discipline									Y	Y				
Work Interest									Y					
Routine									Y					
Wider Community									Y					
Role of Upper Management										Y				
Equality										Y				
Work-life Balance										Y				
Coaching										Y				
Training				Y							Y			Y
Goal Allingment											Y			
Ambiguity												Y		
Professional and Organizational Esprit												Y		
Job Standards												Y	Y	
Consideration														
Employee Welfare														Y
Formalization														Y
Tradition														Y
Flexibility														Y
Outward Focus														Y
Reflexibility														Y
Feedback														Y
Pressur to Perform														Y
Quality of procedures														Y
Effeciency and productivity of staff														Y
Effort														Y
Clarity of Objectives														Y

Dimensions	Moran & Volkwein, 1992	Campbelle, Dunnette, Lawler & Weick, 1970	Litwen & Stringer, 1968	Schulte, Ostroff, Shmulyian & Kinicki, 2009	Rahimic, 2013	James & James, 1989	Monika & Mehta, 2013	Glick, 1985	Payne & Phyeyssey, 1971 (BOC)	Martins & Von der Ohe, 2003	Harmon et al, 2003	Jones & James, 1979	Hellriegel & Slocum, 1974	Patterson et al, 2005 (OCM)
Managerial Support/Empowerment	Y	Y	Y	Y	Y	Y		Y			Y	Y	Y	Y
Justice	Y													
Innovation/Creativity	Y						Y				Y			Y
Recognition	Y			Y										
Trust	Y						Y	Y		Y	Y			Y
Teamwork/Interpersonal Relations	Y			Y	Y	Y	Y		Y		Y	Y		Y
Autonomy	Y	Y				Y							Y	
Structure		Y	Y		Y								Y	
Responsibility			Y											
Risk Taking/Orientation			Y				Y	Y						
Conflict			Y											
Identity			Y											
Standard			Y											
Reward			Y	Y			Y				Y		Y	
Warmth/Friendliness			Y									Y	Y	
Career Development/Advancement				Y	Y									
Quality of Work/Importance					Y							Y		
Sense of belonging					Y									
Mission and Vision				Y	Y									
Organizational Change				Y										
Communication				Y	Y		Y	Y		Y	Y			Y
Employee Skills and Conditions					Y									
Motivation					Y									
Manegerial Behaviors/Practices				Y			Y							
Level of Challenge						Y						Y		
Core Orientation of Firm						Y	Y							
Problem Solving							Y							
Decision Making							Y							Y
Conflict Management							Y					Y		

C. Phase 2: Tool Development – Dimensions Identified Crucial for AUBMC

Climate dimensions employed in the survey were derived from intensive research in the literature. In addition, by reviewing internal sources of information that include results of exit interviews, issues arising from development plans meetings and training sessions, unit visits and investigations that occur at the HR department, we were able to group the findings into the dimensions that will be tackled in the survey. Items of the survey were developed by thoroughly by reviewing literature on the existing climate surveys and their critiques. The items represent the larger dimensions that were identified as critical to the measurement of organizational climate at AUBMC. Identified dimensions that will be used in the survey include: teamwork, communication, employee-supervisor relations, autonomy, employee development, feedback, clarity of goals and recognition. Items under every dimension were traced to particular sub-dimensions in order to gain specific description of items that will be used in the future for analysis purposes. The organizational climate survey consisted of 63 items used to measure the 8 previously mentioned dimensions. The questionnaire utilized a 5-point Likert type scale that ranges from 1 (strongly disagree) to 5 (strongly agree). The organizational climate survey consisted of two sections; the first section obtains demographical information about participants and the second section obtains their input on the items. For every factor, we developed 6 to 17 items depending on the complexity of the dimension. The dimension that included the highest number of items was that of “employee supervisor relationship” and the reason behind that is that we believe that majority of perceptions that employees build in relation to diverse aspects of the organization are affected by their relationship with their supervisor. In addition, based on the input of exit interviews, investigations and development plans meetings,

we came to realize that the biggest concern employees are raising is related to their direct supervisor. On the other hand, the dimension with the lowest number of items is “Autonomy” and that is due to the fact that we are a healthcare organization and autonomy is not always positive especially within employees that provide direct patient care.

Cognitive Interviewing was conducted on all survey items as a first step in piloting. Cognitive Interviewing was conducted on colleagues at the HR department for the sake of checking the readability of the survey. Being HR professionals, it would be beneficial to use their judgment on the clarity and readability of survey items. This process didn’t aim at gathering data about participants or collecting data about survey items. The main purpose behind this pilot was to check if survey items are clear and comprehensible.

As a first step, participants were asked to identify if the item is “easily understood”, “not understood”, or “somehow understood”. Second, we interviewed participants to gather their input on the difficulties they have faced when filling the survey and to attain an input as to what items are unclear or need further amendments. Finally, we gathered their comments about difficulty in reading/comprehending survey items, clarity of items and their proposed changes and modifications were introduced to the items.

D. Phase 3: Validation

1. Sample

To be able to meet the objectives of the study and to develop a comprehensive and well established climate survey, the survey items were piloted to test for validity

and reliability by administering them to 2800 AUBMC employees (excluding faculty members) with intent to gain 400 responses. Out of 2800 employees, we were able to reach 409 responses. The sample included AUBMC employees of different levels and positions in the institution with diverse backgrounds and years of experience.

Employees were asked to fill demographics that include their job category (managerial versus non-managerial), age range, range of years of service and finally the unit/department in which they operate. To ensure participants' identity remains anonymous, employees in managerial positions were not asked to fill the demographic relating to their respective unit. In addition, since we are interested in the aggregate results of the survey and to ensure that employees remain unidentified, units were grouped in a way that all units of similar functions with 5 employees or less are combined into a larger cluster/department.

2. Procedure

The survey was administered to 2800 AUBMC employees through the company mail. All participants filled the survey online via Lime survey after agreeing to the informed consent that was on the first page of the questionnaire. Participants were informed that the survey will take around 10 minutes to complete.

CHAPTER FOUR

DISCUSSION

A. Results

1. Demographical Results

Tables 4.2, 4.3 and 4.4 display geographic information that was collected from the survey. Table 4.2 shows that 31.3 % of the total population was staff in managerial positions and 68.7% were on non-managerial positions. We defined managerial categories as those who have employees reporting to them whereas non-managerial job category refers to those who don't have direct reports. Table 4.3 shows the distribution of participants across different age ranges. The table shows that majority of participants were between 21 and 38 years old and minority were those between 57 and 62 years. Finally, table 4.4 shows the distribution of respondents across diverse years of service. Most participants under the study had years of experience between 4 to 9 years. Tables 4.2, 4.3 and 4.4 display the frequencies relating to demographics of job category, age, and years of service respectively.

Table 4.2. Job Category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Managerial	128	31.3	31.3	31.3
	Non-Managerial	281	68.7	68.7	100.0
	Total	409	100.0	100.0	

Table 4.3. Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-26	68	16.6	16.6	16.6
	27-32	114	27.9	27.9	44.5
	33-38	95	23.2	23.2	67.7
	39-44	39	9.5	9.5	77.3
	45-50	38	9.3	9.3	86.6
	51-56	33	8.1	8.1	94.6
	57-62	22	5.4	5.4	100.0
Total	409	100.0	100.0		

Table 4.4. Years of Service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-3	98	24.0	24.0	24.0
	4-9	137	33.5	33.5	57.5
	10-15	72	17.6	17.6	75.1
	16-21	40	9.8	9.8	84.8
	22-27	34	8.3	8.3	93.2
	28-33	13	3.2	3.2	96.3
	34-39	15	3.7	3.7	100.0
	Total	409	100.0	100.0	

2. Factor Analysis: Descriptives

To determine sampling adequacy and factorability, we conducted the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity. Table 4.5 displays the results. Reference to Hair, Anderson, Tatham and Black (1995), a measure of 0.9 and above is very good for sampling adequacy. In addition, Bartlett's test of sphericity showed significant correlations ($p < .001$) between variables.

We conducted a principle component analysis and it yielded in 10 factors with Eigen-values greater than 1, those include factors that are distinct and can be retained. The 10 factors explained 67.15% of the total variance based on the cumulative percentage of Eigen values. Since items didn't load into 10 factors, we used Scree plot to determine the number of factors to extract. By looking at the Scree plot, the number of factors that are present before the plotted line is around 6 factors (see figure 4.1).

Table 4.5. KMO and Bartlett's Test

Valid	Kaiser-Meyer-Olkin		.956
	Measure of Sampling		
	Bartlett's Test of Sphericity	Approx. Chi-Square	16884.268
		Df	1953
		Sig.	.000

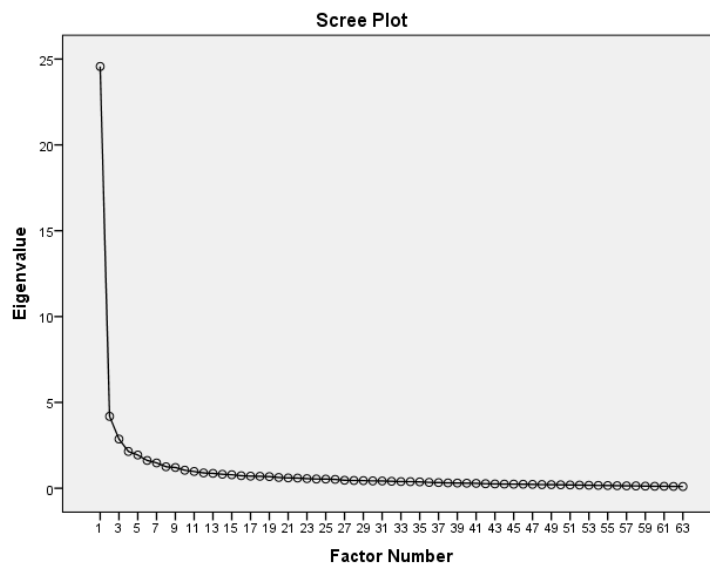


Figure 4.1. Scree Plot

3. Factor Analysis: Extraction

Principle Axis Factoring was used to come up with the Factor correlation matrix which revealed a strong correlation among coefficients of the 6 factors. Thus, we decided to use Direct Oblimin Rotation with Kaiser Normalization.

4. Factor Loadings

Following factor analysis, factors were reduced from 8 factors to 6. Based on the factor loadings, we have decided to name the 6 factors as follows: Employee Supervisor Relationship (Factor 1), Employee Development (Factor 2), Autonomy (Factor 3), Teamwork (Factor 4), Feedback and Recognition (Factor 5) and Communication (Factor 6). Factor on “Clarity of Goals” disappeared and its items were dropped from the survey (we will identify dropped items in the next sections). On another note, dimensions on feedback and recognition were combined into one factor.

The dimensions identified from factor analysis largely reflect the dimensions that were set in the originally proposed climate survey and they reflect those dimensions included in most studies in literature review.

Looking into the factor loadings, we considered including all items that loaded coefficients of 0.3 and above on one or more of the factors because anything less would result in weak relationships and results (Tabachnick&Fidell, 2007). Overall, the total number of items was reduced from 63 to 52 items. In total, 11 items were dropped, 3 of which didn't load in any of the factors. Table 4.6 below shows the final items that were considered relative to every factor based on their loading coefficient value. The table doesn't include items that were dropped nor does it indicate the items that shifted from one dimension into the other. We will be tackling this in our next section.

Table 4.6. Distribution of items across 6 factors

	Coefficient
Dimension 1: Employee Supervisor Relationship	
My direct supervisor motivates employees in my unit	.476
My direct supervisor treats me with respect	.810
My direct supervisor applies policies and regulations fairly among employees in my unit	.668
My direct supervisor asks me for my input to help make decisions that are within my area of jurisdiction	.424
My direct supervisor gives good, practical advice	.752
My direct supervisor sets a good example by demonstrating a high level of professionalism and integrity	.740
My direct supervisor is someone I trust	.852
My direct supervisor helps me to feel secure in my job	.708
My direct supervisor effectively resolves conflicts among employees in my unit	.692
My direct supervisor is open to suggestions	.656
My direct supervisor is available to me when I need help	.679
My direct supervisor works to improve upward, downward and lateral communication in my unit	.447
My direct supervisor gives me negative feedback in front of my colleagues	.420
My direct supervisor creates a sense of teamwork in my unit	.395
In my unit, we get enough chances to tell our direct supervisor how we feel about things affecting our work	.324
My direct supervisor empowers employees to make effective decisions	.317
Dimension 2: Employee Development	
I believe there are adequate ways for me to develop my skills at AUBMC	.569
In my unit, employees receive appropriate training to enhance their effectiveness	.768
I am given opportunity to develop my skills at my unit	.657
I get the training I need in my unit to do my job well	.752
AUBMC invests in employees through training and development	.850
My company provides me with many training opportunities	.890
Training opportunities are available to everyone at AUBMC	.787
My direct supervisor coaches me to help me develop professionally	.380
Dimension 3: Autonomy	
I am encouraged to make my own decisions most of the time	.629
I have to refer to my direct supervisor before taking any decision	.743
I can use my own judgment in getting the job done	.569
My direct supervisor likes me to consult him/her before I take any action	.670
Dimension 4: Teamwork	
It seems as if people in my unit don't work together to accomplish our common goal	.439
I feel like a part of a team within my unit, we assist each other to get the work done	.548
At AUBMC, employees from other units are willing to help each other	.618
At AUBMC, units work against each other rather than with each other to achieve objectives	.542

There is a spirit of we're all in this together within AUBMC	.715
I can depend on my co-workers in my unit to complete their tasks on time so that I can complete my work	.341
Dimension 5: Feedback and Recognition	
My direct supervisor tells me when I do my work well	.687
My direct supervisor gives me constructive feedback	.505
My direct supervisor provides me with continuous feedback	.485
My direct supervisor gives me specific examples when giving me feedback	.488
My direct supervisor praises me for a job well done	.657
In the past month, I have received praise by my direct supervisor for doing a good job	.790
My direct supervisor tells me when my work needs improvement	.393
My direct supervisor provides me with feedback only at the performance appraisal meeting	.367
Hard work is rarely rewarded at my unit	.364
In my unit, employees are recognized for a job well done	.320
Hard work is recognized at AUBMC	.308
My direct supervisor informs me promptly if my performance needs improvement	.328
Dimension 6: Communication	
My direct supervisor provides me with information that affects my work (either written or verbal), in a timely manner	.360
My direct supervisor communicates frequently and honestly about work related issues affecting employees in my unit	.434
AUBMC's business objectives and expectations are clearly communicated to me by my direct supervisor	.381
I usually know what is happening in the company that affects my work	.360
I am kept up to date on what is happening within my unit	.347

5. Omission of Items

Three items in the original survey were dropped because they didn't load in any of the factors. Those items were originally set in the survey pre-factor analysis under dimensions of "Clarity of Goals", "Recognition" and "Teamwork". Under "Teamwork", the dropped item was "There is a strong feeling of teamwork and collaboration at AUBMC". Under "Clarity of Goals", the item the dropped item was: "I can see a clear link between my own work and AUBMC's objectives". Finally, the dropped item under

“Recognition” was “In the last 6 months, I have received recognition or praise by my direct supervisor for doing a good job”.

On another note, many items were dropped post factor analysis because we saw that although they loaded above 0.3 on a specific factor, conceptually they were far from measuring the respective factor. “I know what my responsibilities are” is an item that we originally placed in the survey pre-factor analysis under clarity of goals, however after factor analysis, this item loaded into the dimension on employee supervisor relationship. Conceptually, we believed that this item doesn’t actually measure the relationship between employees and supervisors as being aware of responsibilities can be linked to several causes that might include role of supervisors. Accordingly, we decided to drop the item.

“I clearly understand the goals and mission of my unit” was another item that was originally placed in the survey pre-factor analysis under the dimension clarity of goals and we decided to drop it after its loading under the factor employee development. Conceptually, we believed that this item doesn’t measure employee development and opportunities for training at the institution and thus it was dropped.

Two items in Factor 3 (Autonomy) were dropped as they don’t relate to the concept of autonomy. One of the items was originally placed under the dimension of communication in the survey pre-factor analysis and this was: “I usually hear about important changes through rumors rather than communication from my direct supervisor”. The second item was originally placed under the Employee Supervisor Relationship in the survey pre-factor analysis and this was: “When I make a serious mistake, I am reluctant to go to my direct supervisor for help”. Knowing that both items don’t relate to the concept of autonomy, we decided to drop them.

Two items in factor 4 (Teamwork) were dropped. Both items were first included under the dimension of communication in the survey pre-factor analysis. Even if they loaded under teamwork, we believe that conceptually they don't relate to this construct. The item "At AUBMC, there is a free and open flow of information between the different units" and that of "AUBMC leadership seriously listens to what employees have to say" clearly don't fall under the dimension of teamwork.

No items were dropped from factor 5 (Feedback and Recognition) as all included items were conceptually related to the identified dimension.

When it comes to factor 6 (Communication), two items that were originally placed under the dimension of "Clarity of Goals" in the survey pre-factor analysis were omitted. We believe that the two items "My direct supervisor sets clear expectations for me when I am performing my tasks" and "My job objectives are clearly defined by my direct supervisor" are more not quite reflective of the dimension on communication. We decided to drop them because they differ from the existing items that clearly measure the construct on communication.

6. Shifting of Items

Following factor analysis and after analyzing the conceptual meaning of items, we have decided to shift three of the items from one dimension to the other after having them loading in two factors. We decided to include "Hard work is recognized at AUBMC" (that had highest loading in Teamwork) under the dimension on Feedback and Recognition knowing that it also loaded more than .3 under the factor. We tested this by running reliability statistics and we concluded that Cronbach's alpha was higher for the "Feedback and Recognition" factor when we included the pre-mentioned item.

We included as well “My direct supervisor informs me promptly if my performance needs improvement” (that had highest loading on communication) under the dimension on Feedback and Recognition as we believe that this item measures the timeliness of feedback given to employees and after running reliability statistics, Cronbach’s alpha increased for “Feedback and Recognition” after including the pre-mentioned item”.

Finally, “AUBMC encourages honest two-way communication between direct supervisors and employees” that loaded highest on Teamwork was shifted to the dimension on Communication as it loaded on both factors however it is not a measure of teamwork. This was further supported by running reliability statistics and concluding that Cronbach’s alpha increased in value after adding the mentioned item.

Many of the items that were originally placed in the survey under different dimensions were shifted to Employee Supervisor Relationship. As an example, the item “In my unit, we get enough chances to tell our direct supervisor how we feel about things affecting our work”, was first placed under communication; however following factor analysis and by considering its conceptual meaning we shifted it under the dimension of employee supervisor relationship. Another example is the item “My direct supervisor creates a sense of teamwork in my unit” was first placed under Teamwork however we believe that it is reasonable to have it placed under the dimension relating the relationship between employee and supervisor.

7. Dominating Factor

Looking into the results of the factor analysis, we realized that the factor that contained the highest number of items was “Employee Supervisor Relationship”. This factor included 16 items on its own which demonstrates the importance of such a

construct in measuring employee climate. By looking into all measures of climate described in the literature review above (refer to table 1), we can see that all studies include employee and manager relationship in addition to manager's support as crucial measures for climate. This factor explained majority of items and it demonstrates that employees are affected by it and it plays a major role in shaping organizational climate.

Incomplete Responses

One of the common problems with data collected from lengthy questionnaires is missing data. On average, we encountered missing responses that ranged from 1% to 13% per factor. We assumed that data was missing due to the length of the questionnaire especially that the responses were complete for the first factor however they response rate on items started decreasing after moving through the items of the survey. Last factor included the highest missed data whereas the first one had a complete response rate. This indicated that our piloting was successful and it decreased the possibility of having "difficult" or "unfriendly" items and that missing data might be due to the lengthiness of the survey. We used list wise deletion and by that we excluded the data from the analysis.

8. Reliability

The reliability of all factors has been judged by alpha Cronbach's alpha coefficient. All factors had a coefficient above 0.7. For factor 1, "Employee Supervisor Relationship", Cronbach's alpha displayed a value of .962. As for the second factor, "Employee Development" Cronbach's alpha displayed a value of .920. Looking at the third factor, "Autonomy", Cronbach's value displayed a value of .782. As for the 4th factor, "Teamwork", alpha coefficient was .744. Feedback and Recognition (5th factor)

had an alpha coefficient of .899. Finally, Cronbach's value alpha of the 6th factor, Communication was .872.

B. Descriptive Statistics (Mean and Standard Deviation)

We computed the mean and standard deviation of each of the items and for all 6 factors as a whole. Table 4.7 below displays the results which didn't vary much between the different factors. Results reveal a common mean value among all factors whereby all means were grouped around a value of 3. The highest mean revealed was that of Employee Supervisor Relationship arrived at 3.69 (SD.76), and the lowest (yet not below neutral" was that of Autonomy which arrived at 3.09 (SD.78).

Table 4.7. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ESR	352	1.13	5.00	3.6969	.76910
ED	358	1.00	5.00	3.4431	.78347
AUT	380	1.00	5.00	3.0934	.78565
TW	409	1.50	5.00	3.5118	.62931
FBREC	386	1.17	4.92	3.3562	.68882
COM	362	1.00	5.00	3.5451	.68933
Valid N (listwise)	352				

C. Discussion

The main purpose of this study was to develop a valid and reliable tool to measure organizational climate across institutions. As discussed earlier, the definition of organizational climate held many inconsistencies throughout the years. In brief, we can consider organizational climate as a concept that relates to the perceptions of employees

to diverse aspects of their institution including recognition, relationship with supervisor, autonomy, teamwork and others.

Creating a valid tool that assesses the perceptions of employees in regards to the different areas of their institution was our main aim. The importance of organizational climate is growing with time; measuring its dimensions and developing action plans that tackle the output of surveys is a mandatory step for all companies that aim at protecting their human assets and ensuring a positive working environment.

Employee surveys serve as a common tool for data collection. Those surveys are utilized to describe the nature of an institution, assess its performance, and study the relationships between work practices and work outcomes. (Kraut, 2006). Among the popular surveys are engagement surveys, cultural questionnaires and satisfaction surveys. A clear distinction is needed to differentiate between the different tools.

As discussed earlier measures of culture aim at looking into the values that shape how employees behave in a company. As for climate surveys, they tend to measure the perceptions of employees to dimensions of their job environment (Glisson and James ,2002). On the other hand, satisfaction surveys aim at measuring the extent to which employees like their work. They look at the degree to which an employee's work environment meets his/her needs and personal characteristics (Abraham, 2012). In that sense, climate surveys can be used to assess original perceptions of employees in regards to aspects of their institution and results can indicate the reason why employees scored low/high on items of satisfaction surveys.

Finally, Abraham (2012) uses in its paper CIPD's definition of employee engagement which states that employee engagement measures the commitment

employees have to their organization and engagement shows the willingness of employees to assist colleagues and add value to the organization.

In our study, we were developed an organizational climate survey that was tested over AUBMC premises. After conducting factor analysis, we limited the survey dimensions to 6 major factors: employee supervisor relationship, teamwork, autonomy, employee development, communication and feedback and recognition. Many items were deleted and others were shifted across diverse dimensions. The tool will be used to gather insights about the whole AUBMC population on how they perceive climate at their institution.

D. Limitations and Recommendations

Although the survey has been tested for validity and reliability, yet it is crucial to mention that one of the limitations of this study was that items and factors were studied in the context of one hospital. This constitutes a limitation as climate factors were measured in the healthcare industry only and the factors were targeting healthcare professionals. This issue could be rectified by having future research follow up on further validation and work on testing climate measures across different industries.

A second limitation is that we are uncertain whether the factors that were regarded as strong and crucial for organizational climate will allow the survey to be replicated across different cultures. Study was conducted in Lebanon in a local healthcare organization and thus strength of factors and their respective items might vary according to different cultures. Change across cultures might impact the strength of factors in explaining variances across the items.

A final limitation is that although our sample size was sufficient, yet it is considered small since we had approximately 6 respondents per item while ideally it is preferable if the sample size was bigger.

Future research can work on testing the survey in diverse cultures and across different industries. This can ensure higher validation of its items and it constitutes better proof for the strengths of the factors serving as dimensions for organizational climate.

REFERENCES

- Abraham, S. (2012). Development of employee engagement programme on the basis of employee satisfaction survey. *Journal of Economic Development, Management, IT, Finance, and Marketing*, 4(1), 27.
- Altmann, R. (2000). Understanding organizational climate: Start minimizing your workforce problems. *Water Engineering & Management*, 147(6), 31
- Campbell, J. P., Dunnette, M. D., Lawler, E. E., III & Weick, K. E., Jr. (1970). *Managerial Behavior, Performance, and Effectiveness*. New York: McGraw-Hill
- Glick, W. H. (1985). Conceptualizing and measuring organizational and psychological climate: pitfalls in multilevel research. *Academy of Management Review*, 10, 601–616
- Glisson C and James L R (2002), “The Cross-Level Effects of Culture and Climate in Human Service Teams”, *Journal of Organizational Behavior*, Vol. 23, pp. 767-794
- Goleman, D. (2000). Leadership That Gets Results.[online] Harvard Business Review
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis* (Vol. 5, No. 3, pp. 207-219). Upper Saddle River, NJ: Prentice hall.
- Hamidianpour, F., Esmailpour, M., Alizadeh, M. S., & Dorgoee, A. (2015). The influence of emotional intelligence and organizational climate on creativity and entrepreneurial of small to medium-sized enterprises. *European Online Journal of Natural and Social Sciences*, 4(1), 20–30
- Harmon, J., Scotti, D.J., Behson, S.J., Farias, G., Petzel, R., Neuman, J., & Keashly, L. (2003). Effects of high- involvement work systems on employee satisfaction and service costs in Veterans healthcare. *Journal of Healthcare Management*, 48 (6): 393-405
- Hellriegel, D., & Slocum, J. W. (1974). Organizational climate: Measures, research and contingencies. *The Academy of Management Journal*, 17(2), 255-280. doi:10.2307/254979
- James, L. A., & James, L. R. (1989). Integrating work environment perceptions: explorations into the measurement of meaning
- Jones, A. P., & James, L. R. (1979). Psychological climate: Dimensions and relationships of individual and aggregated work environment perceptions. *Organizational Behavior and Human Performance*, 23(2), 201-250. doi:10.1016/0030-5073(79)90056-4

- Jyoti, J. (2013). Impact of Organizational Climate on Job Satisfaction, Job Commitment and Intention to Leave: An Empirical Model. *Journal of business theory and practice*, 1(1), 66.
- Kangis, P., D. Gordon, and S. Williams (2000). Organisational climate and corporate performance: an empirical investigation. *Management Decision* 38(8), 531–540
- Kraut, A. I. (2006). *Getting action from organizational surveys: New concepts, technologies, and applications*. San Francisco, CA: Jossey-Bass.
- Litwin, G. H., & Stringer Jr, R. A. (1968). Motivation and organizational climate
- Malloy, D. C., Hadjistavropoulos, T., McCarthy, E. F., Evans, R. J., Zakus, D.H., Park, I., . . . Williams, J. (2009). Culture and organizational climate: Nurses' insights into their relationship with physicians. *Nursing Ethics*, 16(6), 719–733
- Manning, M. L., Davidson, M. C. G., & Manning, R. L. (2004). Toward a shortened measure of organizational climate in tourism and hospitality. *Journal of Hospitality & Tourism Research*, 28(4), 444-462.
doi:10.1177/1096348004267516
- Martins, N. & Von der Ohe, H. (2003). Organisational climate measurement- new and emerging constructs during a period of transformation. *South African Journal of Labour Relations*, 27(3), 41-49
- Monika, K. A., & Mehta, K. (2013). Motivational analysis of organization climate. *TSM Business Review*, 1(1), 48-57. Retrieved from <http://search.proquest.com/docview/1657566218?accountid=8555>
- Moran, E. T., & Volkwein, J. F. (1992). The cultural approach to the formation of organizational climate. *Human Relations*, 45(1), 19. Retrieved from <http://search.proquest.com/docview/231417405?accountid=8555>
- Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. F., Lawthom, R., Maitlis, S., . . . Wallace, A. M. (2005). Validating the organizational climate measure: Links to managerial practices, productivity and innovation. *Journal of Organizational Behavior*, 26(4), 379-379+. Retrieved from <http://search.proquest.com/docview/224880237?accountid=8555>
- Payne, R. L., & Pheysey, D. C. (1971). GG Stern's organizational climate index: a reconceptualization and application to business organizations. *Organizational Behavior and Human Performance*, 6(1), 77-98
- Pritchard, R. D., & Karasick, B. W. (1973). The effect of organizational climate on managerial job performance and satisfaction. *Organizational Behaviour and Human Performance*, 9, 126-146.
[http://dx.doi.org/10.1016/0030-5073\(73\)90042-1](http://dx.doi.org/10.1016/0030-5073(73)90042-1)

- Muchinsky, P. M. (1976). An assessment of the Litwin and Stringer Organizational Climate Questionnaire: an empirical and theoretical extension of the Sims and LaFollette study. *Personnel Psychology*, 29, 371–392
- Rogers, E. D., Miles, W. G., & Biggs, W. D. (1980). The factor replicability of the Litwin and Stringer Organizational Climate Questionnaire: an inter- and intra-organizational assessment. *Journal of Management*, 6, 65–78
- Schneider, B., & Reichers, A. E. (1983). On the etiology of climates. *Personnel Psychology*, 36, 19–39
- Wilderom, C. P. M., Glunk, U., & Maslowski, R. (2000). Organizational culture as a predictor of organizational performance. In N. M. Ashkanasy, C. P. M. Wilderom, & M. F. Peterson (Eds.), *Handbook of organizational culture and climate* (pp. 193–209). Thousand Oaks, CA: Sage
- Martins, EC & Martins, N. 2001. Organisational Surveys as a tool for change. Part two: A case study. *HR Future*, 1 (4): 46-49
- Padmaja, B. (2014). Organizational climate as a predictor of job satisfaction of employee: A case study with special reference to electricity employees. *International Journal of Organizational Behaviour and Management Perspectives*, 3(4), 1350–1356
- Rahimic, Z. (2013). Influence of organizational climate on job satisfaction in bosnia and herzegovina companies. *International Business Research*, 6(3), 129
- Schneider, B. (2000). The psychological life of organizations. In N. M. Ashkanasy, C. P. M. Wilderom, & M. F. Peterson (Eds.), *Handbook of organizational culture and climate* (pp. xvii xxi). Thousand Oaks, CA: Sage
- Schulte, M., Ostroff, C., Shmulyian, S., & Kinicki, A. (2009). Organizational climate configurations: relationships to collective attitudes, customer satisfaction, and financial performance. *Journal of applied psychology*, 94(3), 618
- Spector, P. E. (1986). Perceived control by employees: A meta-analysis of studies concerning autonomy and participation at work. *Human relations*, 39(11), 1005-1016
- Svyantek, D. J., & Bott, J. P. (2004). Organizational culture and organizational climate measures: an integrative review. In J. C. Thomas (Ed.), *Comprehensive handbook of psychological assessment: Industrial and organizational assessment* (Vol. 4, pp. 507–524). Hoboken, NJ: Wiley
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Allyn & Bacon/Pearson Education.
- Torres, D. R. (2013). *Organizational Climate for Better Performance in Healthcare* (Doctoral dissertation, Sant'Anna School of Advanced Studies).