

9-2013

The Influence of Organizational Culture on Affinity for Knowledge Management Practices of Registered Nurses

Gregory Allen

George Fox University, gallen@georgefox.edu

Follow this and additional works at: http://digitalcommons.georgefox.edu/dps_fac



Part of the [Health and Medical Administration Commons](#), [Management Sciences and Quantitative Methods Commons](#), [Nursing Commons](#), and the [Organizational Behavior and Theory Commons](#)

Recommended Citation

Allen, Gregory, "The Influence of Organizational Culture on Affinity for Knowledge Management Practices of Registered Nurses" (2013). *Faculty Publications - Department of Professional Studies*. Paper 3.
http://digitalcommons.georgefox.edu/dps_fac/3

This Dissertation is brought to you for free and open access by the Department of Professional Studies at Digital Commons @ George Fox University. It has been accepted for inclusion in Faculty Publications - Department of Professional Studies by an authorized administrator of Digital Commons @ George Fox University.

Walden University

College of Management and Technology

This is to certify that the doctoral dissertation by

Gregory Allen

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee

Dr. Howard Schechter, Committee Chairperson, Management Faculty
Dr. Mary Dereshiwsky, Committee Member, Management Faculty
Dr. Walter McCollum, University Reviewer, Management Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2013

Abstract

The Influence of Organizational Culture on Affinity for Knowledge Management

Practices of Registered Nurses

by

Gregory Allen

MBA, George Fox University, 2004

BS, George Fox University, 1989

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Management and Technology

Walden University

September 2013

Abstract

This study addressed the problems of hospitals' duplicated effort and ad hoc knowledge management (KM) practices. The purpose of this quantitative study was to examine the focus and type of organizational culture in order to describe and predict the relationship between organizational culture and the affinity for KM of nurses working in health care organizations in Portland, Oregon. Guided by the competing values framework and social capital theory, this research study was undertaken to illuminate the possible relationship between the affinity for and probable use of KM and organizational culture in Oregon hospitals. Data were collected from 93 registered nurses that completed the Organizational Culture Assessment Instrument and the Knowledge Management Assessment Test via an online survey. Correlation analyses were performed to test the hypotheses. A Pearson's correlation analysis showed a positive linear relationship of .410 between perceived organizational culture and perceived affinity for KM. A Pearson's correlation analysis also showed a statistically significant positive linear correlation of .441 between perceived affinity for KM and the perception of externally focused culture. The results of the study may be used to effect social change by offering healthcare administrators, doctors, nurses, and patients the data needed to make critical and perhaps life-saving decisions. KM systems like EpicCare may well improve patient care via the use of intellectual capital across the entire value chain of medical research and patient care. The study will also create the opportunity to compare new treatment options based on data in real time that will assist in evaluating therapeutic options for patients and health care providers.

The Influence of Organizational Culture on Affinity for Knowledge Management
Practices of Registered Nurses

by

Gregory Allen

MA, George Fox University, 2004

BS, George Fox University, 1989

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Management and Technology

Walden University

September 2013

Dedication

This dissertation is dedicated to my supportive and outrageously loving wife, Stacy Allen. Your steadfast encouragement and empathy gave me the ability to complete this phenomenal venture. A special thank you to my children, Brittany and Matthew, for their countless sacrifices while I juggled time between my professional career, educational pursuits, and spending time with them. I will always love and cherish you two kids.

Acknowledgments

I wish to thank my committee members who were generous with their expertise and valuable time. A special thank you to Dr. Howard Schechter, my committee chairperson, for his countless hours of reading, encouraging, mentoring, and most of all patience through the entire process. Thank you to Dr. Mary Dereshiwsky, dissertation committee member, and Dr. Walter McCollum, university research reviewer, for their support, guidance, and encouragement in the past 5 years of my academic journey and during the development of this dissertation. I would also like to thank Marie Ballance who is a brilliant editor and spent countless hours pouring over this dissertation.

Table of Contents

List of Tables	v
List of Figures.....	viii
Chapter 1: Introduction.....	1
Background.....	2
Problem Statement.....	3
Purpose of the Study.....	3
Research Questions	4
Theoretical Foundation.....	6
Nature of the Study.....	7
Definitions	9
Assumptions	12
Scope and Delimitations.....	12
Limitations.....	13
Significance	14
Summary.....	15
Chapter 2: Literature Review	17
Introduction	17
Literature Search Strategy	18
Theoretical Framework	19

Cultural Awareness Theory	20
Competing Values Framework	25
Theory of Learning Organization	30
Social Capital Theory	33
Connecting Prior and Recent Research	35
Synthesis of Recent Research	36
Empirical Research Relating to the Study	38
Identification of Knowledge Gap	44
Relevance of Quantitative Research Methodology	45
Summary	46
Chapter 3: Methodology	47
Introduction	47
Research Design and Rationale	48
Population	50
Setting and Sampling Procedures	50
Instrumentation and Operationalization of Constructs	53
Organizational Culture Assessment Instrument	54
Knowledge Management Assessment Tool	56
Assessment of Variables	59
Organizational Culture	59
Knowledge Management	59

Validity and Reliability	60
Data Collection	63
Research Questions and Hypotheses	64
Data Analysis.....	65
Threats to Validity	66
Ethical Procedures	67
Summary.....	68
Chapter 4: Results.....	69
Introduction	69
Data Collection	69
Descriptive Statistics for Demographic Variables	70
Descriptive Statistics for Continuous Variables	71
Data Analysis and Results	73
Research Question 1	73
Research Question 2	75
Summary.....	77
Chapter 5: Discussion, Conclusions, and Recommendations	80
Introduction	80
Interpretation of Findings	80
Research Question 1	81
Research Question 2	82

Limitations of Study	83
Recommendations for Future Research.....	84
Recommendations for Action.....	87
Implications for Social Change	89
Summary and Conclusion.....	91
References	94
Appendix A: E-Mail Invitation	111
Appendix B: Survey Instrument.....	113
Appendix C: Permissions to use the Survey Instruments.....	119
Appendix D: Consent Form.....	121
Appendix E: Frequency Tables of Survey Questions.....	123
Appendix F: Histograms of Continuous Variables	148

List of Tables

Table 1. Links Among Theories, Variables, and Instruments	49
Table 2. Scale for the Assessment of Values	55
Table 3. Culture Type Constructs and Indicator Variables	56
Table 4 Knowledge Processes and Core Values	58
Table 5. Method of Analysis	66
Table 6. Skewness and Kurtosis Values for Continuous Variables	72
Table 7. Cronbach Alpha for Dependent and Independent Variables	73
Table 8. Pearson Correlation for Organizational Types and KM	74
Table 9. Pearson Correlation for Culture Focus and KM	77
Table E1. Gender of the Participants	123
Table E2. Age of the Participants	123
Table E3. Education Level of the Participants	124
Table E4. Place of Employment	124
Table E5. Year Employed with Current Hospital	125
Table E6. Total Year as a RN	125
Table E7. KM Program in Place	126
Table E8. Hours of Training Sessions Attended	126
Table E9. KIC 1 Generation of New Ideas	126
Table E10. KIC 2 Decision Making	127

Table E11. KIC 3 Experience Highly Valued	127
Table E12. KIC 4 Generation of New Ideas	128
Table E13. KIC 5 Tools for Performance Objectives	128
Table E14. KIC 3 Experience Highly Valued	129
Table E15. KCC 1 Job Requirements	129
Table E16. KCC 2 Job Documentations	130
Table E17. KCC 3 Knowledge Repository	130
Table E18. KCC 4 Recording Knowledge	131
Table E19. KCC 5 Time for Knowledge Sharing	131
Table E20. KSO 1 Electronic Knowledge Base	132
Table E21. KSO 2 Cross Referenced Information	132
Table E22. KSO 3 Accurate Information	133
Table E23. KSO 4 Common Storage Practice	133
Table E24. KSO 5 Information Organized	134
Table E25. KSD 1 Knowledge Repositories Shared	134
Table E26. KSD 2 No Road Blocks to Repository	135
Table E27. KSD 3 Intranet Portal and Knowledge Retrieved	135
Table E28. KSD 4 Teamwork and Collaboration	136
Table E29. KSD 5 Information Gathering and Sharing	136
Table E30. KAU 1 Collective Experience and Decisions	137
Table E31. KAU 2 Decision Making Based on Knowledge	137

Table E32. KAU 3 New Ideas Applied	138
Table E33. KAU 4 Training and Staff Development	138
Table E34. KAU 5 Advance Technologies Leveraged	139
Table E35. Clan 1 Honest Communication	139
Table E36. Clan 2 Respect for People	140
Table E38. Clan 4 Cohesive Relationships	141
Table E39. Adhocracy 1 Creative Problem Solving	141
Table E40. Adhocracy 2 Innovation.....	142
Table E41. Adhocracy 3 Trying New Concepts.....	142
Table E42. Adhocracy 4 Visionary Thinking.....	143
Table E43. Market 1 Goal Attainment	143
Table E44. Market 2 Getting the Job Done	144
Table E45. Market 3 Direction and Goal Clarity	144
Table E46. Market 4 Outcome Excellence	145
Table E47. Hierarchy 1 Order	145
Table E48. Hierarchy 2 Stability and Continuity	146
Table E49. Hierarchy 3 Analysis and Control.....	146
Table E50. Hierarchy 4 Predictable Outcomes	147

List of Figures

Figure 1. Research model.	6
Figure 2. Theoretical Framework.	7
Figure 3. Cultural Awareness Model.....	21
Figure 4: The Competing Values Framework	27
Figure F1. KMAT Histogram.	148
Figure F2. Clan Culture Type Histogram.....	148
Figure F3. Adhocracy Culture Type Histogram.....	149
Figure F4. Market Culture Type Histogram.....	149
Figure F5. Hierarchy Culture Type Histogram.	150
Figure F6. Internally Focus Culture Histogram.	150
Figure F7. Externally Focus Culture Histogram.	151

Chapter 1: Introduction

Knowledge management (KM) is a prominent topic that has gained attention from both academics and practitioners. Both groups have given considerable thought to the importance of knowledge workers in achieving and maintaining a competitive advantage (Bennet, 2004; Nonaka & Senoo, 1996; Novak, 2010). According to Nonaka (1991), knowledge is an enduring source of competitive advantage. Some scholars believe that knowledge is the most valuable and important resource possessed by an organization (Cabrera, Collins, & Salgado, 2006). Others have asserted that knowledge is critical to an organization's survival (Davenport & Prusak, 1998).

Research that examines whether organizational culture supports KM is important to help administrators and managers of medical organizations understand how to improve their organizations' effectiveness (Chin-Loy & Majtaba, 2007; Jones, 2008). The empirical evidence in the KM literature is undersupplied when determining the appropriate organizational culture type for KM success in a given environment. Medical organizations today are taking aggressive steps to connect and network knowledge workers (Armstrong & Kendall, 2010). The ever-increasing competition and the new types of social collaboration tools have enhanced the innovation and dissemination processes that have led to a renewed interest in KM by practitioners and scholars (Rothberg & Erickson, 2004).

In addition to the practical and functional uses of further understanding the human side of KM specifically in the medical field, societal benefits can be achieved in and across diverse medical communities of practice, humanitarian organizations large and

small, government agencies, and nonprofit organizations who seek to find effective methods to share knowledge and learn collaboratively. Positive social change is enhanced when hospital administrators examine organizational culture types and match specific KM practices to achieve high quality and innovative patient care.

Background

Recently, researchers identified cultural strength (dominant traits of a single culture type) as an important predictor of organizational effectiveness (Bennet, 2004; Cummings & Worley, 1999). Others found mixed results and contended that strong cultures suppress creativity and innovation (Coyle-Shapiro, 2002). In the context of KM, Benbya (2006), Bennet and Bennet (2004), Jones (2008), and Lawson (2004) found a positive relationship between cultural strength and KM. Jaskyte (2005) did not find strong support for the relationship between cultural strength and KM in nonprofit human service organizations.

The inability of researchers to agree on the nature of cultural strength or organizational focus (internal or external) represents a gap in the KM literature. This specific exploration of the impact of organizational culture upon the practice of, and affinity for, KM significantly adds to the body of knowledge. Academics and practitioners need further research to understand the impact of organizational culture in the context of KM.

Problem Statement

In this study, I addressed the problem of hospitals experiencing duplication of effort and ad hoc KM practices. I also determined if a specific organizational culture type relates to the affinity for KM specifically focusing on one work group operating in the health care environment. Research that examines if a specific organizational culture type supports KM is important to help executives and clinicians understand how to improve their organizations' competitiveness (Chin-Loy & Majtaba, 2007). Due to the lack of empirical evidence in the KM literature it is unclear how to determine the appropriate organizational culture type for KM success in a given environment. Academics and practitioners need more research to understand the relationship between organizational culture and KM.

I examined organizational focus (internal or external) and the affinity for KM from the perspective of improving effectiveness in clinical patient care specifically focusing on registered nurses (RNs). Researchers and practitioners need additional research to further understand the relationship between organizational culture and KM specifically within the health care and human services field (Armstrong & Kendall, 2010; Arntzen-Bechina & Leguy, 2007; Banihashemi, Naeeni, & Aboutalebi, 2007).

Purpose of the Study

The purpose of this study was to examine the focus and type of organizational culture in order to predict the relationship between organizational culture and the affinity

for KM of RNs working in health care organizations in Oregon. I examined the larger picture of change and organizational culture to determine whether medical practitioners can leverage knowledge sharing processes and systems to become more effective and learn together. I reviewed the literature that related to organizational culture, KM, and KM in hospitals focused on nursing. The discussion of KM focused on the historic and theoretical perspective of KM, preceding an examination of the KM construct and the KM cycle. Furthermore, in Chapter 2 I reviewed the empirical studies found in journal articles and books that examined the relationship between organizational culture and KM.

Through the literature review, I provide an explanation of organizational culture and the various techniques for assessing culture. These techniques include Schein's (1992) levels of cultural analysis, the deep assumption approach (Schein, 1992) and the competing values framework (CVF) (Cameron & Quinn, 1999). In the literature review I also detail the theoretical base of this research regarding the competing values framework, defining the cultural strength constructs and the associated empirical research.

Research Questions

I undertook this research study to reach an enhanced understanding of the possible relationship and degree of correlations of associated theoretical factors affecting the affinity for and probable use of KM and organizational culture in Oregon hospitals. Thus, the research questions were the following:

1. What is the nature of the linear correlation between perceived organizational culture and the affinity for KM among RNs?

H1_O: A positive linear correlation does not exist between perceived organizational culture and perceived affinity for KM.

H1_A: A positive linear correlation does exist between perceived organizational culture and perceived affinity for KM.

2. What is the nature of the linear correlation between the affinity for KM and perceived organizational focus?

H2_O: A positive linear correlation does not exist between perceived affinity for KM and the perception of internal focused culture types.

H2_A: A positive linear correlation does exist between perceived affinity for KM and the perception of internal focused culture.

I determined the level of correlation and not causal factors. Figure 1 shows the research model for this study.

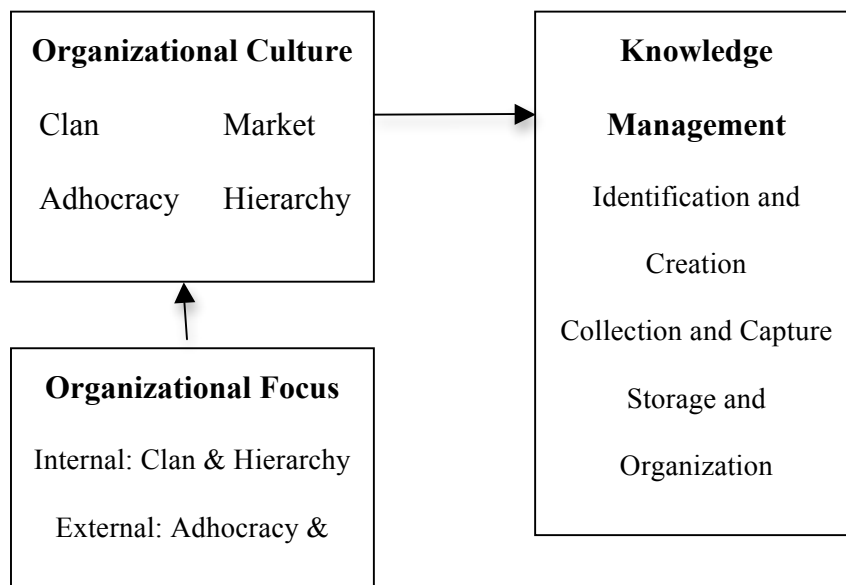


Figure 1. Research model.

Theoretical Foundation

Through this study, I determined the level of correlation that exists between organizational culture and the affinity for KM processes of RNs. Quantitative research involves a researcher assembling, evaluating, and merging data into a solitary study (Creswell, 2009). Evaluating the affinity for KM and organizational culture behaviors in a specific workgroup requires knowledge of behavioral characteristics of everyone in the workgroup. This study included theoretical frameworks that consisted of the CVF (Cameron & Quinn, 1999) and social capital theory (SCT; Hean, Cowley, and Forbes, 2003). SCT augments the study by attempting to provide insight on the affinity for KM and focusing on how nurses develop trust, share knowledge, collaborate, and apply knowledge by providing critical patient care. The theory also helps introduce how social capital in the medical community develops. In addition, the CVF underpinned this study

by providing insight regarding diagnoses of organizational cultures. The CVF provides the foundation needed to understand organizational culture because culture is the single largest factor that impedes organizational change (Cameron & Quinn, 2006). Figure 2 illustrates the interrelationships that develop under the learning organization and cultural awareness theories.

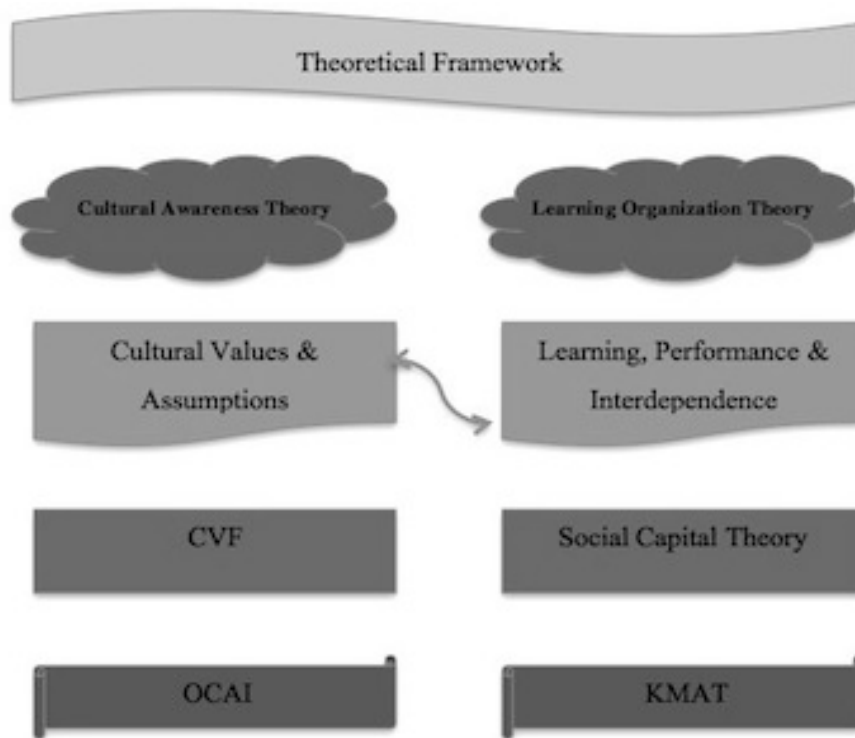


Figure 2. Theoretical Framework.

Nature of the Study

In developing this study, I considered using a mixed methods approach, but rejected this idea because the aim was to test specific hypotheses. In the mixed methods

approach the methodology requires a broadly focused approach as opposed to a narrow focus. Mixed methods research recognizes both quantitative and qualitative researches as important and useful. If one visualizes a continuum with qualitative research anchored at one pole and quantitative research anchored at the other, mixed methods research covers the large set of points in the middle area. Categorically, mixed methods research sits in a new third chair, with qualitative research sitting on the left side and quantitative research sitting on the right side (Creswell, 2009).

A qualitative approach was an option for the study, but I decided not to use it because the aim of the current study was to examine specific variables. I rejected the qualitative approach because the methodology allows the researcher to develop perspective that may differ significantly from other researchers. The major characteristics of traditional qualitative research are induction, discovery, exploration, theory/hypothesis generation, the researcher as the primary "instrument" of data collection, and qualitative analysis (Creswell, 2009). Additionally, qualitative methodology would not answer the specific problem of the study, make predictions, or indicate cause and effect. A detailed discussion specific to the appropriateness of the quantitative design appears in Chapter 3. A correlational study is the most appropriate research methodology because it involves assessing the association between two items.

Three thousand RNs working in Oregon received invitations to participate in the online survey. All participants were active RNs certified by the Oregon State Board of Nursing (OSBN). I paid for and received the professional contact information for all RNs practicing in the state of Oregon from a representative of the OSBN. The sample

consisted of those nurses who consented to participate and complete the survey. Typical survey response rates average around 20% (Cook, Heath, & Thompson, 2000). Thus, I determined that I needed a sample size of approximately 400. A power analysis using G*Power 3.1 further justified the sample size (Faul, Erdfelder, Buchner, & Lang, 2009).

I collected data via electronic surveys. The demographic data that I collected were for descriptive purposes and the data collected that pertained to organizational culture and KM did not contain personal identifying information. All data were analyzed using SPSS statistical software to compute descriptive, correlational, and Cronbach's alpha. The descriptive statistics used included mean, standard deviation, and range of continuous variables to ascertain if they are consistent to anticipated values. Cronbach's alpha was used to measure the internal consistency reliability of all continuous variables. Parametric statistical procedures included Pearson r product-moment correlation procedure to test the hypotheses to examine linearly and strength of the relationship between KM and organizational culture. Chapter 3 includes the details of the methodological approach for the study.

Definitions

Cultural strength: The intensity or the extent to which a culture exhibits the traits such as a single culture type (Orzano, McInerney, Tallia, Scharf, & Crabtree, 2008; Parker, 2000; Starcevich, 2009; Walton & Booth, 2000).

Knowledge: Definitions of knowledge range from the practical to the philosophical (Levinson, 2007). According to Allee (1997), three views of knowledge

exist: “knowledge as process, knowledge as an object, and knowledge as a complex system” (pp. 46-47). Allee argued that there are those who view knowledge as an object that can be stored, maintained, and measured. Organizations that share this view of knowledge, as suggested by Allee, focus on technologies to complete knowledge transfer activities. Allee contended that organizations that view knowledge as a process “focus more on dynamic aspects of knowledge, such as sharing, creating, adapting, learning, applying and communicating” (p. 48). Allee argued that both process and object views of knowledge, if used in the correct situation, are valid.

Polanyi (1966) differentiated the two types of knowledge as *tacit knowledge* and *explicit knowledge*. Polanyi characterized tacit knowledge as “indeterminate commitments that are necessarily involved in any act of knowing based on indwelling” (p. 24). Maier and Mosley (2003) defined tacit knowledge as “personal expertise not formally recorded and therefore essentially unofficial. It includes values, intuitions, biases, and trust that cause employees to think and act. This knowledge is neither easily recorded with the organization nor easily shared among employees” (p. 5). An example of tacit knowledge is the knowledge that a master artisan acquires through years of experience and training in her or his craft (Nonaka, 1991). According to Maier and Mosley, explicit knowledge represents recorded information including “organizational databases or data warehouses, market reports, presentations, training materials, and white papers” (p. 5). They declared that individuals can easily express or transfer explicit knowledge and provided examples such as product specifications or financial formulas (Nonaka, 1991).

Knowledge management (KM): A variety of definitions exist for KM in literature and definitions generally depend upon the researcher and his or her experience, interests, and background (Nonaka & Senoo, 1996; Prusak, 2001). Horwitch and Armacost (2002) defined KM as “the practice of creating, capturing, transferring, and accessing the right knowledge and information when needed to make better decisions, take actions, and deliver results in support of underlying business strategy” (p. 27). Dalkir (2005) provided an alternate definition of KM, saying “knowledge management applies systematic approaches to find, understand, and use knowledge to create value” (p. 3).

Knowledge sharing: The influence of interpersonal trust and sharing or giving tacit knowledge to another person (Chowdhury, 2005).

Organizational culture: “An enduring set of values, beliefs, and assumptions that characterize organizations and their members” (Cameron & Quinn, 1999, p. 147).

Organizational focus: “The vertical axes of the CVF that distinguishes perceptions of an organization from external (adhocracy, market) to internally focused (clan, hierarchy)” (Cameron & Quinn, 1999, p. 27).

Social capital: “Social capital refers to features of social organizations such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit” (Putnam 1995, p. 67).

Registered nurse: “Registered nurses provide and coordinate patient care, educate patients and the public about various health conditions, and provide advice and emotional support to patients and their family members” (U.S. Department of Labor, 2012).

Assumptions

I made the following assumptions:

1. Organizational culture is an attribute of an organization that can be measured and categorized into culture types based on the CVF (Cameron & Quinn, 1999).
2. KM and the affinity for KM can be measured using Maier and Mosley's (2003) knowledge management assessment test (KMAT).
3. Nurses are aware of and care about KM systems such as Epic healthcare system.
4. The responses provide a collective reflection of the KM practices of RNs and culture of healthcare institutions in Portland Oregon.
5. Nurses would be generous with their limited free time and respond to the survey during non-working hours.

Scope and Delimitations

For this study, I drew upon and added to the depth of knowledge of Jones's (2008), Lawson's (2004), and Chin-Loy's (2003) work by examining the relationship between organizational culture and KM in northwestern Oregon health care organizations. The focus was on RNs from three health care systems and associated hospitals in the metropolitan area of Portland, Oregon. Therefore, the findings and results may generalize to other locations, subjects, or future time periods in the health field. The

scope of this research included exploring specifics about one work group or department and did not focus on the entire organization. It did not examine cultural congruence, which “refers to the extent to which the culture reflected in one part of the organization is similar to and consistent with the culture reflected in another part of the organization” (Cameron & Quinn, 1999, p. 152).

I assessed the organization culture and KM of RNs in three health care systems and associated hospitals operating within 25 miles of Portland, Oregon. Organizational culture and culture types served as the independent variable while KM served as the dependent variable. I e-mailed a community participation letter (Appendix A) with a link to an Internet-based questionnaire (Appendix B) to nurse administrators associated with these health care systems and nursing associations. RNs in the same population received only Internet surveys. Because an insufficient number of surveys were returned, two additional e-mails with links were sent to the nonresponsive population.

Limitations

The scope of this study was narrowed to RNs working in one of three health care systems and up to six associated hospitals in northwestern Oregon. Because of the complexity that exists in the selected medical organizations and the limitations of survey research discussed in Chapter 3, results may not be generalized to all RNs. Additional limitations include the following: (a) limited results, as quantitative research provides numerical descriptors rather than a narrative of human perception; (b) scaled answers may not necessarily reflect the precise answers and may be the closest match to the

respondents' level of agreement with each statement; (c) RNs willing to respond to the survey may share characteristics that do not represent the view of the entire audience; (d) RNs were only allowed to respond to the survey during non-working hours creating a potential bias in this study.

Significance

As resources become limited, competitive advantages for health care systems and associated hospitals will be tied to their effectiveness in leveraging knowledge, one of the few unlimited resources. The ability to effectively leverage knowledge sharing processes and KM systems to become more effective and learn together is at the center of that challenge. I hoped to provide greater insight into how organizational culture and KM interact to provide quality patient care and sustainable KM practices for the medical community.

Health care systems from the small local hospital to the metropolitan hospital possess both knowledge workers and intellectual capital that are valuable commodities to anyone who gives or receives medical attention (Liu & Lin, 2007). Studying KM in today's competitive medical environment can lead to a better understanding of causes and solutions of organizational effectiveness with a better understanding of organizational culture and its relationship to KM. Previous research suggests that there is a need to explore the extent to which organizational culture types influence KM initiatives (Armstrong & Kendall, 2010; Cowell, 2006; Jones, 2009; Kangas, 2009). Organizational culture has been found to have a profound effect on change initiatives. Examining and

understanding the impact of organizational culture on the affinity of KM of RNs working in hospitals could provide important advances to the fields of patient care, medical research, medical transport, trauma units, and KM.

Summary

In Chapter 1, I introduced the study by discussing the importance of KM in today's health care and business environment. Organizational culture is an important factor to consider when initiating KM programs. I proposed to examine organizational culture and KM of RNs working in health care organizations in northwestern Oregon. This chapter also identified cultural strength as a focus of the study and presented the research questions, justification for the study, definition of terms, and a summary of the literature. Furthermore, this chapter presented the research delimitations, limitations, and significance of this study. In Chapter 2 I review the empirical studies found in journal articles and books that examine the relationship between organizational culture and KM. In Chapter 3 I describe the methodology used in this study. In Chapter 1 I presented the research population, sample, questions and the associated hypotheses. The reliability and validity of the survey instruments are discussed in Chapter 3. I also present the data collection techniques as well as methods of data analysis in Chapter 3. In Chapter 4 I discuss the data analysis and presentation of the findings. Chapter 4 also includes the descriptive statistics and results of hypothesis testing with inferential statistics. I present the conclusions of this study in Chapter 5. In Chapter 4 I also provide a discussion of the

implications, recommendations for practitioners, limitations, and recommendations for future research.

Chapter 2: Literature Review

Introduction

In this study, I examined the relationship between KM and organizational focus (internal or external) as well as the moderating effect of four organizational culture types specific to the affinity for and use of KM. Executive managers and administrators have been continually pressed to improve their organizations' competitive capacity (Cabrera & Conache, 1999; De Long & Fahey, 2000). The message reflects the worth of advancing a competitive strategy that promotes both the organization and its culture. Competition among businesses spurred many executives to develop and manage knowledge workers in new ways and created new systems such as knowledge maps that show employees' possession or the expansion of knowledge. The manner in which knowledge workers are managed is a significant source of competitive advantage (Abrams, 2003; Bennet, 2004; Chen, Chang, Lin, & Chen, 2009; Coyle-Shapiro, 2002; Davenport & Prusak, 1998; Drucker & NetLibrary Inc., 2000).

Chapter 2 contains relevant literature specific to KM and the various methods of assessing culture including Schein's (1992) levels of culture and the competing values framework (CVF). The CVF was the overarching theory for characterizing culture in this study. In this chapter, I present the empirical research associated with organizational culture, KM, and nursing-specific KM. Through the empirical review I identify research gaps in quantitative studies specifically within the KM arena.

Literature Search Strategy

The link between organizational culture and KM is not new but it has been the theme of current research (Bennet, 2004; Davenport & Prusak, 1998, Jones, 2008). Orzano (2008) stated that “research on KM initiatives shows that culture and knowledge are inextricably linked in medical organizations” (p. 21). A growing sense of frustration exists among executives as many companies have either failed to reach benchmarks or have not seen significant returns from new KM processes or systems (Bennet, 2004; Dagnino & Rocco, 2009). Mellander (1993) advised that in order for a KM process or system to be successful it must contribute to the learning environment. Rothberg and Erickson (2004) argued that organizational culture has an effect on knowledge workers willingness to trust, use, share, and create knowledge. They identified organizational culture as a significant barrier to leveraging knowledge workers.

A significant challenge to the KM research community is understanding the relationship between the knowledge workers, organizational culture, and KM. Recent research has shown that an organization’s dominant culture is capable of overcoming KM projects before they begin (Bennet, 2004; Jones, 2008; Kramer, 1996; Parker, 2000). Bennet and Bennet (2004) stressed that “organizational culture is difficult at best to change, that people change not because of reward or policy, but that change occurs by influence rather than by order” (p. 35). In this chapter, I review the literature specific to both organizational culture and KM. The various methods of culture diagnosis and change theories are dependent upon understanding organizational culture and specifically

how culture applies to benchmarks of learning organizations. The diagnostic models include Schein's levels of cultural analysis, SCT, and the CVF.

The empirical research I offer in this chapter formed the foundation for the study. Research came from multiple academic databases, the EBSCO host database, academic search premier database, business source complete, and gale business insights to locate academic journals, peer-reviewed journal articles, textbooks, manuscripts, academic conference presentations, panels, and papers. Primary search terms included *knowledge management, cultural analysis, knowledge sharing, organizational culture, learning organization, healthcare collaboration, social capital, trust, organizational change, medical knowledge flow, knowledge sharing barriers, medical informatics, and mentoring nurses*. Additionally, other studies cited in the retrieved material proved useful. The search strategies yielded over 900 articles, of which 340 were clearly interrelated to the topic.

Theoretical Framework

KM is a multi-dimensional construct with a large number of interdependent attributes. However, three components that are commonly found in the literature are knowledge acquisition, knowledge sharing, and knowledge use. The probable use of KM processes depends on specific preconditions. One of the important prerequisites for efficient use of KM is organizational culture. Organizations do not operate in a vacuum but are influenced by the socio-cultural context. Organizational culture consists of action,

behavior, and values that people in an organization are expected to share and follow (Allame, Nouri, Tavakoli, & Shokrani, 2011).

However, more research is essential to understand the correlations among the probable use of KM and organizational culture types of RNs. The purpose of the literature review was to analyze and synthesize the most relevant empirical and theoretical studies to support the rationale for a study that examines to what extent a relationship may exist between organizational culture and the affinity for and probable use of KM in Oregon hospitals. The support is demonstrated through a discussion of the most relevant studies associated with concepts from Schein's (1992) cultural awareness model as the overarching theoretical framework. Within this section there are literature-based theories that underpin each continuous variable and are organized around the major themes of the study. Analyses of the research variables organizational culture of RNs and the supporting theories of KM include: cultural awareness theory, learning organization, SCT, and CVF.

Cultural Awareness Theory

Schein's (1992) cultural awareness theory is the overarching theoretical framework in this study. The concept of culture is often difficult to identify primarily because its parts are usually imperceptible. Only the most basic components of an organization's culture are visible to members belonging to that specific organization. Schein's cultural awareness model (Figure 3) is often depicted as an iceberg that illustrates the hierarchy of cultural components. The visible cultural components

compose the peak, while deeper level cultural foundations are submerged and are not visible to the eye. The artifacts are visible, while norms, values, and basic assumptions are not seen (Schein 1992).

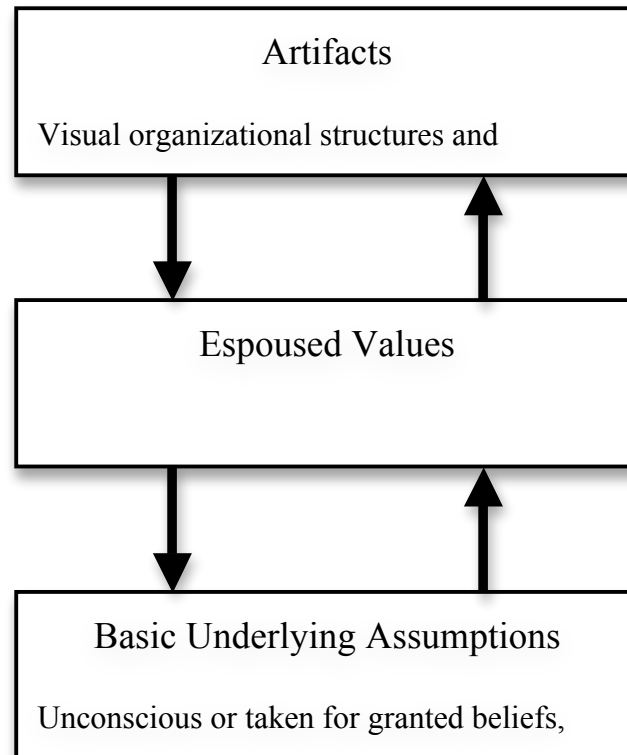


Figure 3. Cultural Awareness Model.

Artifacts. Cultural artifacts are visible representations of an organization's values, norms, and beliefs that often come in the form of symbols (Schein, 1999). Organizations often use symbols to remind employees of important culture-shaping people, events, and decisions. Common cultural symbols include displays of early products (e.g., Model T Ford), influential people (e.g., Lee Iacocca Chrysler), symbolic events (e.g., employee of the year), and rituals (e.g., summer picnics). In addition to

symbols, artifacts also describe explicit rules, procedures, and structures an organization uses to enforce its culture (Schein, 1999). Although visible, artifacts themselves do not directly communicate; rather they represent an organization's underlying norms, values, and basic assumptions.

Norms. While an organization's cultural norms are less visible than artifacts, they are important in shaping an employee's everyday behaviors (Schein, 1999). Cultural norms are often tacit and communicated primarily through social reinforcement (Schein, 1999). As a result, cultural norms are powerful social regulators when compared to visible artifacts. Humans have a need to feel accepted; cultural norms function as invisible social rules, pressuring individuals to conform to values and behaviors acceptable to an organization's general membership (Schein, 1999).

Values. Cultural values are one step below norms in an organization's cultural awareness and represent some of the factors important to an organization (Schein, 1999). For instance, organizations that value customer service are likely to possess norms and artifacts that exemplify that value. It is important to note that cultural values are a direct product of an organization's basic assumptions about business success, which is the final component of Schein's (1992) model. Similarly, cultural norms are extensions of an organization's values and serve to diffuse those values to the larger organizational population.

Basic Assumptions. The deepest level of cultural awareness reveals the organization's basic assumptions about business success (Schein, 1999). Businesses are typically founded upon these basic assumptions that are pivotal in shaping an

organization's structure and general approach to competitiveness. This competitive strategy is exemplified by organizations that adhere to a specific differentiation strategy and hold as a core belief that customers, for example, will pay more for products that are perceived as uniquely distinct from those offered by their competitors. The general population is not conscious of the basic cultural assumptions; they are conscious of the norms and artifacts that shape their daily behaviors (Schein, 1999).

To understand an organization's culture, it is necessary to identify the issues and problems the group has faced over the course of time (Schein, 1992). To Schein, there was very little difference between the process that forms a culture and the formation of a group. In organizations, the group will deal with issues concerning short- and long-term strategies, goals, mission, benchmarks, and correction procedures if goals are not achieved. Consensus by the group embeds them into the culture while lack of consensus creates problems. Schein identified six issues that a group must resolve to integrate. It is important to note that while the founder initially provided the primary influence in these issues, the process of group formation tests the founder's beliefs and the results in negotiated outcomes. If the group reaches consensus, the resolutions to these issues will become part of the culture. The internal integration issues the group must address are: (a) language; (b) membership; (c) power, influence, and status; (d) relationships; (e) rewards and punishment; (f) critical events.

In addition to internal integration issues, the group also faces external adaptation issues from survival. External adaptation issues "basically specify the coping cycle that any system must be able to maintain in reaction to its changing environment" (Schein,

1992, p. 52). The external issues involve the organization's mission and strategy, goals and the means to obtain the measurement criteria, and what correction strategies to implement if needed. Schein (1992) was one of the few social scientists to approach the notion of how corporate culture is developed in an organization. Schein recognized that "one of the most mysterious aspects of organizational culture is how it originates . . . equally mysterious are the evolution of culture and the degree to which culture at times seems to resist change" (p. 221).

Schein (1996) related the elements of organizational culture to the creation of a learning environment. The relationship between learning and change can be traced to the mainstream of the change studies that generally followed the footsteps of Lewin (1951), who suggested that change started with unfreezing behavior. Lewin indicated that the process of unfreezing involves unlearning so that new learning can take place. In this process, employees attempt to restructure their thoughts, feelings, and behaviors with regard to the change at hand (Schein, 1999; Senge, 2006). Therefore, the stage of unfreezing in which the readiness for change is pursued necessitates participants to unlearn the status quo and acquire new learning. The literature frequently emphasized that learning is essential to successful organizational change (Argyris & Schon, 1978; Schein, 1999, 2004; Senge, 1990, 2006). Learning has the capability of diminishing anxiety, unease, and confusion while creating opportunities for useful ideas and thoughts to emerge. Organizations that learn faster can adapt to change more rapidly. This adaptation to change not only increases an organization's chance of survival, it also creates a sustainable competitive advantage (Schein, 1999).

Competing Values Framework

The framework was developed in 1983 by Quinn and Cameron and has been applied by practitioners and researchers to assess leadership, core competencies, employee selection, and organizational culture along with employee motivation just to name a few. CVF evaluates culture with four value pairs. The opposing values exist on both the X and Y axis. The vertical plain separates the internal or externally focused, and the horizontal axis divides flexibility versus stability (Cameron & Quinn, 1999). Cameron and Quinn (1999) discovered that “some organizations were effective if they maintained efficient internal processes whereas others were effective if they maintained competitive external positioning relative to customers and clients” (p. 15). The polar disparity discovered formed the bedrock of the opposing dimensions on which Cameron and Quinn formed the CVF. The four dimensions are primary elements in identifying underlying assumptions and values of organizational culture.

The CVF is a well-organized and effective method for academics to compare and measure different organizational cultures. Several leading researchers have made use of the OCAI testing instrument based on the CVF to further explore leadership, information flow, organizational change, organizational culture, and organizational decision-making (Cameron et al., 2003). In the early 1980s, Quinn and Rohrbaugh (1983) began a sequence of research that examined the opposing parallels between two organizational descriptors. The competing values were the result of their analysis specific to organizational effectiveness. The model classified organizations as controlled and stable

to flexible and adaptable. These two dimensions (flexibility or control) combined with the organizations internal or external focus make up the four quadrants of the CVF.

The CVF comprises four sections with the X and Y axis that represent opposing values. The vertical or Y-axis plots the organizational control variable from flexible to controlling, while the horizontal or X-axis differentiates the environmental focus from external to internal. Each section of the framework represents one of the four major organizational theories. Both the Y-axis and X-axis represent a core value differing from the section on the opposite end of the spectrum. The CVF (Figure 4) is so named because each diagonal quadrant creates dimensions that are in competition with the other. For example, the lower left hand section contains values that emphasize control and internal focus whereas the upper right hand quadrant stresses creativity and flexibility.

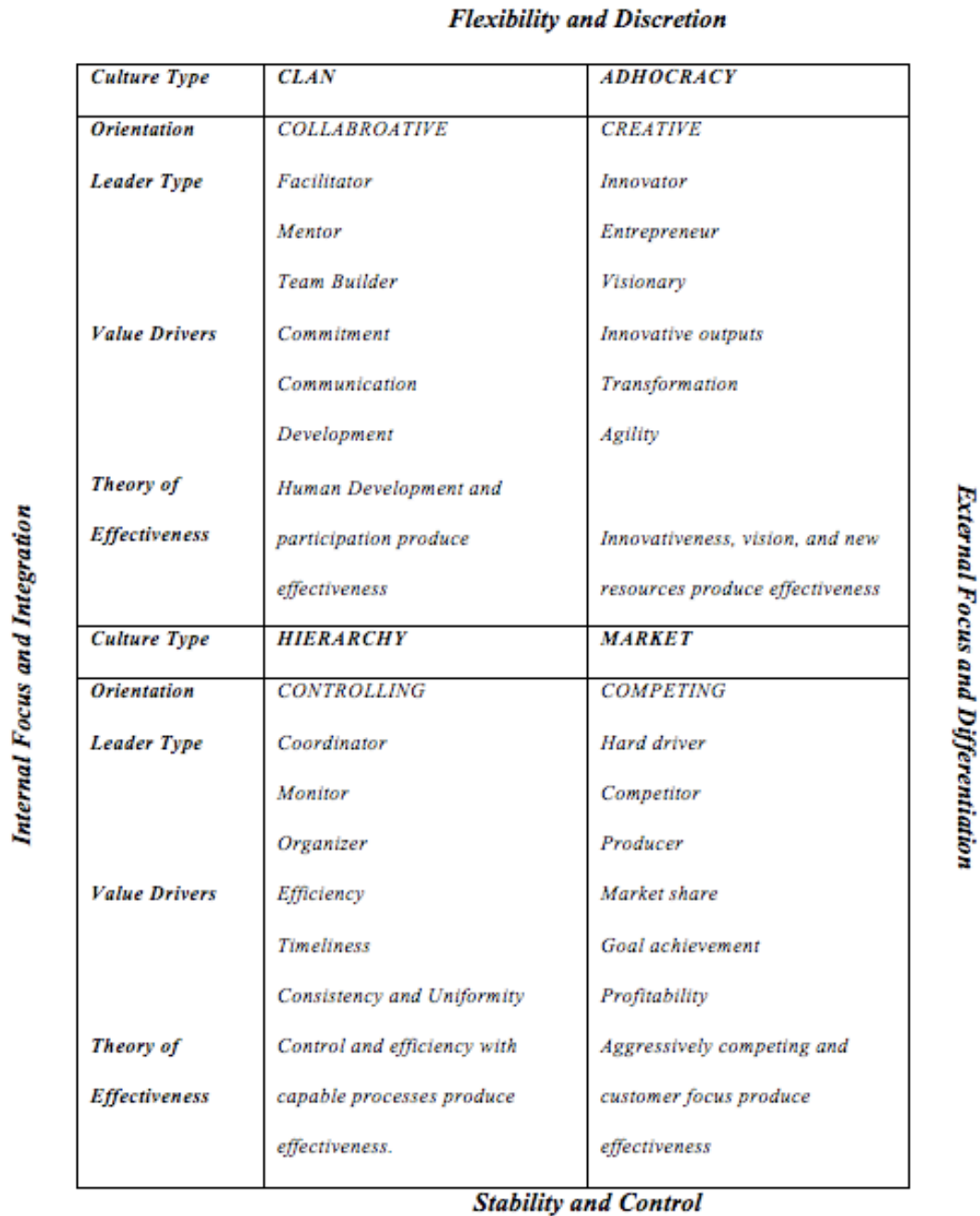


Figure 4: The Competing Values Framework

The CVF contains four distinct culture types according to Cameron and Quinn (1999) (Figure 4).

Clan culture. According to Cameron and Quinn (2006) the clan culture places a high value on collaboration, involvement, and consensus. The primary task of a leader in the clan culture is to coach while providing multiple opportunities for development and professional growth in order to strengthen individual and team performance (Cameron & Quinn, 2006).

The leaders, or the heads of the organization, are considered to be mentors and perhaps even parent figures. The organization is held together by loyalty or tradition. Commitment is high. The organization emphasizes the long-term benefit of human resources development and attaches great importance to cohesion and morale. Success is defined in terms of sensitivity to customers and concern for people. The organization places a premium on teamwork, participation, and consensus. (p. 58)

Adhocracy culture. The adhocracy culture, according to Cameron and Quinn (2006), characterizes an entrepreneurial, dynamic, and creative workplace. This culture is fixated on the current market trends; flexibility is a primary key to meet the demands of an unpredictable market. The adhocracy culture is bound together by a devotion to innovation and experimentation to produce original products or services. According to Cameron and Quinn (1999), the adhocracy culture is

A dynamic, entrepreneurial, and creative place to work. People stick their necks out and take risks. The leaders are considered innovators and risk takers. The

emphasis is on being on the leading edge. The organization's long-term emphasis is on growth and acquiring new resources. Success means gaining unique and new products or services. Being a product or service leader is important. The organization encourages individual initiative and freedom. (p. 58)

Hierarchy culture. According to Cameron and Quinn (2006), the hierarchy culture is based on Weber's (1947) classical attributes of bureaucracy. The goal of the hierarchical is to generate efficient and reliable products or services. Cameron and Quinn (1999) stated that

leaders pride themselves on being good coordinators and organizers who are efficiency-minded. Maintaining a smooth-running organization is most critical. Formal rules and policies hold the organization together. The long-term concern is on stability and performance with efficient, smooth operations. Success is defined in terms of dependable delivery, smooth scheduling, and low cost. The management of employees is concerned with secure employment and predictability. (p. 59)

Market culture. Cameron and Quinn (2006) stated that a market culture is externally focused yet, unlike the adhocracy culture, obtains stability and control. Organizations that are classified as possessing a market culture are outwardly focused, very competitive, and focus on productivity. Cameron and Quinn (1999) indicated,

the leaders are hard drivers, producers, and competitors. They are tough and demanding. The glue that holds the organization together is an emphasis on winning. Reputation and success are common concerns. The long-term focus is on competitive actions and achievement of measurable goals and targets. Success is defined in terms of market share and penetration. Competitive pricing and market leadership are important. The organizational style is hard-driving competitiveness. (p. 58)

Theory of Learning Organization

Senge (1990) developed Argyris's (1982) models of double and single loop learning. Senge pointed out that adaptive learning is essential for the existence of a learning organization but it is not enough for an organization to merely survive. A learning organization must couple adaptive learning with generative learning in order to increase the intellectual capital of knowledge workers. "Learning in organizations means the continuous testing of experience, the transformation of the experience into knowledge accessible to the whole organization, and relevant to its core purpose" (Senge, 1994, p. 49). With the birth of KM spurred by the publication of Peter Senge's book *The Learning Organization* in 1990, there has been increased interest within the medical community in organizational culture and its relationship to KM and knowledge sharing. Senge (1990) defined learning organizations as "organizations where people continually expand their capacity to create the results they truly desire, where new patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually

learning to see the whole together” (p. 3). Learning organizations are distinguished by mastery of five components that converge to produce a learning organization. These components consist of systems thinking, personal mastery, mental models, shared vision, and team learning (Senge, 2006).

Systems thinking. Senge (2006) revealed that systems’ thinking is a deep understanding of the core structure when viewed as a complex system that is propelled by feedback loops interacting to drive behavior. Senge argued that the primary management problem is a simplistic or short-term viewpoint that is applied to complex issues. A short-term cost-saving budget cut may provide additional capital but bring a long-term drop in production. Senge (2006) defined systems thinking as “a way of thinking about the forces and interrelationships that shapes the behavior of systems” (p. 38).

Personal mastery. Personal mastery is a mode of continual learning in an effort to examine and deepen one’s personal vision or potential. Senge (2006) stated, “Personal mastery is not something one can possess. It is a process, a lifelong discipline” (p. 142). Personal mastery creates a paradoxical situation that entails tension as the gap between reality and person vision widen as one’s understanding deepens. According to Senge (2006),

People with a high level of personal mastery live in a continual learning mode. They never ‘arrive.’ Sometimes, language, such as the term ‘personal mastery’ creates a misleading sense of definiteness, of black and white. But personal mastery is not something you possess. It is a process. It is a lifelong discipline. People with a high

level of personal mastery are acutely aware of their ignorance, their incompetence, their growth areas. And they are deeply self-confident. Paradoxical? Only for those who do not see the 'journey is the reward.' (p. 142)

Mental models. Entrenched thinking, internal political positioning, and game playing wreak havoc on changes that could develop from systems thinking. If true change is to occur new skills and the development of new orientations is essential in moving away from entrenched mental models that create openness that transcends business as usual. Senge (1990) stated,

mental models starts with turning the mirror inward; learning to unearth our internal pictures of the world, to bring them to the surface and hold them rigorously to scrutiny. It also includes the ability to carry on meaningful conversations that balance inquiry and advocacy, where people expose their own thinking effectively and make that thinking open to the influence of others. (p. 9)

Shared vision. Leaders must hold the framework of a vision while allowing people within the organization to contribute their picture of the future within the organizational context. Senge (2006) postulated that as people express their vision the organization's vision becomes clearer; as focus on the vision continues, enthusiasm for its benefits follow.

The practice of shared vision involves the skills of unearthing shared "pictures of the future" that foster genuine commitment and enrolment rather than compliance.

In mastering this discipline, leaders learn the counter-productiveness of trying to dictate a vision, no matter how heartfelt. (Senge, 1990. p. 9)

Team learning. Senge (2006) stated that “team learning starts with ‘dialogue,’ the capacity of members of a team to suspend assumptions and enter into a genuine ‘thinking together.’ Allowing the group to discover insights not attainable individually” (p. 10). This type of team learning must align people and process in order to create the desired results. Team learning is centered on both personal mastery and shared vision. These components must be used with cooperative learning bringing together the team’s individual talents to produce results not attainable by the sum of the team’s parts.

Social Capital Theory

Research demonstrated that knowledge exchange is a complex social process that, at least in part, relies upon the social capital between exchange partners. Networks provide firms the access to knowledge, resources, markets, or technologies. Various scholars interested in network relationships have recognized the knowledge dimension of social networks and its link with competitive success (e.g., Baum, Calabrese, & Silverman, 2000; Dyer & Nobeoka, 2000; Gupta & Govindarajan, 2000; Nishiguchi, 1994). A key argument is that through membership in social networks and the resulting enduring exchange relationships, the network members create the potential for knowledge acquisition.

SCT received criticism recently for possessing multiple definitions and conceptualizations. This stems from the fact that social capital has multiple human elements interwoven with multi-dimensional concepts with each dimension contributing to the meaning of social capital. Each dimension or definition is not entirely able to capture the concept each one contributes to what Hean, Cowley, and Forbes (2003) named the primary dimensions of social capital. According to Hean, the main dimensions of SCT are commonly seen as

- Trust (Coleman 1998, Cox 1997, Putnam 1993)
- Rules and norms governing social action (Coleman 1998, Collier 1998, Fukuyama 2001)
- Types of social interaction (Collier 1998, Snijders 1999)
- Network Resources (ABS 2002, Kilpatrick 2000, Snijders 1999)
- Volunteerism (Burt 1997, Kilpatrick 2000, Putnam 1995)

Adapted from (Hean et al. 2003, p. 1062)

Attempts to more thoroughly conceptualize social capital resulted in many authors identifying different types and characteristics, the most common being the distinction of bonding and bridging. Although not always called the same thing, the distinction between bridging and bonding is common in the literature. Anheier and Kendall (2002) referred to social capital as, “bonding capital is found among people who live in the same or adjacent communities, and bridging capital, which extends to individuals and

organizations that are more removed. Bridging social capital is closely related to thin trust, as opposed to the bonding (splitting) social capital of thick trust” (p. 344).

The Dekker and Uslaner (2001) definition of social capital served as the working definition of this study: “Social capital is about the value of social networks, bonding similar people and bridging diverse people, with norms of reciprocity” (p. 1).

Connecting Prior and Recent Research

Prior research suggested that fostering cohesive relationships, teamwork, reflective practice, and organizational learning can improve processes, outcomes, and adaptability of work groups. This holds true specifically for primary care clinicians as collaborative culture and team cohesion has been associated with improved patient care, continuity, and increased patient satisfaction. Learning organizations foster open communication and trust among participants, encourage measured risk, and recognize tacit knowledge as an important source of learning. Recent research suggested that collective learning can improve collaboration, job satisfaction, employee retention, innovation, organizational efficiency, and customer satisfaction.

The use of narratives as learning tools can support the creation of collegial networks, increase self-efficacy, and practice change. Collective learning among clinicians was linked to long-term small group learning in which learners use their tacit knowledge in the knowledge sharing process (see Figure 3). This is an example of complex adaptive systems, defined as “a collection of individual agents that have the freedom to act in ways that are not always predictable and whose actions are

interconnected in a way that the action of one part changes the context for other agents” (Ellis & Herbert, 2011, p. 156). The implication is the creation of collaborative environments that enhance relationships and improved venues for people to voice their ideas and explore small changes that encourage innovation. Clinical workers use a process of reflective adaption and learn from diverse perspectives of the participants support improvement and sustainable quality care delivery of patient care.

Synthesis of Recent Research

Research conducted by Sveiby (2007a) specific to KM practices in several international organizations suggested that managers’ incongruent behaviors, such as lack of trust, silo mentalities, and overdependence on systems, are significant reasons KM can become disabled in organizations. To facilitate change in the existing organizational culture it is essential for leaders to identify such incongruent behaviors. Sveiby (2007b) identified apathy as a primary disabling act specifically for those in a leadership position:

Apathy is not passive, it should be understood as a disabling action. An apathetic manager who does not actively encourage knowledge sharing is either knowingly or unwittingly creating obstacles to share knowledge and will gradually disable the context for creating, sharing and applying knowledge. The silo walls in organizations are built of apathy. Manager actions and decisions have often been studied but what about the absence of action? The following are the five common behaviors of a manager who displays apathy and should be watched for. Not

walking the talk, treating employees differently, knowledge hoarder, not listening to opposing opinions, and being unwilling to change. (Sveiby, 2007b, p. 1640)

Knowledge sharing is often ranked side-by-side with information technology (IT) systems such as EpicCare, PeopleSoft, Groupware, or other data-driven systems. This ranking has resulted in a paradoxical situation in which despite the accessibility of mammoth amounts of data and information many knowledge workers believe that they do not have enough tacit or actionable knowledge. The fact that information is available by no means makes it viable or even usable by the knowledge seeker. Building a knowledge sharing culture solely based on databases or data driven systems uncovers numerous issues. Just because data or information is available does not mean that an organization has created a knowledge sharing culture within an organization. In fact, not all knowledge can be made explicit, and therefore must remain with the knowledge worker. Even on those occasions in which knowledge is deemed explicit there is the threat of differing mental models. The knowledge seeker will interpret the explicit knowledge keyed into a database differently from what the sender intended. The ways in which individuals receive and understand information vary greatly, and they therefore interpret data and information differently.

Silo mentality often occurs in larger or at least more fragmented organizations but can occur between organizations within a single value chain. It is important that all levels of the organization or organizations work together across hierarchies and divisional boundaries to achieve goals. Silo mentality reduces an organization's ability to manage

crises effectively because it blocks opportunities and strengths such as innovation, ideas, creativity, increased communication, and efficiencies. Silo thinking creates isolation, lack of awareness, inefficiencies, duplication, and loss of production. People who operate with silo mentality also tend to act and think about their own interests to achieve their personal goals rather than those of the organization. Sveiby (2007b) stated the reasons for the silo effect can range from simple introversion to significant turf issues. Regardless of causes the silo effect stems from insecurity based in real or imagined fear, which is a result of issues not being confronted and addressed. (p. 1637)

If the organization is to thrive as a cross-boundary knowledge sharing company then the recognition of responsibility avoidance must be met and dealt with appropriately.

Empirical Research Relating to the Study

The culture of an organization plays a significant role in the success or failure of knowledge sharing and KM initiatives in the modern organization. Choo and Bontis (2002) stated that “culture may make or break efforts to manage knowledge effectively within an organization” (p. 94). Lawson’s (2002) research examined cultural types, specifically which cultural types were found to be significant to the implementation of KM practices. Lawson’s study incorporated an important study by Pan and Scarbrough (1999) concluded that knowledge sharing processes existing in the cultural domain and should be less dependent upon technology. Mentoring and communities of practice were

encouraged to produce integration of know-how and knowledge toward the KM goals of the organization. In their research Gold, Malhotra, and Segars (2001), considered the relationship of KM capabilities (technology, structure, and culture) and effectiveness measures (acquisition, conversion, application, and protection) in operational KM programs. Gold et al. found that the presence of social capital was positively related to knowledge acquisition, conversion, and application. Those social relationships were interconnected to organizational effectiveness, which was leveraged as the operational cornerstone for managed knowledge (Gold et al., 2001).

Lawson's (2004) research, although limited, confirmed a positive correlation for the market cultural type. The hierarchy culture showed a negative correlation of the successful implementation of KM, while both the clan and adhocracy types of culture showed inconclusive results. The statistical results of Lawson's study could not be generalized because the sample size used in the study was fewer than 150 participants spanning eight organizations. The implications, however, added value to organizations as they considered KM initiatives. Researchers have indicated that if executives can match organizational culture with specific KM tools and practices they will have an additional tool to assist in decision-making that impacts the competitive advantage of their organization (Arntzen & Leguy, 2007; Chin Loy, 2004; Lawson 2004; Tan & Teow 2006).

In a correlational study, Phillips (2011) examined if KM, job design, and organizational climate influenced autoworkers perception of quality. Phillips found "profound results pertaining to the moderating influence that organizational climate

orientation to quality has on the KM and perception of quality relationship (.440)

correlation measured at the 0.01 level (1-tailed)” (p. 73). Phillips (2011) stated,

organizational climate does have a moderating effect on the factors, in particular, all levels of organizational climate and the management of knowledge. This implies that climate is critical to free flow of knowledge and ideas that are critical to quality systems. (p. 76)

Chin-Loy (2003) used the OCAI to measure organizational culture and the KMAI to measure KM from 38 separate U.S. companies. Chin-Loy (2003) found positive correlations ($p < .001$) between organizational benefits and KM (growth, $r = .31$; innovation, $r = .43$; competitive advantage, $r = .42$). Chin-Loy (2003) examined the moderating effect of organizational culture by using multiple regression analysis to test the connection between KM and the three organizational benefits that served as the depended variables. Chin-Loy (2003) stated that the findings demonstrated, “knowledge management is strongly and positively related to knowledge management benefits, the adhocracy culture type had the strongest correlation ($r = .075$) with the knowledge management benefit of growth” (Chin-Loy & Majtaba, 2007, p. 105). The results of Chin-Loy’s research provided quantitative evidence that the acceptance and use of KM programs or systems are related to organizational culture. Chin-Loy (2007) suggested that “identifying the organizational culture type that is most strongly related to knowledge management programs can assist in fostering successful knowledge management programs” (Chin-Loy & Majtaba, 2007, p. 225).

KM as a business discipline in the field of medicine is in the development stage and thus limited research is available. With the recent development of online social networking and other technology tools that lend themselves to the practice of KM, new research is in process to advance and develop new paradigms in KM. The adoption of electronic medical records systems such as EpicCare has obvious benefits for the hospital from an organizational perspective as decreased cost, increased patient flow have a positive impact on the business. However, adoption of KM systems has been difficult because healthcare professionals view KM systems as patient care neutral (Ghosh & Scott, 2007).

The research carried out by Ghosh and Scott (2007) examined the integration of clinical KM systems and the impact on nurses' collaboration methods during knowledge acquisition, application, and dissemination phases. The contact between patient and nurse frequently resulted in the nurse identifying new knowledge in relation to symptoms, change in patient condition, and other critical patient care issues. Ghosh and Scott (2007) found that organizational culture plays a larger role than KM systems, which reduce personal interactions between nurses, coworkers, and patients.

Knowledge infrastructure capabilities, which depend on structure, culture, and technologies can improve the interaction among nurses and therefore support a personalization strategy. Systems that reduce the personalization activities of a clinical nurse are not likely to meet with success. Therefore, for successful implementations of KM systems in healthcare organizations, the systems should be designed to (1) increase the amount of personalization information captured,

(2) provide real-time communications among nurses, and (3) support knowledge creation activities. (Ghosh & Scott, 2007, p. 81)

The patients will only see benefits if the KM system improves face-to-face contact connecting attending nurses to patients. Creating a collaborative environment for RNs that improves practices and advances patient care activities is essential for KM to succeed in the medical field. The research from Ghosh and Scott (2007) showed that nurses relied on face-to-face interaction with patients (95%) and clinical coworkers (76%) while 65 percent of nurses' work was collaborative. The cooperative culture of nurses must be further examined: a simple KM system will not address the variety of responsibilities nurses routinely carry out (Ghosh & Scott, 2007).

Tan and Teow (2006), examined Singapore General Hospital's (SGH) hybrid KM system and e-learning portal designed specifically for nurses. Singapore General serves over 660,000 patients annually and expects demand to increase as healthcare demand increases with the aging population of Singapore. The increased demand for healthcare, coupled with the shortage of qualified nurses and high turnover, created an opportunity for change (Tan & Teow, 2006). The KM/e-learning system provided online communities of practice, peer group discussion, and journal reviews used for informal knowledge sharing, while providing formal methods of knowledge sharing and training via interactive training modules and slide presentations with narration (Tan & Teow, 2006). SGH implemented this new hybrid KM system using an integrated strategic approach tying the corporate vision to the new KM system.

In addition to using strategy as a guiding mechanism, SGH approached the development of the new system by systemically defining the roles of nurses and hence, the information which is required by them. Through defining the various roles played by nurses, a clear picture of their knowledge requirements appears. A knowledge acquisition map can be plotted and an e-learning KM platform developed to deliver this information. The aim is to give external and internal information, a single access point, thus improving ease of accessing and locating needed information. The knowledge intensive healthcare industry needs to focus on reducing information glut, which will threaten the productivity and effectiveness of nurses. SGH plans to tackle the problem of information glut in its e-learning system through the knowledge portal. (Tan & Teow, 2006, p. 416)

The new system created by SGH provided an appealing blend of e-learning and KM. The researchers did not broach organizational culture; this omission represented a research gap in the study.

The aim of Chen, Chang, Lin and Chen's (Chen, Chang, Lin, & Chen, 2008) study was designed to examine the degree of knowledge sharing practices and professional commitment during the severe acute respiratory syndrome outbreak in Taiwan by nurses providing care to those affected in 2007. Health care workers in Taiwan accounted for 16.4% of the total death toll in Taiwan in 2003, according to the Center for Disease Control, Department of Health, the highest mortality rate for medical personnel among Asian countries. Chen (2008) collected data via a structured

quantitative questionnaire and distributed 8056 to a cross-section of nurses in Taiwan; 2833 nurses returned the completed survey for a 39% response rate.

Pearson correlation analysis was used to explore the relationship between knowledge sharing, SARS impact, and professional commitment (Chen et al., 2008). The researchers found a negative correlation between SARS impact and professional commitment ($r_{12} = -0.074, p < 0.001$) a negative correlation was also found between SARS impact and knowledge sharing ($r_{23} = -.109, p < 0.001$); however, knowledge sharing and professional commitment were positively correlated ($r_{13} = .356, p < .001$) (Chen et al., 2008). The researchers used knowledge sharing as a controlled variable and found a partial correlation between SARS' impact and professional commitment of -0.039 with a p value of 0.045 demonstrating statistical insignificance with the absence of knowledge sharing (Chen et al., 2008). The study's authors inferred that "knowledge sharing was the antecedent variable for the impact of professional commitment and SARS" (Chen et al., 2009, p. 1744). This study produced significant preliminary evidence that knowledge sharing is connected to professional commitment of health care professionals. This research in turn may well impact the retention of hospital and health care providers when faced with new highly contagious diseases (Chen et al., 2008).

Identification of Knowledge Gap

Nurses form a significant operation force in all hospitals. Although the physicians have a responsibility for the diagnosis of the patient's condition and ailments, the RNs have the majority of contact with the patient during the patient's stay in the hospital. The

interaction between the RNs and patients often result in the nurse identifying new knowledge concerning symptoms, changed conditions, and other clinical patient care issues (Ghosh & Scott, 2005). Surprisingly, given this essential patient care and knowledge rich role of RNs in the knowledge process, much of the current KM research has focused primarily on physicians. This study addresses the previous call for research that applies organizational theories to study the context of KM in one healthcare specific process or role such as RNs (Chiasson & Davidson, 2004).

Relevance of Quantitative Research Methodology

Among the social science research community, the research questions determine the research methodology. Researchers typically conduct quantitative studies to examine the relationship among variables and qualitative studies to explore phenomena (Creswell, 2009). To identify key elements of a complex adaptive system in order to ascertain major knowledge processes and organizational enabling factors, Amitabh and Gupta (2010) noted that quantitative research methodology is reflective of research questions that require statistical data to test hypotheses.

The articles referenced in this literature review utilized quantitative techniques such as regression and correlation to research the relationships. The research questions in this study are designed to examine the relationship between enabling factors and influence of organizational culture and the affinity for KM practices. Therefore, a quantitative research methodology is appropriate.

Summary

Chapter 2 reviewed relevant literature specific to KM and the various methods of assessing culture, including Schein's levels of culture and the competing values framework. The competing values framework (CVF) was identified as the theory for characterizing culture in this study. This chapter provided an overview of proposed statistical techniques, discussed the empirical research associated with organizational culture, KM, and nursing specific KM. The empirical review showed that there is a gap in quantitative studies specifically within the KM arena (Allame, et al., 2011; Chin-Loy & Majtaba, 2007; Lawson, 2004). In Chapter 3 I explore the research model and discuss the method used to test the hypotheses.

Chapter 3: Methodology

Introduction

In this study, I examined the relationship between KM and organizational culture. To be more precise, I sought to determine what organizational culture type was related to KM, specifically examining RNs working in the metropolitan area of Portland, Oregon. This correlational study attempts to determine the role of cultural strength in the organizational culture-KM relationship.

Chin-Loy (2003), Lawson (2003), and Jones (2009) explained that KMAI and OCAI assess several different dimensions of KM and organizational culture. However, there is no clarity on how the instruments can assess KM and organizational culture capacity for large and very complex organizations. Chin-Loy (2003) assessed multiple IT companies and military organizations that had numerous departments that were geographically dispersed. Each department or work silo produced highly compartmentalized knowledge created and used by a few within each organization. The larger the organization, the more difficult it becomes to get an accurate overall assessment. A number of previous studies utilized the same instruments (KMAI and OCIA) and focused primarily on the organizations as a whole that represent large for-profit businesses such as sales, IT, and manufacturing organizations. This study is similar to previous studies in that organizational culture and KM was examined. However, this study used the KMAT to measure the affinity for and possible use of KM and investigated a single business unit of the healthcare industry. Several instruments are

available to measure KM, yet little is known regarding the agreement between instruments.

Chin-Loy (2003), Lawson (2003), and Jones (2009) each made recommendations that future studies should focus on specific subunits of similarly complex organizations; consequently, this study explored an area that had not yet benefitted from recommended research. All medical care units and the RNs that staff them represent a high stress professional environment. This division of all hospitals includes surgery, post-operation rooms, oncology, pediatrics, and family medicine that nurses work in daily and have the added significance of making decisions affecting life and death.

In this chapter, I illustrate the method of this research effort by presenting the research questions, hypotheses, population, sample, research design, measurement instruments, validity, and reliability. In addition, I discuss the data collection procedures and data analysis technique(s) that were used in this study.

Research Design and Rationale

A quantitative correlational study design is appropriate for determining the nature and strength of any correlation between organizational types and the affinity for KM. Quantitative research includes collecting and compiling numeric data to accept or reject research questions. Bobko (2010) described quantitative research as an endeavor to provide a truthful description of a circumstance. Creswell (2009) stated that studies between existing variables either describe the relationship that currently exists or

determine cause and effect type relationships. Therefore a correlational design is the most appropriate method for this study.

The study involved the use of printed and electronic survey tools to examine the relationship between continuous variables. The same tools were used to reject or not reject the hypotheses and answer the research questions. The dependent variables were organizational culture types (clan, hierarchy, market, and adhocracy) and I used the OCAI to measure organizational focus (internal or external), a proven reliable and valid instrument designed to diagnose organizational culture. The independent variable was the affinity for KM, which I measured using the survey instrument KMAT, designed to assess five phases of KM. An examination of the four culture types and five phases of KM appears in detail in later sections. I approached this research from a neutral perspective with the intent of providing unbiased results while determining the nature and strength of a correlation, which may exist between continuous variables as shown in Table 1.

Table 1. Links Among Theories, Variables, and Instruments

Cultural awareness model	Supporting theory	Research variable	Instrument
Artifacts: Language, membership,	Organizational learning & SCT: Knowledge sharing processes	Knowledge creation, capture	KMAT
Espoused values: Relationships, power influence	CVF: interaction between workers	Culture types: Clan, adhocracy, hierarchy, market	OCAI
Underlying assumptions: Critical events, achievement	SCT: Collaborative networks	Knowledge dissemination, application, use	KMAT

Population

The population of this study consisted of the RNs working in the various units in hospitals and medical care facilities in Oregon. The sampling frame or target group excluded other clinical and non-clinical professionals working in the hospitals. Based on the Oregon State Board of Nursing (Nursing, 2011), there are approximately 38,000 RNs licensed in Oregon. The sampling plan in this frame describes the approach that was used to select the sample from the population, determine the sample size, and indicate the desired response rate.

Setting and Sampling Procedures

According to Creswell (2009), “the sample is what is studied, and the population is an unknown that researcher draw conclusions about on the basis of the sample” (p. 85). Tashakkori and Teddlie (2010) described sampling as “selecting a set of elements from a population in such a way that descriptions of those elements accurately describe the total population from which they were selected” (p. 137). There are two primary types of sampling methods: probability sampling and non-probability sampling. Probability sampling uses stratified, systematic, and simple random sampling techniques. The participants of the population have an equal chance or probability of being selected. Researchers using random selection or probability samples “limit the probability of choosing a biased sample” (Tuckman, 1999, p. 258). This unbiased sample in turn “permits you to estimate the accuracy or representativeness of your sample” (Babbie, 2007, p. 74). Participants of non-probability samples such as convenience, quota, and

snowball sampling are chosen based on participant availability relative to the population. It is not by chance that participants become part of the sample; these sampling methods can produce sampling error or bias, thus limiting generalizability of the results to other populations.

Probability sampling was used in this study to minimize selection biases and as a result “each element has a known, nonzero chance of being included in the sample” (Creswell, 2009, p. 105). Systematic random sampling involves “taking every K^{th} element after a random start” (McCall, 1998, p. 273). The random sample generator tool in Microsoft Excel was used to select a random sample from the population of RNs.

When the sample size (or N) is relatively small in relation to the number of variables, the researcher risks finding significant coefficients by chance. The sample size must be large enough to uncover a hypothesized difference necessary to make a statistical inference. Determining the representative sample size includes a range of factors such as effect size, alpha, and power (Creswell, 2009). The degree of accuracy or the acceptable levels of error are symbolized by α (alpha). McCall (1998) stated, “The specified acceptable levels of statistical error can be the probability value that forms the boundary between rejecting and not rejecting the null hypothesis” (p. 214). A Type I error is the possibility of showing statistical significance when none is present. A Type II error, represented by β (beta), is the probability of accepting a false null hypothesis (Grimm, 1993; McCall, 1998). The level of power affects the likelihood of detecting differences if they exist, while alpha level determines the strength of permissible statistical significance.

When a Type I error moves closer to zero or becomes restrictive, the likelihood of a Type II error occurring increases. This circumstance creates a push/pull or opposing relationship between error types. All researchers must balance the alpha level and power. Researchers generally employ alpha levels of 0.05 or 0.01 (Babbie, 2007; Creswell, 2009; McCall, 1998). The power is governed by the sample size, alpha, and margin of error (Creswell, 2009). An increased sample size at any given alpha level usually reduces sampling error, which in turn increases the power of the statistical tests (Creswell, 2009). A small sample size can impact a statistical test by making it insensitive; conversely, a large sample size can generate an overly sensitive test. Statistics such as correlation measure group differences in the sample size and directly impact the power of the test. In most cases values for confidence level = 95%, confidence interval = 5%. These values were applied to the population of 38,000 RNs working in Oregon. I used a sample size software, G*Power 3.1, to calculate a total sample size of 380 RNs that was needed to stay within the specified confidence level and confidence interval.

To produce a representative sample of RNs, I utilized post-stratification weights based on demographic data. The demographic data used for post stratification consisted of gender and age. I compared the sample data to auxiliary data accessed via the Oregon State Board of Nursing to ensure the distributions of demographic characteristics are similar to the auxiliary data.

I asked the Oregon Nurses Association and the Oregon chapter of the American Association of RNs to provide a hyperlink from the research sections of their respective webpages or make available the e-mail addresses of RNs matching the survey frame to

participate in the survey. Both of the associations declined my request to post a link to my research on their respective websites.

The consent form informed the participants that the survey was voluntary and that they could discontinue their participation in the study at any point. The participants were asked about their perceptions of organizational culture and use of KM in addition to demographic data. There were no known risks associated with participation in online surveys. The participants were advised that permission for administering this survey was acquired from the Oregon State Board of Nursing that provided me the authorization to conduct this study. I also provided the Walden Institutional Review Board (IRB) number 03-06-13-0070368 for the study.

Instrumentation and Operationalization of Constructs

The questionnaire consisted of three parts: Cameron and Quinn's (2006) OCAI, Maier and Mosley's (2003) KMAT, and demographic assessment (Appendix B). The OCAI was used to describe organizational culture and cultural strength. This instrument is common to both KM and organizational culture literature (Chin-Loy & Majtaba, 2007; Firestone & McElroy, 2004; Jones, 2008; Kangas, 2009; Lawson, 2004; Lines, 2005; Marshall, 2005). Researchers in the KM literature also have used the KMAT to diagnose KM (Chawla, 2011; Francisco Javier, 2010; IAEA, 2008; Phillips, 2011).

Organizational Culture Assessment Instrument

According to Cameron and Quinn (2006), the OCAI is theoretically based on the competing values framework. Researchers use the OCAI to assess organizational culture and cultural strength (K. S. Cameron & Quinn, 2006). Several researchers used the OCAI in studies that include both organizational culture and KM (Bartunek, et al., 2003; Bennet, 2004; Chin-Loy & Majtaba, 2007; Dupuy, 2004; Firestone & McElroy, 2004; Ives, et al., 2000; Jaskyte & Dressler 2005; Jones, 2008; Kangas, 2009). Permission to employ this survey instrument was given to me by Dr. Cameron's research assistant (Appendix C).

The OCAI measures organizational culture on two dimensions. The first dimension measures flexibility and discretion versus stability and control along a continuum. The second dimension measures an internal focus and integration versus external focus and differentiation along a continuum. The two dimensions form the four organizational types of clan, adhocracy, market, and hierarchy.

According to Cameron and Quinn (2006), the OCAI asks questions from six categories that include dominant characteristics, organizational leadership, employee management, organizational glue, strategic emphasis, and criteria of success. The instrument contains four questions from each category for a total of 24 questions. This study used a 5-point Likert scale to rank each question. Table 2 shows the 5-point Likert scale that was used to assess the values for each organization.

Table 3 shows the questions that relate to each culture type. As shown in Table 3, questions 1.1A, 1.2A, 1.3A, 1.4A, 1.5A, and 1.6A relate to a clan culture type. I used the

average score of these questions to determine the clan average score. Questions 1.1B, 1.2B, 1.3B, 1.4B, 1.5B, and 1.6B relate to the adhocracy culture type. I used the average score of these questions to determine the adhocracy average score.

Questions 1.1C, 1.2C, 1.3C, 1.4C, 1.5C, and 1.6C are related to the market culture type. The average score of these questions determined the market average score.

Questions 1.1D, 1.2D, 1.3D, 1.4D, 1.5D, and 1.6D relate to the hierarchy culture type and were used to determine the hierarchy average score. I used the average score of the questions ending with A (clan) and D (hierarchy) culture types to determine the internal focus and integration score and the average score of the questions ending with B (adhocracy) and C (market) culture types to determine the external focus and differentiation score.

Table 2.

Scale for the Assessment of Values

5-point Likert scale	Likert scale
1	<i>Strongly disagree</i>
2	<i>Disagree</i>
3	<i>Neither agree or disagree</i>
4	<i>Agree</i>
5	<i>Strongly Agree</i>

Table 3.

Culture Type Constructs and Indicator Variables

Culture Type	Core Values	Focus	Question No.
Clan	Honest communication Respect for people Trust Cohesive relationships	Internal	1.1A, 1.2.A, 1.3A 1.4A,
Adhocracy	Creative problem solving Innovation Trying new concepts Visionary thinking	External	1.1B, 1.2.B, 1.3B 1.4B,
Market	Goal attainment Getting the job done Direction and goal clarity Outcome excellence	External	1.1C, 1.2C, 1.3C 1.4C,
Hierarchy	Order Stability and continuity Analysis and control Predictable outcomes	Internal	1.1D, 1.2D, 1.3D 1.4D,

Knowledge Management Assessment Tool

Researchers use the Knowledge Management Assessment Tool (KMAT) to measure KM activities in organizations. Maier and Mosley (2003) developed the KMAT while working at American Productivity and Quality Center (APQC) and Arthur Anderson respectively, to help organizations self-assess where their strengths and opportunities lie in managing knowledge. Several other researchers in KM literature have also used the KMAT to diagnose KM (Chawla, 2011; Francisco Javier, 2010;

IAEA, 2008; Phillips, 2011; Singh, 2008). I purchased the KMAT in May 2012 from the APQC.

The KMAT measures KM along five knowledge dimensions as shown in Table 4. These processes include knowledge identification and creation (KIC), knowledge collection and capture (KCC), knowledge storage and organization (KSO), knowledge sharing and dissemination (KSD), and knowledge application and use (KAU). The instrument contains six questions for each process, for a total of 25 questions. This study used a 5-point Likert scale, as shown in Table 2, to rank each question.

Table 4.

Knowledge Processes and Core Values

Knowledge Process	Values	Question
KIC	Generation of new ideas	1
	Decision making	6
	Experience highly valued	11
	Generation of new ideas	16
	Tools for performance objectives	21
KCC	Job requirements	2
	Job documentation	7
	Knowledge repository	12
	Recording knowledge	17
	Time for knowledge sharing	22
KSO	Electronic knowledge base	3
	Cross-referenced information	8
	Accurate information	13
	Common storage practice	18
	Information organized	23
KSD	Knowledge Repositories shared	4
	No road blocks to repository	9
	Intranet portal and K retrieved	14
	Teamwork & collaboration	19
	Information gathering and sharing	24
KAU	Collective experience & decisions	5
	Decision making based on knowledge	10
	New ideas applied	15
	Training and staff development	20
	Advance technologies leveraged	25

Source: Adapted for Maier and Mosley (2003)

Assessment of Variables

The independent variables included organizational culture and organizational focus (internal or external) while KM served as the dependent variable. This section also provides an explanation of each variable.

Organizational Culture

Organizational culture served as the independent variable. The study considered organizational culture as representing one of the four organizational culture types. I measured organizational culture by using Cameron and Quinn's (2006) OCAI. This instrument categorizes an organization's culture as a clan, adhocracy, market, or hierarchy culture type.

I measured organizational focus by using Cameron and Quinn's (2006) OCAI. The various questions of the OCAI determine if an organization's focus matches an internal (clan, hierarchy) or external (adhocracy, or market) cultural focus. Each question was ranked on a 5-point Likert scale. The collection of RNs that obtained the highest average culture type score was considered the dominant culture type of that stratification. This method is consistent with the organizational culture literature (Obenchain & Johnson, 2004).

Knowledge Management

KM served as the dependent variable in this study. I assessed KM by administering the KMAT instrument developed by Maier and Mosley (2003). The

KMAT evaluated KM on five dimensions that included knowledge identification and creation, knowledge collection and capture, knowledge storage and organization, knowledge sharing and dissemination, and knowledge application and use.

Each question was ranked using a 5-point Likert scale. A higher total score indicated a greater affinity for the associated dimensions of KM. The KM variable was considered the total average score of the 25 items on the KMAT. This method is consistent with previous studies in the KM literature (Bartunek et al., 2003; Chin-Loy & Majtaba, 2007; Jones, 2009; Kangas, 2009; Lawson, 2004; Radhakrishnan & Balasubramanian, 2006).

Validity and Reliability

Cameron and Quinn (1989, 2006) provided confirmation of the OCAI's validity and reliability. Cameron and Quinn (1989) cited three studies that produced sufficient evidence by means of Cronbach's alpha coefficients to evaluate reliability. A study conducted in 1988 by Cameron and Quinn (1988) utilized the OCAI to survey 86 separate public utility organizations in which 796 executives rated their firm's culture.

A Cronbach's alpha coefficient was used to test reliability of the four culture types measured by the OCAI. A coefficient greater than or equal to .70 must be reached to be statistically significant. The coefficients for each culture type were reported as significant. The clan scored a .74, adhocracy tallied .79, hierarchy received a .73, and a .71 for the market culture. Yeung, Brockbank, and Ulrich (1991) offered additional confirmation of reliability for the OCAI with their research that included more than

10,000 executives in over 1,000 fortune 500 corporations. The results of the Yeung et al. (1991) study showed significant reliability coefficients of .79 for the clan culture, .80 for the adhocracy culture, .76 for the market culture, and .77 for the hierarchy culture. Zammuto and Krakower (1991) utilized the OCAI to investigate culture of higher education institutions. The respondents of their study included trustees, academic and nonacademic administrators who rated the culture of their institutions. Zammuto and Krakower reported significant reliability coefficients of .82 for clan culture, .83 for adhocracy culture, .78 for market culture, and .67 for hierarchy culture.

Regarding validity of the OCAI, Cameron and Quinn (1989) stated that “the empirical evidence suggest that the OCAI measures what it claims to measure, namely key dimensions of organizational culture that have a significant impact on organizational and individual behavior. Moreover, it measures these dimensions in a reliable way” (p. 160). Cameron and Quinn (1989) cited Quinn and McGrath (1985) as a study that provided evidence of convergent and discriminant validity of the OCAI instrument. Convergent validity was indicated by the association between scores from two different ways of measuring organizational culture. One method employed Likert scales and the other invited respondents to allocate 100 points between four different organizational culture scenarios. Discriminant validity was indicated by the differences between scores on the scales used to construct the four forms of organizational culture. Cameron and Quinn (1989) stated, “When the multi-trait and multi-method correlation matrix was examined convergent validity was supported. All diagonal correlation coefficients were statistically different from zero ($P < .001$), and they ranged between .212, and .515, a

moderate level of correlation” (Cameron & Quinn, 1989, p. 157). These tests and measures provided support for the construct validity of the OCAI testing instrument.

Maier and Moseley (2003) pilot tested and revised the KMAT based on the feedback from corporate managers who were responsible for process improvement, technology, and organizational development. Maier and Moseley did not report reliability data for the KMAT survey. Chawla and Joshi (2011) conducted confirmatory factor analysis for the validation of the KMAT using Cronbach alpha before conducting their analysis. Chawla and Joshi stated, “The value of Cronbach alpha varied from 0.775 to 0.940 indicating a high degree of reliability for each of the five dimensions included in the KMAT instrument” (p. 9).

Phillips (2011) conducted a study of 114 automotive manufacturing line employees in Michigan. The study examined product quality and used the KMAT and three other instruments to measure the extent KM and job design influence quality and if organizational climate moderates that relationship. Phillips reported a Cronbach alpha score of 0.895 for the KMAT instrument. Phillips demonstrated sufficient reliability because the Cronbach alpha scores for each construct as well as the mean score for the KMAT exceeded the 0.70 minimums.

In a study that investigated KM processes and the impact of leadership styles Singh (2008) tested the KMAT for internal consistency of all five dimensions using Cronbach alpha coefficients. The Singh study reported that the Cronbach alpha levels ranged from 0.702 to 0.904 demonstrating a high degree of reliability for each of the five dimensions of the KMAT.

Data Collection

I collected data by distributing the questionnaire to the eligible population of RNs working in Oregon via web or printed survey. The population received an e-mail invitation to participate in the study (Appendix A) that included a link to the Internet-based survey to the nurse administrators of three health care systems, including Providence Medical Group, Oregon Health Science University, and Legacy Good Samaritan Medical Group. The sample was drawn from those hospitals that have either an e-mail or postal address provided by the Oregon State Board of Nursing.

I used Survey Monkey to post the survey on the Internet and for data collection purposes. The survey was administered to RNs who work in the Portland metropolitan area and were familiar with the organizational culture and KM practices of their hospital. Respondents received an e-mail with a link to a password-protected web page that contains the survey. The respondents completed the survey online and had the ability exit the survey at will. The survey included a progress indicator to give the respondents some indication of their progress. The survey was programmed to allow only one response for each question and allow the respondents to stop and reenter the survey as necessary. I notified the respondents that information acquired will remain private and their anonymity was protected. The data collected and stored via Survey Monkey had end-to-end SSL encryption to guarantee security and privacy.

Five working days after the initial e-mail request with the link to the survey, I sent a second e-mail to thank those who had completed the survey and remind the others who

had yet to respond to the first request. A third reminder was necessary and again I sent a thank you and reminder e-mail at the 15-day mark. The respondents had 28 days to complete the Internet-based survey. The attempts to gain the preferred sample size of $N = 380$ were unsuccessful; therefore, I adjusted the confidence interval to 10, which produced a smaller sample size of $N = 90$ calculated with 95% confidence level.

Hospitals and associations for which an e-mail address was not provided received paper surveys via U.S. Postal Service. The paper survey contained a link to the web-based survey to give the respondents the option of completing the survey online. I entered the paper survey data manually into the Survey Monkey database and then exported the survey data from the Survey Monkey database to a Microsoft Excel file. The data were coded and tabulated in Excel and exported from Microsoft Excel to SPSS version 20.0 statistical software.

Research Questions and Hypotheses

I investigated the following two research questions and four related hypotheses:

1. What is the nature of the linear correlation between perceived organizational culture and the affinity for KM among RNs?

$H1_O$: A positive linear correlation does not exist between perceived organizational culture and perceived affinity for KM.

$H1_A$: A positive linear correlation does exist between perceived organizational culture and perceived affinity for KM.

2. What is the nature of the linear correlation between the affinity for KM and perceived organizational focus?

H2_O: A positive linear correlation does not exist between perceived affinity for KM and the perception of internal focused culture types.

H2_A: A positive linear correlation does exist between perceived affinity for KM and the perception of internal focused culture.

Data Analysis

The data appeared to satisfy the assumptions of normality, and homoscedasticity for parametric testing. I used the Pearson r product-moment correlation procedure to determine the direction and strength of the relationship between organizational culture and KM to test each hypothesis. The Pearson product-moment correlation procedure is the typical research tool used by other KM and organizational culture researchers (Chin-Loy & Majtaba, 2007; Jones, 2009; Kangas, 2009; Lawson, 2004).

I performed the demographic data analysis and inferential statistical methods by using SPSS statistical software. As part of the descriptive statistics, I screened the data by identifying missing data and outliers and used pairwise exclusion of missing data. This method excluded the cases only if they were missing the data required for a specific analysis. Pallant (2005) recommended using this technique to account for missing data. I removed all cases for the data set that contain outliers. The data were considered an outlier if the standardized residual is greater than three or less than negative three. I also used the skewness and kurtosis of the variable to assess normality.

The independent and dependent variables that were used in this study was measured using a 5-point Likert scale. Sims (2004) asserted that “while there might be mathematical debate on whether these types of scales are simply categories and not continuous variables, social scientists do agree that they can safely be used in statistical analysis as continuous variables” (p. 6). Therefore, the data were analyzed using parametric statistical procedures. The parametric techniques used in the study include the Pearson product-moment correlation (Table 5).

Table 5.

Method of Analysis

Hypothesis	Instrument	Method	Sig
<i>RQ 1. What is the nature of the linear correlation between perceived organizational culture and the affinity for KM among nurses?</i>			
H1 _o : A positive linear correlation does not exist between perceived organizational culture and perceived affinity for KM.	KMAT Maier & Moseley (2003), and OCIA Cameron and Quinn's (2006)	Pearson Correlation	Alpha =0.05
<i>RQ 2. What is the nature of the linear correlation between the affinity for KM and perceived organizational focus?</i>			
H2 _o : A positive linear correlation does not exist between perceived affinity for KM and the perception of internal focused culture types.	KMAT Maier & Moseley (2003), and OCIA Cameron and Quinn's (2006)	Pearson Correlation	Alpha =0.05

Threats to Validity

There were several threats to the external validity of this study. First, data collection from a survey generally produces a low response rate. I took steps to increase

the size of the sample in order to attain enough responses for statistical analyses. This, however, did not decrease the risk of low response rate that may have an effect on data analysis. A second point was that internal validity might be threatened by outside variables due to an unlimited amount of variables that could impact organizational culture and perception of KM. A third point was the fact that RNs could not respond to the survey during working hours. Lastly, it was possible that RNs' perception of their hospital does not represent the real culture of the entire organization.

Ethical Procedures

The confidentiality and anonymity of the data provided by the participants of this study was an important concern. This study collected data from a web-based survey on a voluntary basis by RNs who were all adults. The first invitation e-mail illustrated the protection of participants' rights and assured the participants that the survey was anonymous and voluntary (see Appendix A).

The rights and protection of the participants were detailed in the survey consent form (Appendix D). The consent form provided an introduction to the survey, clarified the voluntary nature of the study, and detailed participants' benefits and risks, procedures, confidentiality, statement of consent, and contact information. The participants were reminded to complete the survey only once, even though they may receive multiple e-mail invitations to participate.

The participants were informed that participation in this study was completely anonymous and the survey results were reported in aggregate fashion in this dissertation

or related journal articles. A web-based survey was used to protect the identity of the participants. The data were exported from surveymonkey.com and transferred to two of my external hard drive devices for backup and safekeeping. The backup copy was kept in a separate location. After a period of 5 years the data will be securely deleted from all drives.

In the event of participant concerns or questions, any survey participant could contact me via phone or e-mail. The participants were informed that they may contact a Walden University representative regarding their rights as a survey research participant. The completion of the survey gave informed consent to participate in the study as stated in the consent form and invitation e-mail (Thomas, 1999). The e-mail invitations, letter of cooperation, survey, and consent form accompanied the IRB proposal. No data were collected until approval was obtained from Walden University's IRB (approval number 03-06-13-0070368).

Summary

This chapter presented the methodology of this study. This methodology included the research approach, research setting, instruments used for measurement, concepts measured, data collection, and data analysis techniques were discussed. The procedures outlined in this chapter were followed closely to ensure that data collection and analysis was done in a manner both statistically correct and confidential. The next chapter presents the data analysis and results of the research.

Chapter 4: Results

Introduction

The purpose of this quantitative study was to examine what level of correlation exists between KM and organizational culture within hospitals operating in Portland, Oregon. The central problem was determining the appropriate organizational culture type for KM success in the healthcare environment. Chapter 4 includes detailed descriptions of how the study was conducted, the data collection methods, and procedures of data analysis. Chapter 4 also includes an accounting of results with respect to data analysis, including how the findings were used to test the hypotheses and to answer the research questions.

Data Collection

Initially, 1,500 RNs working in Portland, Oregon were invited to participate in an electronic survey. During the following 10 days, 54 nurses attempted to complete the online survey and more than 85% of the participants completed the entire survey. In order to achieve a larger sample size, a total of two follow up e-mails were sent on Days 5 and 15 to the participants inviting them to contribute. There was a spike in participation following each reminder and then a drop-off after 48 hours. There was one apparent technical problem with online service because surveymonkey.com experienced server issues approximately one hour after the initial invitations were distributed. The impact to this survey is unknown; however, this unexpected outage did cause inconvenience to many would-be participants. This survey did not attain the desired sample size of 380

participants. However, of the 104 total participants, 93 completed the entire survey. The final sample size for this study was $N = 93$. As a result, I adjusted the confidence interval to 90% to accommodate for the smaller sample size calculated with 95% confidence level.

Descriptive Statistics for Demographic Variables

Among the 93 individuals who completed the entire survey, 10 (10.8%) were male and 83 (89.2%) were female. Ten (10.8%) participants were between the ages of 21-29 years old, 27 (29%) were between the ages of 30 and 39 years old, 24 (25.8%) were between the ages of 40 and 49 years old, 28 (30.1%) were between the ages of 50 and 59 years old, and four (4.3%) were 60 years old or older. In terms of education level, 22 (35.5%) of the participants held a master's degree, while six (6.5%) held a doctoral degree, 30 (32.3%) earned a bachelor's degree, 18 (19.4%) held an associate's degree, and 6 (6.5%) of the participants did not hold a degree.

With respect to the participants' current place of employment the results were as follows: Portland Providence (37.6%), Kaiser Permanente Oregon (9.7%), Oregon Health Science University Hospital (28%), Portland Legacy Emanuel (15.1%), and nine (8.6%) responded "other provider." For the time-specific questions, the participants were asked how long they have served in their current medical organization and total years in the field of medicine. Forty-two (45.2%) participants reported having worked 7 or more years with their current organization, 21 (22.6%) reported having between four and six years, 18 (19.4%) fell between two and three years, and 11 (11.8%) reported have one or

less years with their current medical organization; one participant did not respond to this question. Forty-two (45.2%) of the participants responded that they have 16 or more years of experience in the field of nursing, 24 (25.8%) reported between zero and five years, 15 (16.1%) fell between 11 – 15 years, and 11 (11.8) reported as having 6–10 years experience as a RN; one participant did not respond to this question. For the KM program in use question, 38 (40.9%) of the participants responded in the affirmative while 19 (20.4%) responded with a no and 35 (37.6%) were unsure; one participant did not respond to this particular question. The participants were asked how many KM training hours they had received. Seventy-five (80.6%) of the participants indicated they had zero training hours, 7 (7.5%) reported two hours of training, 3 (3.2%) received four hours of training, and 8 (8.6%) received eight or more hours of training. See Appendix E for descriptive statistics and frequency tables for all survey questions.

Descriptive Statistics for Continuous Variables

I assessed the normality of the continuous variables by examining the skewness and kurtosis of each variable. Table 6 shows the skewness and kurtosis values for independent and dependent variables. The value of skewness and kurtosis will equal zero if the distribution is perfectly normal. However, a perfectly normal distribution rarely occurs in social science research (Pallant, 2005). I considered values of skewness and kurtosis acceptable for psychometric purposes if they were between positive 2 and negative 2. Researchers commonly use this method to assess normality (Garson, 2009).

Table 6.

Skewness and Kurtosis Values for Continuous Variables

	<i>N</i>	<i>M</i>	<i>SD</i>	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
KMAT	93	3.551989	.5397852	.484	.250	.419	.495
Clan	93	3.612903	.5959613	-.068	.250	-.502	.495
Adhocracy	93	3.152330	.5644757	.118	.250	.236	.495
Market	93	3.442652	.5519479	.046	.250	-.621	.495
Hierarchy	93	3.727599	.5371382	.466	.250	-.259	.495
Valid N	93						

As shown in Table 6, the skewness and kurtosis values for all of the variables were between a positive two and a negative two.

Cronbach's alphas were calculated for each of the independent and dependent variables. Table 7 showed all continuous variables had a high degree of internal consistency reliability. Cronbach's alpha for KM had a value of .905. Cronbach's alpha for organizational culture ranged from .781 (market culture) to .717 (internal focus). The skewness and kurtosis values for all of the continuous variables were between a positive two and a negative two. The Cronbach alpha scores showed a high degree of internal consistency. Therefore, I considered the continuous variables as having an acceptable degree of normality for parametric testing. See Appendix F for histograms of all continuous variables.

Table 7.

Cronbach Alpha for Dependent and Independent Variables

Variable	Cronbach's alpha (N=93)	Number of items
KM	.905	25
Clan culture	.759	6
Adhocracy culture	.747	6
Market culture	.781	6
Hierarchy culture	.777	6
Internal focus	.717	12
External focus	.719	12

Data Analysis and Results**Research Question 1**

The main research question was what, if any, linear correlation exists between KM and organizational culture within hospitals operating in Oregon. The first research question was, “What is the nature of the linear correlation between perceived organizational culture and the affinity for KM among RNs?” This question was answered by testing the following hypotheses:

$H1_O$: A positive linear correlation does not exist between perceived organizational culture and perceived affinity for KM.

$H1_A$: A positive linear correlation does exist between perceived organizational culture and perceived affinity for KM.

The Pearson product-moment correlation coefficient (r) is a measure of the degree of linear relationship between two variables. A value of zero reveals there is no relationship between two variables. A value of positive 1 indicates a perfect relationship between two variables; as one variable increases the other variable also increases. The closer the r value is to positive one, the stronger the relationship. The dependent variable for the correlation model was perceived affinity for KM and the independent variable was perceived organizational culture types. Table 8 shows the Pearson correlation matrix for the perceived organizational culture types and perceived affinity for KM.

Table 8.

Pearson Correlation for Organizational Types and KM

		KMAT	Clan	Adhocracy	Market	Hierarchy
KMAT	Pearson Correlation	1	.298**	.410**	.323**	.187
	Sig. (2-tailed)		.004	.000	.002	.073
	N	93	93	93	93	93
Clan	Pearson Correlation	.298**	1	.361**	.050	.356**
	Sig. (2-tailed)	.004		.000	.633	.000
	N	93	93	93	93	93
Adhocracy	Pearson Correlation	.410**	.361**	1	.388**	.106
	Sig. (2-tailed)	.000	.000		.000	.310
	N	93	93	93	93	93
Market	Pearson Correlation	.323**	.050	.388**	1	.166
	Sig. (2-tailed)	.002	.633	.000		.112
	N	93	93	93	93	93
Hierarchy	Pearson Correlation	.187	.356**	.106	.166	1
	Sig. (2-tailed)	.073	.000	.310	.112	
	N	93	93	93	93	93

** . Correlation is significant at the 0.01 level (2-tailed).

From Table 8, the Pearson correlation matrix indicated that all four organizational culture types revealed a positive relationship to perceived affinity for KM. Three of the culture types were found as significantly positive; clan ($r = .298$), adhocracy ($r = .410$), and market ($r = .323$) were significantly related to the affinity for KM. Hierarchy culture type ($r = .187$) was positively related to the affinity for KM but the relationship was not strongly related.

Because the Pearson product-moment correlation coefficients indicated a positive relationship between perceived affinity for KM and the four organizational culture types, the null hypothesis $H1_0$ was rejected and the alternative hypothesis $H1_A$ supported. Therefore a positive linear correlation does exist between perceived organizational culture and perceived affinity for KM. This finding was consistent with previous research (Ajmal et al., 2009; Allame et al., 2011; Bartunek et al., 2003; Benbya, 2006; S. Chen et al., 2009; Chin-Loy & Majtaba, 2007; Lawson, 2004).

Research Question 2

This study also examined the nature of the linear correlation between the perceived affinity for KM and perceived organizational focus. I used the Pearson product-moment correlation coefficient to test Hypotheses 2. The dependent variable for the correlation model was perceived affinity for KM and the independent variables were related to the perceived focus of the organizations (internal and external). The second research question was, “What is the nature of the linear correlation between the affinity

for KM and perceived organizational focus?” This question was answered by testing the following hypotheses:

$H2_O$: A positive linear correlation does not exist between perceived affinity for KM and the perception of internal focused culture types.

$H2_A$: A positive linear correlation does exist between perceived affinity for KM and the perception of internal focused culture.

Table 9 shows the Pearson correlation matrix for the perceived organizational focus and perceived affinity for KM. The Pearson correlation matrix indicated that both internal and external perceived organizational culture focus showed a positive relationship to the perceived affinity for KM. The culture focus types were found as significantly positive; internal focus ($r = .298$), and external focus ($r = .441$) were significantly related to the affinity for KM. External focus culture type ($r = .441$) showed a significantly stronger positive relationship to the affinity for KM than did the internal focus type. Because the Pearson product-moment correlation coefficients indicated a positive relationship between the perceived affinity for KM and the perceived organizational focus, the null hypothesis $H2_O$ was rejected and the alternative hypothesis $H2_A$ supported. A positive correlation does exist between perceived affinity for KM and the perception of internal focused culture.

Table 9.

Pearson Correlation for Culture Focus and KM

		KMAT	Internal Focus	External Focus
KMAT	Pearson Correlation	1	.298**	.441**
	Sig. (2-tailed)		.004	.000
	N	93	93	93
Internal Focus	Pearson Correlation	.298**	1	.253*
	Sig. (2-tailed)	.004		.015
	N	93	93	93
External Focus	Pearson Correlation	.441**	.253*	1
	Sig. (2-tailed)	.000	.015	
	N	93	93	93

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Summary

The purpose of this study was to determine if perceived affinity for KM (dependent variable) correlated with either perceived culture types or perceived organizational focus (independent variables). Participants were RNs working in the greater metropolitan area of Portland, Oregon. Ninety-three of the 1,500 RNs who were invited to participate completed the entire survey, resulting in a final sample size of 93. The data from the 93 participants who responded via Internet surveys were imported into SPSS version 21 for analysis.

Descriptive statistics were completed in order to identify demographic attributes of the sample. Eighty-nine percent of the 93 participants were female and 10.8% were male. This ratio is consistent with the demographic data (90.9% female, 9.1% male) received from the Oregon Department of Nursing (Nursing, O.S.B.O., 2011). The ages of the participants were evenly distributed as 30.1% reported they were 50-59 years of age, 29% were 30-39, 25.8% were 40-49, 10.8% were 20-29 years of age, and the final 4.3% were 60 years or over. The total years as a nurse was interesting as 45.2% reported possessing 16 plus years in nursing, while 25.8% were in their first 5 years as a nurse. Nearly half (49.9%) percent of the nurses reported that their hospital had a KM program in place, while 37.6% were unsure, and 20.4% responded in the negative. Only 18 (19.4%) nurses reported having two or more hours of KM training, while 75 (80.6%) nurses reported having not attended any KM training sessions.

The Pearson product-moment correlation coefficient statistic was computed to test the hypotheses. The results showed that among RNs adhocracy, market, and clan culture types were significantly related to KM, while hierarchy culture type showed a positive correlation but results were not significant. Therefore, a positive correlation does exist between perceived organizational culture and perceived affinity for KM. The results showed a positive relationship between both internal focus ($r = .298$) and external focus ($r = .441$) were significantly related to the affinity for KM.

Chapter 5 contains an interpretation of the research findings, limitations of the study, recommendations for head nurses, implications for social change, and

recommended future research. Finally, Chapter 5 includes a discussion on how the current study findings relate to or deviate from prior research studies.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this correlational study was to examine the relationship between organizational culture (clan, adhocracy, market, hierarchy) and the affinity for KM of nurses working in Oregon hospitals. Researchers and practitioners called for additional research to further understand the relationship between organizational culture and KM specifically within the health care and human services field (Armstrong & Kendall, 2010; Arntzen-Bechina & Leguy, 2007; Banihashemi, Naeeni, & Aboutalebi, 2007). Although research has been conducted on organizational culture, limited research exists that focused on RNs, their affinity for KM, and different focus types (internal and external) of organizational culture.

In Chapter 5, I summarize and conclude the study. Chapter 5 consists of a summation of the study, which includes the interpretation of the findings, limitations, social change implications, recommendations for future studies, recommendations for action, and conclusions.

Interpretation of Findings

Participants of the study included RNs ($N = 93$) practicing in Portland, Oregon. The sample was primarily female (80.2%). Twenty-seven (29%) of the participants were between the ages of 30 and 39 years old, 24 (25.8%) were between the ages of 40 and 49 years old, and 28 (30.1%) were between the ages of 50 and 59 years old. Forty-three (45.2%) of the participants responded they have 16 or more years of experience in the

field of nursing, 24 (25.8%) reported between zero and 5 years of experience as a RN. For the KM program in use question, 38 (40.9%) of the participants responded in the affirmative, while 19 (20.4%) responded with a no, and 35 (37.6%) were unsure. The participants were asked how many KM training hours they had received. The majority (80.6%) of the participants indicated they had zero training hours.

The Pearson r statistic was computed to answer the research questions and test the related hypotheses. All statistical analyses were performed using SPSS software; the Pearson correlations were computed with a 5% alpha level. The following sections provide an analysis of the findings presented in Chapter 4.

Research Question 1

The first research question examined the nature of the linear correlation between perceived organizational culture and the affinity for KM among RNs. To address this question, I created Null Hypothesis 1, which stated that a positive linear correlation does not exist between perceived organizational culture and perceived affinity for KM. This hypothesis was tested using Pearson's correlation statistic as the data fit the alpha and skewness requirements.

Results of the Pearson's correlation statistic showed a statistically significant positive linear correlation existed between the market ($r = .323$), adhocracy ($r = .410$), and clan ($r = .298$) culture types and the affinity for KM. A positive correlation existed between hierarchy ($r = .187$) culture type and the affinity for KM; however, these results were not statistically significant. Therefore, it was concluded that a positive correlation does exist between perceived organizational culture and perceived affinity for KM.

This finding supports Jones (2009), who also found that adhocracy culture type ($r = .625$) had a stronger relationship to KM than the hierarchy ($r = .319$) culture type. In addition, Kangas (2005) found that adhocracy culture ($r = .341$) had a stronger relationship to KM than hierarchy ($r = .232$). Kangas's findings were consistent with some previous research (Allame et al., 2011; Benbya, 2006; S. Chen et al., 2009; Kangas, 2005), but it contradicts Chin-Loy and Majtaba (2007), who found that adhocracy culture type ($r = .768$) had a weaker relationship to KM than hierarchy culture type ($r = .793$).

The rather moderately positive correlations discovered in this study were consistent with both the Kangas (2005) and Jones (2009) studies. The correlation statistic in Kangas's study showed a statistically positive correlation existed between the market ($r = .45$), adhocracy ($r = .38$) clan ($r = .31$), and hierarchy ($r = .23$) culture types and KM. The Jones study also produced moderately positive correlations with a high of $r = .625$ for adhocracy culture to a low of $r = .321$ for hierarchy culture type. Surprisingly, the Chin-Loy and Majtaba (2007) study produced strong correlations ranging from a high of $r = .897$ for the market culture type to a low of $r = .768$ for the clan culture type. The population of Chin-Loy and Majtaba's study was instrumental in producing the strong correlations given that the respondents were officers and enlisted personnel serving on Army bases located in the United States.

Research Question 2

The second research question examined the nature of the linear correlation between perceived organizational focus and the affinity for KM among RNs. To address this question, I created Null Hypothesis 2, which stated that a positive linear correlation

does not exist between perceived affinity for KM and the perception of internal focused culture types. I tested this hypothesis using Pearson's correlation statistic as the data fit the alpha and skewness requirements.

External focus culture type ($r = .441$) showed a significantly stronger positive relationship to the affinity for KM than did the internal focus type ($r = .298$). Because the Pearson correlation coefficients indicated a positive relationship between the perceived affinity for KM and the perceived organizational focus, the null hypothesis $H2_O$ was rejected and the alternative hypothesis $H2_A$ supported. A positive correlation does exist between perceived affinity for KM and the perception of internal focused culture.

Limitations of Study

Because hospitals and virtually all medical centers are considered learning organizations, they are continually changing and this study is a picture of one specific point in time as are all research projects. With the exception of Kaiser Permanente all hospitals in this study were in the first year of implementing the KM system EpicCare. RNs working a providence, OHSU, and legacy health systems were experiencing a steep learning curve. The log-linear shape of the learning curve along with over 80% of RNs reporting they received less than 2 hours of EpicCare training explains the significant but anemic correlation scores. Senge (2006) pointed out that learning organizations cannot proclaim they have reached the pinnacle of being a learning organization because the learning process is continuous. Because only 93 nurses from four hospitals in Portland,

Oregon contributed to this study, the research offers a generalized view of the medical care industry in a single geographic area.

I used a quantitative methodology in this research. Additionally, I employed a self-administered survey method of data collection. This method does not allow for follow-up questions that could ascertain the participants' deeper perspective. While there were limitations to the study, I was able to overcome those limitations because it was based on sound constructs measuring different aspects from reliable and valid instruments (Creswell, 2009). Subsequently, this study conveyed useful information for lead nurses and hospital administrators.

Recommendations for Future Research

Minimal research exists regarding the focus of organizational culture and the affinity for KM among nursing professionals. This study provided a starting point; more research that specifically concentrates on this subject is necessary. Future researchers may consider expanding the population to include additional nurses from other regions of the United States. If future researchers could partner with a national medical organization such as Kaiser Permanente, they may indeed increase the magnitudes of correlation, thus improving the generalizability of the study by expanding the study to a larger and more focused audience.

Researchers may consider using a mixed-model or qualitative methodology and taking observational approach to gathering data. This approach would allow researchers to gather contextual information by asking exploratory follow-up questions. Often open-

ended questions provide the participants to think deeper and provide richer data as well. This approach may provide future researchers with increased insight into the experiences of the participants.

Future researchers may want to use demographic characteristics as variables to explore in future studies. For example, over 80% of the participants in this study received zero training. Additionally, nearly 90% of the participants in this study were female. Researchers may want to explore if the findings will be similar across the different demographic variables. A researcher may consider using a specific population of nurses such as pre-operation or post-operation nurses as segmented populations.

Research to examine if a specific organizational culture type and focus supports KM is important to help executives and clinicians understand how to improve their organizations' competitiveness (Chin-Loy & Majtaba, 2007). In this study I pulled together the body of literature related to KM, organizational culture types and focus (internal or external) and extended that literature by offering additional insight into determining the appropriate organizational culture type for KM success in the healthcare field. The results presented in Tables 8 and 9 indicate that positive relationships exist between organizational culture, organizational focus and the affinity for KM. Although positive correlation does not imply causation, it does suggest that impact on one variable may cause another to alter. This is a key underlying tenant of any culture change initiative targeting the creation of an environment appropriate for KM systems implementation.

This study focused exclusively on RNs and not the specific departments in which they worked. Researchers should consider expanding the participant pool to all healthcare professionals within a national medical organization such as Kaiser Permanente to allow for additional insight. For example, including RNs from different regions of the United States may have provided dissimilar culture perspectives that could have contributed to a more inclusive study.

Further research is needed to show more empirical connection between organizational culture types and KM. Because this research was limited in the data that it could provide, increasing the population or conducting a mixed model study may be necessary to gain additional data to this phenomenon, particularly at the medical unit level. In addition, future research should investigate the learning goals of RNs to not only share knowledge but also populate evidence and data into a KM system such as EpicCare. Knowles (1988) stated, “Learners will invest their energy in making use of available resources to the extent that they perceive them as being relevant to their learning needs and goals” (p. 56). The relationship between the organizational culture and learning goals played a critical role in sharing new diagnostic approaches in Singapore during the 2003 SARS crisis (Chen et al., 2008). The motivation to learn and share knowledge is a critical success factor in creating new modalities of sharing knowledge via a KM system and is certainly worthy of further examination.

Research specific to learning goals of RNs and organizational culture may prove fruitful for future research. The results of the Chen et al. (2008) research provided preliminary evidence that knowledge sharing was significantly correlated with

professional commitment of nursing personnel. This research combined with similar studies provides initial support that nurses' perception of organizational culture showed a positive correlation to KM. A qualitative study focused on KM portals designed for the predominate culture type of a specific business unit, such as the collaborative KM system presented in Chua and Brennan's (2004) research and the specific learning goals of each department, would be thought provoking.

Recommendations for Action

The findings of this study suggest that a lack of KM training was an important factor to achieving higher learning motivation and the use of KM systems. As shown in Appendix E, less than 12% of the participants indicated having more than 2 hours of training while over 85% reported having fewer than two hours or no training on the current KM system. This lack of training activities either offered or participated in implies that hospital administrators need to enhance their KM training activities. In addition, this finding highlights an opportunity for medical organizations to examine motivational factors that increase use of KM system. This training gap certainly would include learning goals and the log-linear shape of the learning curve experienced by RNs who participated in this study.

KM is fundamentally an effort to share and collect wisdom and experience while attempting to make those experiences available and useful to all within the organization. The literature provided diverse points of view on the emerging KM programs in the healthcare industry. The literature supports that knowledge is considered to be one of the

most important assets in the way medical practitioners provide care for their patients. This study did not explicitly examine the appropriate organizational culture type or focus for KM successes. The literature supports that changing organizational culture is a herculean task that can be difficult and time intensive. Understanding how to achieve KM success within a specific organizational type is vital.

While KM systems are technology based, it is not about computers; for KM to be successful and effective in the field of medicine it has to be much more. For example, the positive correlation between external focus and KM in this study suggests that organizational focus maybe a motivating force behind whether or not medical practitioners can effectively achieve its primary objective of total patient care.

Administrators of hospitals implementing KM systems such as EpicCare should conduct a review to access the breadth of the KM suite in order to detect any gaps. Certainly the KMAT developed by Maier and Moseley (2003) could be used to facilitate the review. The review should consider the five knowledge dimensions, which include knowledge creation, capture, storage, sharing, and application. Healthcare managers should have tools in place that address each process. For example, to address the knowledge capture and sharing processes, oncologists and their patients must make choices regarding the approach to treatment. Meropol (2012) stated, “The availability of longitudinal clinical and laboratory data, interpreted in the context of administered treatment, holds promise for analysis and delivery of real world data at the bedside” (p. 4192). In addition, the hospitals should have mechanisms in place that encourage practitioners to exchange

knowledge and reward them for sharing new ideas to their patients and the entire medical community.

Hospital administrators should also evaluate the culture of their organization in conjunction with assessing their KM programs. Managers can use Cameron and Quinn's (2006) OCAI to determine their hospitals organization's predominant culture type and focus. Cameron and Quinn pointed out that no one organizational focus is best. However, the results of this study suggest that in a healthcare environment, the external focus relates to a higher affinity for KM than the internal focus type. Hospital managers and administrators may want to consider incorporating some of the values of the market and adhocracy culture types in their organizations. These values include innovation, creativity, competition, goal achievement, and agility.

Implications for Social Change

The results of the study may affect social change by offering healthcare administrators, RNs, doctors, and patients with the data needed to make critical and perhaps life saving decisions. Identifying the predominant organizational culture type at the department level may aid the medical organization in selecting specific KM modalities that enhance the integrative framework for the KM healthcare system EpicCare. The affinity for KM explains why a KM system, in this case EpicCare, needs to be tailored to specific culture types as well as being implemented in an integrative framework. For example, Chen (2008) stated

Nurses' attitudes changed from extreme fear and rejection to acceptance and willingness. Nurses acquired the necessary knowledge and skills for caring for SARS patients by attending online training and sharing patient care instructions and information via CDC KM portal. (p. 1743)

The findings of the study denoted positive correlations between organizational culture types and the affinity for KM among register nurses working in Oregon. Additionally, the results showed there was a significant positive correlation between the externally focused organizational culture and the affinity for KM. The ability to efficiently and effectively share knowledge and improve patient care in a high-pressure medical environment was at the epicenter of this study. For example, Meropol (2012) stated, "The opportunity to compare new treatments in real time, on the basis of data from patients in real world clinical settings can have transformative impact on the care we provide" (p. 4193). Therefore, leaders of medical organizations may want to implement different modalities of collecting and disseminating medical knowledge within the current KM systems such as EpicCare based on the predominant culture type of each department within the organization. These modifications may increase the likelihood of RNs and all medical practitioners to share implicit and tactic knowledge within the EpicCare system. Such adjustments can be useful to nurses and physicians as they seek to interpret a new generation of evidence that is derived from researchers who seek to address unmet needs such as cancer research. Miriovsky, Shulman, and Abernethy (2012) stated, "KM tools such as EpicCare promise to provide relevant data

that will assist in weighing the value of therapeutic options for patients. Knowledge management platforms such as EpicCare enable broad sharing of individual patient data for research and clinical application” (p. 4247).

KM systems like EpicCare may well improve patient care via the use of intellectual capital across the entire value chain of medical research and patient care.

The information in the study contributes to the field of management by providing perspectives of what RNs experience on a daily basis. Leaders of medical organizations, doctors, and other researchers may use the results of this study to understand the organizational makeup and determine the perception of KM and organizational culture that RNs hold. Because any intervention to expand KM in healthcare practices must be built on firm theoretical foundation, the work presented in this study can function as a reference and incentive for improving the quality in the healthcare provided by medical practitioners, and as a result, has the potential to influence the overall improvement in the health of patients in Oregon, the United States, and the world.

Summary and Conclusion

This study added to the body of knowledge in the KM field and included information medical administrators and KM researchers may find helpful by examining the affinity for KM to organizational culture types and focus. The research problem led to the investigation of how nurses perceive KM systems in the market, clan, hierarchy and adhocracy organizational culture types. The environment that RNs work in is fast paced, high stress, and change is constant with regards to patient care and technological

advances. The purpose of this quantitative correlational study was to investigate the effect of organizational culture on the affinity for KM of RNs working in Oregon. I posed research questions to answer whether positive correlations existed between affinity for KM, organizational focus, and organizational type. A statistically significant positive correlation existed between the affinity for KM and the clan, adhocracy, and market organizational culture types. A significant correlation did not exist between hierarchy culture type and the affinity for KM. Additionally, evidence of a positive relationship existed between both the internally and externally focused organizational cultures and the perceived affinity for KM among nurses working in Oregon hospitals.

Understanding how specific organizational types affects the affinity for KM is critical in assisting hospital administrators advance the various methods of accessing the KM system. For many organizations KM projects often fail because leaders try to change the culture in a relatively short time frame. The results of this study indicated that several subcultures exist within the four medical organizations that participated in this study. There was significant evidence of a positive relationship in three culture types in regard to the affinity for KM. Leaders of medical teams should try to create both healthy cultures and different modalities of collecting and disseminating medical knowledge within the current KM system.

In conclusion, hospital administrators can use the results of this study to make well-versed decisions, optimize employee engagement, and foster inclusion. The research findings were consistent with the academic literature by indicating that a positive relationship existed between the affinity for KM and organizational culture types. A new

way of examining organizational culture was presented in this study as a positive relationship was presented between external and internal organizational focus and the affinity for KM. Medical leaders can use this information to think deeply about current medical practices and how knowledge is exchanged within the medical community. In addition, leaders can use this information to make better decisions specific to organizational strategies, enhanced patient care and increased collaboration among healthcare providers. The significance is that all healthcare professionals could use these results to develop different modalities of knowledge sharing within a single system such as the EpicCare system. This accelerative collaboration among healthcare providers will vastly improve patient care while leveraging intellectual capital across the entire medical community.

References

- Abrams, L. C., Cross, R., Lesser, E., & Levin, D. Z. (2003). Nurturing interpersonal trust in knowledge-sharing networks. *Academy of Management Executive*, 17(4), 66-77. doi:10.5465/AME.2003.11851845
- Allaire, Y., & Firsirotu, M. E. (1984). Theories of organizational culture. *Organization Studies (Walter de Gruyter GmbH & Co. KG.)*, 5(3), 193-203. doi:10.1177/017084068400500301
- Allame, S. M., Nouri, B. A., Tavakoli, S. Y., & Shokrani, S. A. R. (2011). Effect of organizational culture on success of knowledge management system's implementation (Case Study: Saderat Bank in Isfahan province). *Interdisciplinary Journal of Contemporary Research in Business*, 2, 321-346.
- Allee, V. (1997). *The knowledge evolution: Expanding organizational intelligence*. Boston, MA: Butterworth-Heinemann.
- Anheier, H., & Kendall, J. (2002). Interpersonal trust and voluntary associations. *British Journal of Sociology* 53, 343-362. doi:10.1080/0007131022000000545
- Anwar, M. A., & Ba, A. H. (2010). Role of information management in the preservation of indigenous knowledge. *Pakistan Journal of Library & Information Science* 2(11), 5-14.
- Armstrong, K., & Kendall, E. (2010). Translating knowledge into practice and policy: The role of knowledge networks in primary health care. *Health Information Management Journal*, 39(2), 9-17. doi:10.1186/1748
- Arntzen-Bechina, A. A., & Leguy, C. A. D. (2007). A model of knowledge sharing in

- biomedical engineering: Challenges and requirements. *Journal of Business Chemistry*, 4(1), 21-32.
- Babbie, E. (2007). *Survey research methods* (7th ed.). Belmont, CA: Wadsworth.
- Banihashemi, K., Naeeni, S. M. K., & Aboutalebi, R. (2007). New dimensions, new visions and new expectations in health care systems: An approach to promote innovative minds of skilled human resources. *Internet Journal of Healthcare Administration*, 4(2), 9-19.
- Bartunek, J., Trullen, J., Bonet, E., & Sauquet, A. (2003). Sharing and expanding academic and practitioner knowledge in health care. *Journal of Health Services Research & Policy*, 8(3), 62-68. Doi:10.1258/135581903322405199
- Benbya, H. (2006). *Mechanisms for knowledge management systems effectiveness: Empirical evidence from the Silicon Valley*. Academy of Management Annual Meeting Proceedings. doi:10.5465/AMBPP.2006.22898698
- Bennet, D. (2004). *Organizational survival in the new world: The intelligent complex adaptive system*. Boston, MA: Butterworth-Heinemann.
- Bobko, P. (2001). *Correlation and regression: Applications for industrial organizational psychology and management*. Thousand Oaks, CA: Sage Publications, Inc.
- Cabrera, Å., Collins, W., & Salgado, J. (2006). Determinants of individual engagement in knowledge sharing. *International Journal of Human Resource Management*, 17(2), 245-264. doi:10.1080/09585190500404614
- Cabrera, E. F., & Cabrera, A. (2005). Fostering knowledge sharing through people management practices. *International Journal Of Human Resource Management*,

16(5), 720-735. doi:10.1080/09585190500083020

Cameron, G., & Wren, A. M. (1999). Reconstructing organizational culture: A process using multiple perspectives. *Public Health Nursing, 16*(2), 96-101.

doi:10.1046/j.1525-1446.1999.00096.x

Cameron, K. S., Dutton, J. E., & Quinn, R. E. (2003). *Positive organizational scholarship: Foundations of a new discipline* (1st ed.). San Francisco, CA: Berrett-Koehler.

Cameron, K. S., & Quinn, R. E. (1988). *Paradox and transformation: Toward a theory of change in organization and management*. Cambridge, MA: Ballinger Pub. Co.

Cameron, K. S., & Quinn, R. E. (1989). *Diagnosing and changing organizational culture: Based on the competing values framework*. Reading, MA: Addison-Wesley.

Cameron, K. S., & Quinn, R. E. (1999). *Diagnosing and changing organizational culture: Based on the competing values framework*. Reading, MA: Addison-Wesley.

Cameron, K. S., & Quinn, R. E. (2006). *Diagnosing and changing organizational culture: Based on the competing values framework* (Rev. ed.). San Francisco, CA: Jossey-Bass.

Chawla, D., & Joshi, H. (2011a). A comparative study of knowledge management assessment in business excellence awarded and non-awarded organizations in India. *Global Business Review, 12*(2), 279-295.

doi:10.1177/097215091101200207

- Chawla, D., & Joshi, H. (2011b). Impact of knowledge management dimensions on learning organization: Comparison across business excellence awarded and non-awarded Indian organizations. *International Journal of Knowledge Management*, 7(2), 68-85. doi: 10.4018/jkm.2011040104
- Chawla, D., & Joshi, H. (2011c). Knowledge management across various hierarchical levels in Indian organizations: A comparative study. *Abhigyan*, 28(4), 6-18.
- Chen, H., Waithaka, Y., Aban, I., & Bachmann, L. (2008). A process evaluation of the implementation a computer-based, health provider-delivered HIV prevention intervention for HIV positive men who have sex with men in the primary care setting. *AIDS Care*, 20, 51-60. doi:10.1080/09540120701449104
- Chen, S., Chang, S., Lin, H., & Chen, C. (2009). Post-SARS knowledge sharing and professional commitment in the nursing profession. *Journal of Clinical Nursing*, 18(12), 1738-1745. doi:10.1111/j.1365-2702.2008.02488.x
- Chiasson, M., & Davidson, E. (2004). Pushing the contextual envelope: Developing and diffusing IS theory for health information systems research. *Information and Organization*, 14(3), 155–188.
- Chin-Loy, C. (2003). *Assessing the influence of organizational culture on knowledge management success* (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses database. (UMI305235097)
- Chin-Loy, C., & Majtaba, B. (2007). Organizational learning and knowledge. In B. G. Mujitaba; *Workforce Diversity Management: Challenges, competencies and strategies* (pp. 207-229). Tamarac, FL: Llumina Press.

- Choo, C., & Bontis, N. (2002). *The strategic management of intellectual capital and organization knowledge*. New York, New York: Oxford University Press.
- Chowdhury, S. (2005). The role of affect and cognition-based trust in complex knowledge sharing. *Journal of Managerial Issues*, 17(3), 310-326.
- Cowell, R. (2006). Knowledge management essential, not optional. *Nursing Management*, 13(6), 10-13.
- Coyle-Shapiro, J., Morrow, P., Richardson, R., & Dunn, S. (2002). Using profit sharing to enhance employee attitudes: A longitudinal examination of the effects on trust and commitment. *Human Resource Management*, 41(4), 423-439.
- Cramer, D. (1998). *Fundamental statistics for social research: Step-by-step calculations and computer techniques using SSS for Windows*. New York, NY: Routledge.
- Creswell, J. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Cummings, T., & Worley, C. (1999). *Organizational transformation: Organizational development and change*. Cincinnati, OH: South-Western College Publishing.
- Dagnino, G., & Rocco, E. (2009). *Coopetition strategy: Theory, experiments and cases*. New York, NY: Routledge.
- Dalkir, K. (2005). *Knowledge management in theory and practice*. Oxford: Elsevier Butterworth-Heinemann.
- Davenport, T., & Prusak, L. (1998). *Working knowledge: How organizations manage what they know*. Boston, MA: Harvard Business School Press.
- de Jager, M. (1998). The KMAT: Benchmarking knowledge management. *Library*

Management, 20(7), 367-372.

Drucker, P. (1995). *Managing in a time of great change*. New York, NY: Truman Talley Books/Dutton.

Drucker, P. (1999). *Management challenges for the 21st century* (1st ed.). New York, NY: HarperBusiness.

Drucker, P. (2002). *Managing in the next society* (1st ed.). New York, NY: St. Martin's Press.

Drucker, P. (2006). *Classic Drucker: Essential wisdom of Peter Drucker from the pages of Harvard Business Review*. Boston, MA: Harvard Business Review Book.

Drucker, P. (1969). *The age of discontinuity: Guidelines to our changing society*. New York, NY: Harper and Row, Publishers.

Dupuy, F. (2004). *Sharing knowledge: The why and how of organizational change*. New York, NY: Palgrave Macmillan.

Ellis, B., & Herbert, S. (2011). Complex adaptive systems (CAS): An overview of key elements, characteristics and application to management theory. *Informatics In Primary Care*, 19(1), 33-37.

Fahey, D., & Burbridge, G. (2008). Application of diffusion of innovations models in hospital knowledge management systems: Lessons to be learned in complex organizations. *Hospital Topics*, 86(2), 21-31. doi:10.3200/HTPS.86.2.21-31

Faul, F., Erdfelder, E., Buchner, A., & Lang, A. (2009). Statistical power analyses using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41, 1149-1160. doi:10.3758/BRM.41.4.1149

- Firestone, J., & McElroy, M. (2004). Organizational learning and knowledge management: The relationship. *Learning Organization*, 11(2), 177-184.
- Francisco Javier, C., Kostas, M., & Tan, Y. (2010). Urban, regional, national and global knowledge capital. *Journal of Knowledge Management*, 14(5), 631-634.
- Friedman, T. (2005). *The world is flat: A brief history of the twenty-first century* (1st ed.). New York, NY: Farrar, Straus and Giroux.
- Ghosh, B., & Scott, J. (2007). Effective knowledge management systems for a clinical nursing. *Information Systems Management*, 24, 73-84.
- Gold, A., Malhotra, A., & Segars, A. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185-214.
- Gowen, C., Stephanie C., & McFadden, K. (2009). Knowledge management as a mediator for the efficacy of transformational leadership and quality management initiatives in U.S. health care. *Health Care Management Review*, 34(2), 129-140. doi:10.1097/HMR.0b013e31819e9169
- Greenwood, R. (2004). Employee privacy issues of the early 20th century: 1900 through Hawthorne Studies. *Journal of Applied Management*, 9(1), 94-100.
- Grimm, L. (1993). *Statistical applications for the behavioral sciences*. New York, NY: John Wiley & Sons.
- Guptill, J. (2005). Knowledge management in health care. *Journal Of Health Care Finance*, 31(3), 10-14.
- Hean, S., Cowley, S., & Forbes, A. (2003). The M-C-M cycle and social capital. *Social*

- Science Medicine*, 56(5), 1061-1072. doi:10.1016/S0277-9536(02)00103-X
- Horwitch, M., & Armacost, R. (2002). Helping knowledge management be all it can be. *Journal of Business Strategy*, 23(3), 26-32. doi:10.1108/eb040247
- International Atomic Energy Agency (Corporate Author). (2008). Planning and execution of knowledge management assist missions for nuclear organizations IAEA TECDOC-1586. Retrieved from <http://www.myilibrary.com?id=277521>
- Ichijo, K., & Nonaka, I. (2007). *Knowledge creating and management: New challenges for managers*. New York, NY: Oxford University Press.
- International Association of Technological Univ. Libraries, G. (1998). *The challenge to be relevant in the 21st century: Abstracts and full text documents of papers and demos given at the [International Association of Technological University Libraries] IATUL Conference (Pretoria, South Africa, June 1-5, 1998)*, 18.
- Ives, W., Torrey, R., & Gordon, C. (2000). Knowledge sharing is a human behavior. In D. Morey, M. Maybury & B. Thuraishingham (Eds.), *Knowledge management: Classic and contemporary works* (pp. 99-129): Cambridge and London: MIT Press.
- Jaskyte, K., & Dressler, W. (2005). Organizational culture and innovation in nonprofit human service organizations. *Administration in Social Work*, 29(2), 23-41. doi:10.1300/J147v29n02_03
- Johnson, D. (1998). Knowledge management is the new competitive edge. *Healthcare Strategic Management*, 16, 2-3.
- Jones, M. (2009). *Organizational culture and knowledge management: An empirical*

investigation of U.S. manufacturing firms. D.B.A., Nova Southeastern University.

Kangas, L. (2009). Assessing the value of the relationship between organizational culture types and knowledge management initiatives. *Journal of Leadership Studies*, 3(1), 29-38. doi:10.1002/jls.20093

Kerr, S., & Landauer, S. (2004). Using stretch goals to promote organizational effectiveness and personal growth: General Electric and Goldman Sachs. *Academy of Management Executive*, 18(4), 134-138. doi:10.5465/AME.2004.15268739

Kilmann, R. (1984). *Beyond the quick fix: Managing five tracks to organizational success.* San Francisco, CA: Jossey-Bass.

Knowles, M. (1988) *The modern practice of adult education: From pedagogy to andragogy.* Boston, MA: Cambridge Book Co.

Kramer, R. (1996). *Trust in organizations: Frontiers of theory and research.* Thousand Oaks, CA: Sage Publications, Inc.

Krejcie, R., & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(1), 607-610.

Langan-Fox, J., & Tan, P. (1997). Images of a culture in transition: Personal constructs of organizational stability and change. *Journal of Occupational & Organizational Psychology*, 70(3), 273. doi:10.1111/j.2044-8325.1997.tb00648.x

Lawson, S. (2004). *Examining the relationship between organizational culture and knowledge management.* Fort Lauderdale, FL. Nova Southeastern University.

- Levinson, M. (2007). Knowledge management definition and solutions. *CIO*.
Retrieved from <http://www.cio.com/article/40343>.
- Lines, R., Selart, M., Espedal B., & Johansen, S. (2005). The production of trust during organizational change. *Journal of Change Management*, 5(2), 221-245.
- Lingard, L., Albert, M., & Levinson, W. (2008). Grounded theory, mixed methods, and action research. *British Medical Journal*., Vol. 337, 567-582.
doi:10.1136/bmj.39602.47.
- Liu, S., & Lin, C. (2007). Building customer capital through knowledge management processes in the health care context. *Health Care Management Review*, 32(2), 92-101. doi:10.1097/01.HMR.0000267786.94437.57
- Maier, D., & Moseley, J. (2003). The knowledge management assessment tool (KMAT). *A Download from the 2003 Annual*., Vol. 1, Training, 16. Retrieved from <http://www.wiley.com/WileyCDA/WileyTitle/productCd-0787970166.html>
- Marshall, R., Nguyen, T., & Bryant, S. (2005). A dynamic model of trust development and knowledge sharing in strategic alliances. *Journal of General Management*, 31(1), 41-57.
- Martin, J. (2002). *Organizational culture: Mapping the terrain*. Thousand Oaks, CA: Sage Publications, Inc.
- McCall, R. (1998). *Fundamental statistics for behavioral sciences* (7th ed.). Pacific Grove, CA: Brooks.
- Mellander, K. (1993). *The power of learning: Fostering employee growth*. Alexandria, VA: American Society for Training and Development, Business One Irwin.

- Mertens, D. (2005). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Meropol, N. (2012). Comparative Effectiveness Research to Inform Medical Decisions: The Need for Common Language. *Journal of Clinical Oncology*, 30(34), 4192-4193. doi: 10.1200/jco.2012.44.8837
- Metaxiotis, K. (2005). E-health versus KM-based health: A dilemma in researchers' minds. *International Journal of Electronic Healthcare*, 1(3), 303-315. doi:10.1504/IJEH.2005.006477
- Miriovsky, B., Shulman, L., & Abernethy, A. (2012). Importance of Health Information Technology, Electronic Health Records, and Continuously Aggregating Data to Comparative Effectiveness Research and Learning Health Care. *Journal of Clinical Oncology*, 30(34), 4243-4248. doi:10.1200/jco.2012.42.8011.
- Mooradian, T., Renzle, B., & Matzler, K. (2006). Who trusts? Personality, trust and knowledge sharing. *Management Learning*, 37(4), 1523-1540.
- Morrison, P., & Sturges, J. (1980). Evaluation of organization development in a large state government organization. *Group & Organization Studies*, 5(1), 48-64. doi:10.1177/105960118000500105
- Ngai, E., & Chan, E. (2005). Evaluation of knowledge management tools using AHP. *Expert Systems with Applications*, 29(4), 889-899. doi: 10.1016/j.eswa.2005.06.025
- Nonaka, I. (1991). The knowledge-creating company. *Harvard Business Review*, 69(6),

96-104. doi:10.1016/B978-0-7506-7009-8.50016-1

Nonaka, I., & Nishiguchi, T. (2000). *Knowledge emergence: Social, technical, and evolutionary dimensions of knowledge creation*. New York, NY: Oxford University Press.

Nonaka, I., & Senoo, D. (1996). From information processing to knowledge creation: A paradigm shift in business management. *Technology in Society*, 18(2), 203-218., doi:10.1016/0160-791X(96)00001-2

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York, NY: Oxford University Press. doi:10.1016/0024-6301(96)81509-3

Novak, J. (2010). *Learning, creating, and using knowledge: concept maps as facilitative tools in schools and corporations* (2nd ed.). New York, NY: Routledge.

Nursing, O. S. B. N. (2011). Certified Critical Care Nurses. Available from Oregon State Board of Nurses Certified Registered Nurses, from State of Oregon
<http://www.oregon.gov/OSBN/RN-LPNlicensure.shtml>

Obenchain, A., & Johnson, W. (2004). Product and process innovation in service organizations: The influence of organizational cultures in higher education institutions. *Journal of Applied Management and Entrepreneurship*, 9(3), 91-113.

Orzano, A., McInerney, C., Scharf, D., Tallia, A., & Crabtree, B. (2008a). A knowledge management model: Implications for enhancing quality in health care. *Journal of the American Society for Information Science & Technology*, 59(3), 489-505.
doi:10.1002/asi.20763

- Orzano, A., McInerney, C., Tallia, A., Scharf, D., & Crabtree, B. (2008b). Family medicine practice performance and knowledge management. *Health Care Management Review, 33*(1), 21-28. doi:10.1097/01.HMR.0000304489.65028.75
- Pan, S., & Scarbrough, H. (1999). Knowledge management in practice: An exploratory case study. *Technology Analysis & Strategic Management, 11*(3), 359-375. doi:10.1080/095373299107401
- Parker, M. (2000). *Organizational culture and identity: unity and division at work*. Thousand Oaks, CA: Sage Publications, Inc..
- Phillips, M. S. (2011). *Knowledge management, job design, and organizational climate's influence on employees' perception of quality*. PhD, Eastern Michigan University.
- Polanyi, M. (1966). *The tacit dimension* (1st ed.). Garden City, N.Y: Doubleday.
- Prusak, L. (2001). Where did knowledge management come from? *IBM Systems Journal, 40*(4), 1002-1007. doi:10.1147/sj.404.01002
- Putnam, R. (1995). Bowling alone: America's declining social capital. *Journal of Democracy, 6*(1), 64-78.
- Quinn, R. E., & McGrath, M. R. (1985). The transformation of organizational cultures: A competing values perspective. In P. J. Frost, L. F. Moore, M. R. Louis, C. C. Lundberg & J. Martin (Eds.), *Organizational culture*. (pp. 315-334). Thousand Oaks, CA: Sage Publications, Inc.
- Radhakrishnan, B., & Balasubramanian, S. (2006). Empirical investigation of critical success factor and knowledge management structure for successful implementation of knowledge management system: A case study in process

- industry. *Journal of Knowledge Management*, 26(3), 154-165.
- Rohrbaugh, J., & Quinn, R. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science*, 29(3), 363-377. doi:10.1287/mnsc.29.3.363
- Roman, J., & Stankosky, M. (2004). Organizational culture types and their relationship with knowledge flow and knowledge management success: An empirical study in the U.S. government and nonprofit sectors. *Journal of Information & Knowledge Management*, 3(2), 167-178. doi:10.1016/B978-0-7506-7878-0.50008-9
- Rothberg, H., & Erickson, G. (2004). *From knowledge to intelligence: Creating competitive advantage in the next economy*. Burlington, MA: Elsevier Butterworth-Heinemann.
- Schein, E. (1992). *Organizational culture and leadership* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Schein, E. (1999). *The corporate culture survival guide: Sense and nonsense about culture change* (1st ed.). San Francisco, CA: Jossey-Bass.
- Schein, E. (2004). *Organizational culture and leadership* (3rd ed.). San Francisco, CA: Jossey-Bass.
- Senge, P. (2006). *The fifth discipline: The art and practice of the learning organization*. (2nd ed.). New York, NY: Doubleday/Currency.
- Shaughnessy, J., Zechmeister, E., & Zechmeister, J. (2008). *Research methods in psychology* (8th ed.). New York, NY: McGraw-Hill.
- Sims, R. (2004). *Bivariate data analysis: A practical guide*. New York, NY: Nova

Science Publishers, Inc.

Singh, S. (2008). Role of leadership in knowledge management: A study. *Journal of Knowledge Management*, 12(4), 3-15. doi:10.1108/13673270810884219

Starcevich, M. (2009). Diagnosing and changing organizational culture: Based on the competing values framework. Retrieved from
<http://www.coachingandmentoring.com/BookReviews/diagnosingculture.htm>

Stewart, A., Petch, A., & Curtice, L. (2003). Moving towards integrated working in health and social care in Scotland: From maze to matrix. *Journal of Interprofessional Care*, 17(4), 335-350. doi:10.1080/13561820310001608177

Sveiby, K. (2007a). Disabling the context for knowledge work: The role of managers' behaviors. *Management Decision*, 45(10). doi:10.1108/00251740710838004

Sveiby, K. (2007b). Disabling the context for knowledge work: the role of managers' behaviours. *Management Decision*, 45(10), 1636-1655.

doi: 10.1108/00251740710838004

Tan, L., & Teow, A. (2006). An e-learning portal for nurses in Singapore General Hospital. *Studies In Health Technology And Informatics*, 122, 415-419.

Taneja, S., Taneja, P., & Gupta, R. (2011). Researches in corporate social responsibility: A review of shifting focus, paradigms, and methodologies. *Journal of Business Ethics*, 101(3), 343-364. doi:10.1007/s10551-010-0732-6

Tashakkori, A., & Teddlie, C. (2010). *SAGE Handbook of Mixed Methods in Social & Behavioral Research* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.

Thomas, S. (1999). *Designing surveys that work!: A step-by-step guide*. Thousand Oaks,

CA: Corwin Press.

Thornett, A. (2001). Computer decision support systems in general practice. *Journal of Information Management*, 21, 39-47.. doi:10.1016/S0268-4012(00)00049-9

Tuckman, B. (1999). *Conduction educational reserach* (5th Ed.). Fort Worth, TX: Harcourt Brace.

U.S. Department of Labor. (2012). Registered Nurses: Occupational Outlook Handbook: U.S. Bureau of Labor Statistics. Retrieved from <http://www.bls.gov/ooh/Healthcare/Registered-nurses.htm>

Van der Walt, C., Van Brakel, P., & Kok, J. (2004). Knowledge sharing via enterprise intranets: Asking the right questions. *South African Journal of Information Management*, 6(2), 1-12. doi:10.4102/sajim.v6i2.389

Walton, G., & Booth, A. (2000). *Managing knowledge in health services*. London: Library Association.

Wickramasinghe, N., & Schaffer, J. (2006). Creating knowledge-driven healthcare processes with the intelligence continuum. *Journal of Electronic Healthcare*, 2(2), 164-174.

Wiig, K. (1993). *Knowledge management foundations*. Arlington, TX: Schema Press.

Wilkins, A., & Ouchi, W. (1983). Efficient cultures: Exploring the relationship between culture and organizational performance. *Administrative Science Quarterly*, 28(3), 468-481. doi:10.2307/2392253

Yeung, K., Brockbank, J., & Ulrich, D. (1991). Organizatinal cultures and human resources practices: An empirical assessment. *Reseach in Organizational Change*

and Developement, 5(2), 59-81.

Zammuto, R., & Krakower, J. (1991). Quantitative and qualitative studies of organizational culture. *Reseach in Organizational Change and Developement*, 5(1), 83 - 114.

Appendix A: E-Mail Invitation

Participation Request

Dear Colleague:

I am asking for your participation in a survey that examines organizational culture and knowledge management in medical facilities and hospitals in Oregon. The importance of knowledge workers and sharing knowledge in the field of medicine has gained traction in the past five years, yet we do not fully understand the role that organizational culture plays in expanding or diminishing many knowledge management practices.

This study is a partial requirement of my doctoral research at Walden University in Minneapolis, Minnesota. The purpose is to gain a better understanding of the relationship between organizational culture and knowledge management in the field of medicine and specifically registered nurses. I am contacting a random sample of registered nurses working in Oregon to explore this relationship. Your observation of organization culture and knowledge management practices where you work will help practitioners and academics gain insight into this important issue.

Your participation is completely voluntary, and your responses will remain confidential. All survey results will be reported in an aggregated form, so no personal identification will be possible. This survey should take no more than fifteen minutes to complete

To access the survey, please click on the link below:
<https://www.surveymonkey.com/s/OCKM24>

Password:

If you would like the results of this research, please send your request via e-mail to [REDACTED]. If you have any questions or concerns regarding this study please contact me at [REDACTED] or through my work e-mail at [REDACTED].

Thank you in advance for contributing your time and effort to this study. I deeply value your involvement in this important research project.

Sincerely,

Gregory P. Allen
Ph.D. Candidate
Walden University

Participation Follow-up Request

Dear Colleague,

Recently, you received a survey seeking information about how to determine the appropriate organizational culture type for knowledge management success in the healthcare environment. This research is part of my doctoral research at Walden University. If you have already completed the survey, your participation is greatly appreciated, and you may disregard my message. If you have not yet completed the survey, this is a friendly reminder to complete the survey.

If you are willing to participate in this voluntary study, you will be asked to complete a brief online survey consisting of 30 questions. It is expected to take approximately 10 to 15 minutes to complete the survey.

This unfunded research is considered to be a minimal risk and regrettably no compensation is available to pay you for your participation. This research will be anonymous and the survey results will only be reported in the aggregate.

If you have any questions about this study, please contact Greg Allen either by phone at [REDACTED] or by e-mail at [REDACTED]. Additionally, if you have questions about your rights as a participant or concerns about this study and want to confer with someone outside the research, please contact the research participant advocate of Walden University at [REDACTED]. The IRB ID Number for this study, titled "The influence of organizational culture on affinity for knowledge management practices of registered nurses" is [REDACTED].

I appreciate your time and consideration of participating in this study.

Please click the link below to take part in this survey.

<https://www.surveymonkey.com/s/OCKM24>

Password: RNs

Thank you in advance,

Greg Allen
Ph.D. Candidate
Walden University

Appendix B: Survey Instrument

Survey Information:

This survey examines the impact of organizational culture on knowledge management practices of critical care nurses working in Portland, Oregon.

This survey is safeguarded by SSL encryption to protect the participant anonymous and voluntary participation. If you choose you may exit this survey at any time. This survey will take approximately 15 minutes to complete. Your participation is greatly appreciated!

Directions:

Please read each question and then select the response that most closely reflects your answer.

1. Are you male or female?

- ☐ Male
- ☐ Female

2. Which category below includes your age?

- ☐ 21-29
- ☐ 30-39
- ☐ 40-49
- ☐ 50-59
- ☐ 60 or older

3. What is the highest level of school you have completed or the highest degree you have received?

- ☐ Less than high school degree
- ☐ High school degree or equivalent (e.g., GED)
- ☐ Some college but no degree
- ☐ Associate degree
- ☐ Bachelor degree
- ☐ Graduate degree

4. Length of time with current medical organization

- ☐ 0 - 5 Years
- ☐ 6 - 10 Years
- ☐ 11 - 15 Years
- ☐ 16 + Years

5. Total length of time in the field of medicine

- ☐ 0 - 5 Years
- ☐ 6 - 10 Years
- ☐ 11 - 15 Years
- ☐ 16 + Years

6. Definition of Knowledge Management: Getting the right knowledge to the right people at the right time so they can make the best decision.**My organization has a Knowledge Management program in place**

- ☐ Yes
- ☐ No
- ☐ Unsure

3. Knowledge Management Assessment

Instructions:

The following statements represent various processes of knowledge management. Please indicate your level of agreement with each statement. No right or wrong answers exist for these questions, just as there is no right or wrong knowledge management program. Every organization will most likely produce a different set of responses.

Scale

1. Strongly Disagree
2. Disagree
3. Neither Agree nor Disagree
4. Agree
5. Strongly Agree

9. KM

	1	2	3	4	5
1. The generation of new ideas and knowledge is highly valued.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Job analyses are frequently performed to determine job duties and requirements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. An electronic knowledge base exists to store new ideas, knowledge, solutions, and best practices.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Documents are proactively shared with employees.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. The collective experience of employees is an integral part of decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Suggestions and multiple viewpoints are often sought for decision making and organization development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. The development of job documentation is encouraged.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. Information from many sources is stored in an integrated manner and cross-referenced, facilitating better communication and decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. No policies or technical security issues prevent the sharing of information and knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Job responsibilities are carried out and decisions are made based on all the necessary information and knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Experience is highly valued.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12. Documents can be posted on an organizational intranet portal or saved on a network server.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13. The information and knowledge you receive is accurate and up-to-date.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14. An organizational intranet portal exists where information and knowledge relevant to job requirements may be retrieved.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15. New ideas and knowledge are frequently applied.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Brainstorming and other similar techniques are often used to generate and record new ideas and knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17. New ideas and knowledge are recorded for future use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18. It is common practice to store work documents on an organizational server, rather than on personal computers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19. Electronic and/or non-electronic collaboration, teamwork, and cooperation are a part of doing business.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20. Recorded knowledge and best practices are used for training, staff development, and organizational development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
21. Tips and tools, job aids, and case studies of best practices are available for performance objectives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22. On-the-job time is available to gather information and knowledge from others.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23. Information is stored and organized in a way that makes it intuitively easy and quick to locate.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24. Collaborative meetings to gather information and share knowledge are productive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25. Advanced technologies, such as data ware- housing, mining, and modeling, are used to leverage data and information for strategic and operational decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26. There is a directory of experts for each major knowledge domain.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27. Concept mapping, sometimes called "mind mapping," is a common technique used to gather new information and knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28. Documents stored on an organizational server or intranet contain timely and useful knowledge for our job responsibilities.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29. Incentives are in place that motivate staff to share knowledge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30. Expert systems and knowledge bases are used to aid in decision making.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Instructions:

The following statements represent various aspects of organizational culture. Please indicate your level of agreement with each statement. No right or wrong answers exist for these questions, just as there is no right or wrong culture. Every organization will most likely produce a different set of responses.

Scale

1. Strongly Disagree
2. Disagree
3. Neither Agree nor Disagree
4. Agree
5. Strongly Agree

13. Organizational Glue

	1	2	3	4	5
A. The glue that holds my organization together is loyalty and mutual trust. Commitment to this organization runs high.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. The glue that holds my organization together is commitment to innovation and development. There is an emphasis on being on the cutting edge.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. The glue that holds my organization together is the emphasis on achievement and goal accomplishment. Aggressive and winning are common themes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. The glue that holds my organization together is formal rules and policies. Maintaining a smooth-running organization is important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. Strategic Emphases

	1	2	3	4	5
A. My organization emphasizes human development. High trust, openness, and participation persist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. My organization emphasizes acquiring new resources and creating new challenges. Trying new things and prospecting for opportunities are valued.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. My organization emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. My organization emphasizes permanence and stability. Efficiency, control and smooth operations are important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Criteria of Success

	1	2	3	4	5
A. My organization defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. My organization defines success on the basis of having the most unique and newest products. It is a product leader and innovator.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. My organization defines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. My organization defines success on the basis of efficiency. Dependable delivery, smooth scheduling, and low-cost production are critical.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. Dominant Characteristics

	1	2	3	4	5
A. My organization is a very personal place. It is like an extended family. People seem to share a lot of themselves.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. My organization is a very dynamic and entrepreneurial place. People are willing to stick their necks out and take risks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. My organization is very results oriented. A major concern is with getting the job done. People are very competitive and achievement oriented.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. My organization is a very controlled and structured place. Formal procedures generally govern what people do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. Organizational Leadership

	1	2	3	4	5
A. The leadership in my organization is generally considered to exemplify mentoring, facilitating or nurturing.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. The leadership in my organization is generally considered to exemplify entrepreneurship, innovating, or risk taking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. The leadership in my organization is generally considered to exemplify a no-nonsense, aggressive, results-oriented focus.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. The leadership in my organization is generally considered to exemplify coordinating, organizing or smooth-running efficiency.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

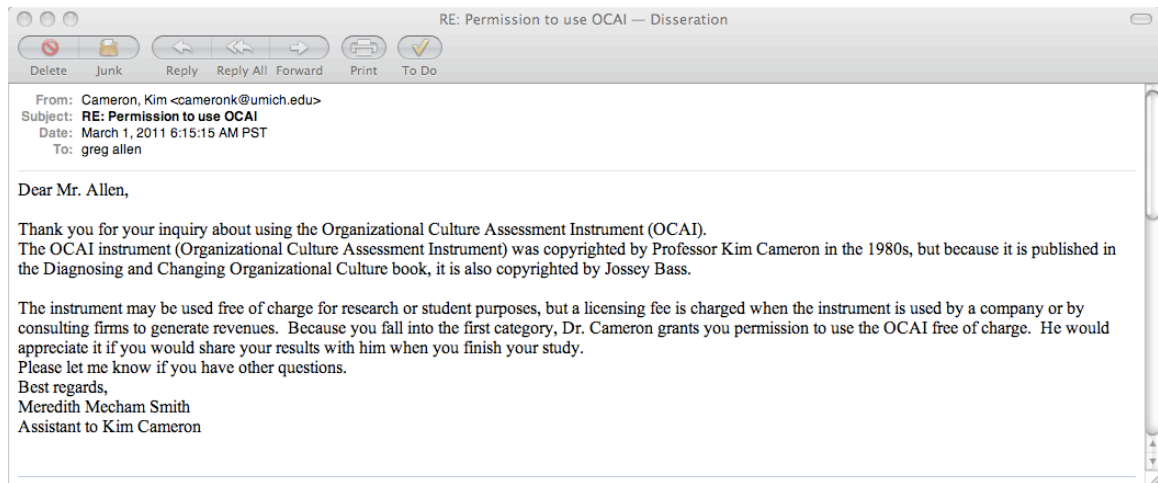
18. Management of employees

	1	2	3	4	5
A. The management style in my organization is characterized by teamwork, consensus, and participation.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
B. The management style in my organization is characterized by individual risk-taking, innovation, freedom, and uniqueness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
C. The management style in my organization is characterized by hard-driving competitiveness high demands, and achievement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
D. The management style in my organization is characterized by security of employment, conformity, predictability, and stability in relationships.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank you for taking the time to complete this survey and share your thoughts with me.

Appendix C: Permissions to use the Survey Instruments

Organizational Culture Assessment Instrument



Knowledge Management Assessment Tool



Greg Allen

Assistant Professor of Organizational Leadership

Department of Professional Studies

George Fox University—Portland Campus

February 20, 2013

Dear Mr. Allen,

It was a pleasure speaking with you and discussing your interest in "The Knowledge Management Assessment Tool (KMAT)" authored by Dr. Maier and me. *You do have my permission to use the tool for research purposes.* I would appreciate whatever feedback you can provide once your research is completed. A copy of the corrected instrument is attached.

As I indicated in our phone conversation on Monday, KMAT is an informal diagnostic tool. While there are both content and face validity, the instrument has not been subjected to rigorous validity studies and reliability data are not available.

Again, thanks for your interest and I wish you much success as you pursue your research.

Cordially,

A handwritten signature in cursive script that reads 'James L. Moseley'.

James L. Moseley, EdD, LPC, CHES, CPT

Associate Professor of Instructional Technology

395 College of Education

Appendix D: Consent Form

Background Information:

The empirical evidence in the literature is unclear regarding how to determine the appropriate organizational culture type for knowledge management success in the healthcare environment. As a result, hospitals experience duplication of effort and ad hoc knowledge management. This organizational problem will be examined to determine what level of correlation exists between knowledge management and organizational culture within hospitals operating in Oregon. The question that served as the focus for this study involves determining which, if any, organization types found in healthcare organization are significantly related to knowledge management.

Procedures & Instructions:

- Participation in this study is voluntary and you have the right to discontinue participation at any time during the survey.
- If you agree to participate in this quantitative study, you will be asked to take part in a survey that will take approximately 15 minutes to complete.
- You may move back and forth between parts of the survey. However, when you have pressed "done" at the end, you will not be able to re-enter the survey.
- You should not work on the survey while on work time.

Potential Risks and Benefits:

As a participant no specific risk are involved in completing this survey. The benefits include an opportunity to assist in further understand the process of knowledge management and organizational cultures impact within the various units of medical organizations. This study will encourage and promote social change by increasing the likelihood of improved patient care via the use of intellectual capital across the medical centers' value chain.

Compensation:

There is no compensation for participation in this study.

Confidentiality:

Any information you provide will be kept confidential. I will not use your information for any purposes outside of this research project. All research results will be displayed in aggregate form. I will not collect your name or anything else that could identify you in any reports of this study.

Contact and Questions:

You may ask any questions you have now or if you have question later, you may contact the researcher Greg Allen, via e-mail: [REDACTED] or [REDACTED]. If you wish to talk privately about your rights as a participant, you may contact Walden University research participant advocate via e-mail: [REDACTED] or telephone [REDACTED]. Walden University's approval number for this study is [REDACTED] and it expires on March 6, 2014.

You may print this page as a copy of this form to keep.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By clicking continue below, I am agreeing to the term described above.

Appendix E: Frequency Tables of Survey Questions

Table E1. Gender of the Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Male	10	10.8	10.8	10.8
	2 Female	83	89.2	89.2	100.0
	Total	93	100.0	100.0	

Table E2. Age of the Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 21-29	10	10.8	10.8	10.8
	2 30-39	27	29.0	29.0	39.8
	3 40-49	24	25.8	25.8	65.6
	4 50-59	28	30.1	30.1	95.7
	5 60 +	4	4.3	4.3	100.0
	Total	93	100.0	100.0	

Table E3. Education Level of the Participants

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Some college	6	6.5	6.5	6.5
2 Associate	18	19.4	19.4	25.8
3 Bachelors	30	32.3	32.3	58.1
4 Masters	33	35.5	35.5	93.5
5 Doctorate	6	6.5	6.5	100.0
Total	93	100.0	100.0	

Table E4. Place of Employment

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Providence	35	37.6	37.6	37.6
2 Kaiser	9	9.7	9.7	47.3
3 OHSU	26	28.0	28.0	75.3
4 Legacy	14	15.1	15.1	90.3
5 Other	9	9.7	9.7	100.0
Total	93	100.0	100.0	

Table E5. Year Employed with Current Hospital

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 0-1 Yr.	11	11.8	12.0	12.0
	2 2-3 Yrs.	18	19.4	19.6	31.5
	3 4-6 Yrs.	21	22.6	22.8	54.3
	4 7 + Yrs.	42	45.2	45.7	100.0
	Total	92	98.9	100.0	
Missing	System	1	1.1		
Total		93	100.0		

Table E6. Total Year as a RN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 0-5 Yrs.	24	25.8	26.1	26.1
	2 6-10 Yrs.	11	11.8	12.0	38.0
	3 11-15 Yrs.	15	16.1	16.3	54.3
	4 16 + Yrs.	42	45.2	45.7	100.0
	Total	92	98.9	100.0	
Missing	System	1	1.1		
Total		93	100.0		

Table E7. KM Program in Place

		KM in Use			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	38	40.9	41.3	41.3
	2 No	19	20.4	20.7	62.0
	3 Unsure	35	37.6	38.0	100.0
	Total	92	98.9	100.0	

Table E8. Hours of Training Sessions Attended

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 No Training	75	80.6	80.6	80.6
	2 2 Hrs.	7	7.5	7.5	88.2
	3 4 Hrs.	3	3.2	3.2	91.4
	4 6 Hrs.	8	8.6	8.6	100.0
	Total	93	100.0	100.0	

Table E9. KIC 1 Generation of New Ideas

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly disagree	1	1.1	1.1	1.1
	2 Disagree	5	5.4	5.4	6.5
	3 Neutral	27	29.0	29.0	35.5
	4 Agree	40	43.0	43.0	78.5
	5 Strongly agree	20	21.5	21.5	100.0
	Total	93	100.0	100.0	

Table E10. KIC 2 Decision Making

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	3	3.2	3.2	3.2
2 Disagree	18	19.4	19.4	22.6
3 Neutral	27	29.0	29.0	51.6
4 Agree	28	30.1	30.1	81.7
5 Strongly agree	17	18.3	18.3	100.0
Total	93	100.0	100.0	

Table E11. KIC 3 Experience Highly Valued

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	6	6.5	6.5	7.5
3 Neutral	19	20.4	20.4	28.0
4 Agree	38	40.9	40.9	68.8
5 Strongly agree	29	31.2	31.2	100.0
Total	93	100.0	100.0	

Table E12. KIC 4 Generation of New Ideas

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	22	23.7	23.7	25.8
3 Neutral	19	20.4	20.4	46.2
4 Agree	32	34.4	34.4	80.6
5 Strongly agree	18	19.4	19.4	100.0
Total	93	100.0	100.0	

Table E13. KIC 5 Tools for Performance Objectives

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	14	15.1	15.1	17.2
3 Neutral	28	30.1	30.1	47.3
4 Agree	32	34.4	34.4	81.7
5 Strongly agree	17	18.3	18.3	100.0
Total	93	100.0	100.0	

Table E14. KIC 3 Experience Highly Valued

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly Disagree	7	7.5	7.5	7.5
2 Disagree	23	24.7	24.7	32.3
3 Neutral	28	30.1	30.1	62.4
4 Agree	28	30.1	30.1	92.5
5 Strongly Agree	7	7.5	7.5	100.0
Total	93	100.0	100.0	

Table E15. KCC 1 Job Requirements

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	3	3.2	3.2	3.2
2 Disagree	23	24.7	24.7	28.0
3 Neutral	28	30.1	30.1	58.1
4 Agree	31	33.3	33.3	91.4
5 Strongly agree	8	8.6	8.6	100.0
Total	93	100.0	100.0	

Table E16. KCC 2 Job Documentations

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly Disagree	1	1.1	1.1	1.1
2 Disagree	9	9.7	9.7	10.8
3 Neutral	23	24.7	24.7	35.5
4 Agree	33	35.5	35.5	71.0
5 Strongly Agree	27	29.0	29.0	100.0
Total	93	100.0	100.0	

Table E17. KCC 3 Knowledge Repository

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	5	5.4	5.4	5.4
2 Disagree	16	17.2	17.2	22.6
3 Neutral	38	40.9	40.9	63.4
4 Agree	24	25.8	25.8	89.2
5 Strongly agree	10	10.8	10.8	100.0
Total	93	100.0	100.0	

Table E18. KCC 4 Recording Knowledge

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	9	9.7	9.8	9.8
2 Disagree	16	17.2	17.4	27.2
3 Neutral	18	19.4	19.6	46.7
4 Agree	37	39.8	40.2	87.0
5 Strongly Agree	12	12.9	13.0	100.0
Total	92	98.9	100.0	

Table E19. KCC 5 Time for Knowledge Sharing

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	23	24.7	24.7	25.8
3 Neutral	19	20.4	20.4	46.2
4 Agree	36	38.7	38.7	84.9
5 Strongly agree	14	15.1	15.1	100.0
Total	93	100.0	100.0	

Table E20. KSO 1 Electronic Knowledge Base

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	4	4.3	4.3	4.3
2 Disagree	32	34.4	34.4	38.7
3 Neutral	25	26.9	26.9	65.6
4 Agree	21	22.6	22.6	88.2
5 Strongly agree	11	11.8	11.8	100.0
Total	93	100.0	100.0	

Table E21. KSO 2 Cross Referenced Information

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 3 Neutral	29	31.2	31.2	41.9
4 Agree	40	43.0	43.0	84.9
5 Strongly agree	14	15.1	15.1	100.0
Total	93	100.0	100.0	

Table E22. KSO 3 Accurate Information

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	10	10.8	10.8	11.8
3 Neutral	23	24.7	24.7	36.6
Valid 4 Agree	44	47.3	47.3	83.9
5 Strongly agree	15	16.1	16.1	100.0
Total	93	100.0	100.0	

Table E23. KSO 4 Common Storage Practice

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	14	15.1	15.1	17.2
3 Neutral	20	21.5	21.5	38.7
Valid 4 Agree	38	40.9	40.9	79.6
5 Strongly agree	19	20.4	20.4	100.0
Total	93	100.0	100.0	

Table E24. KSO 5 Information Organized

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	3	3.2	3.2	3.2
2 Disagree	22	23.7	23.7	26.9
3 Neutral	36	38.7	38.7	65.6
Valid 4 Agree	25	26.9	26.9	92.5
5 Strongly agree	7	7.5	7.5	100.0
Total	93	100.0	100.0	

Table E25. KSD 1 Knowledge Repositories Shared

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	18	19.4	19.4	21.5
3 Neutral	23	24.7	24.7	46.2
Valid 4 Agree	42	45.2	45.2	91.4
5 Strongly agree	8	8.6	8.6	100.0
Total	93	100.0	100.0	

Table E26. KSD 2 No Road Blocks to Repository

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	17	18.3	18.3	19.4
3 Neutral	25	26.9	26.9	46.2
Valid 4 Agree	40	43.0	43.0	89.2
5 Strongly agree	10	10.8	10.8	100.0
Total	93	100.0	100.0	

Table E27. KSD 3 Intranet Portal and Knowledge Retrieved

	Frequency	Percent	Valid Percent	Cumulative Percent
2 Disagree	8	8.6	8.6	8.6
3 Neutral	11	11.8	11.8	20.4
Valid 4 Agree	46	49.5	49.5	69.9
5 Strongly Agree	28	30.1	30.1	100.0
Total	93	100.0	100.0	

Table E28. KSD 4 Teamwork and Collaboration

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	7	7.5	7.5	8.6
3 Neutral	14	15.1	15.1	23.7
Valid 4 Agree	49	52.7	52.7	76.3
5 Strongly agree	22	23.7	23.7	100.0
Total	93	100.0	100.0	

Table E29. KSD 5 Information Gathering and Sharing

	Frequency	Percent	Valid Percent	Cumulative Percent
2 Disagree	9	9.7	9.7	9.7
3 Neutral	21	22.6	22.6	32.3
Valid 4 Agree	51	54.8	54.8	87.1
5 Strongly Agree	12	12.9	12.9	100.0
Total	93	100.0	100.0	

Table E30. KAU 1 Collective Experience and Decisions

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	8	8.6	8.6	9.7
3 Neutral	19	20.4	20.4	30.1
Valid 4 Agree	49	52.7	52.7	82.8
5 Strongly agree	16	17.2	17.2	100.0
Total	93	100.0	100.0	

Table E31. KAU 2 Decision Making Based on Knowledge

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	10	10.8	10.8	11.8
3 Neutral	23	24.7	24.7	36.6
Valid 4 Agree	44	47.3	47.3	83.9
5 Strongly agree	15	16.1	16.1	100.0
Total	93	100.0	100.0	

Table E32. KAU 3 New Ideas Applied

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2 Disagree	10	10.8	10.8	10.8
3 Neutral	30	32.3	32.3	43.0
4 Agree	35	37.6	37.6	80.6
5 Strongly agree	18	19.4	19.4	100.0
Total	93	100.0	100.0	

Table E33. KAU 4 Training and Staff Development

	Frequency	Percent	Valid Percent	Cumulative Percent
2 Disagree	7	7.5	7.5	7.5
3 Neutral	20	21.5	21.5	29.0
4 Agree	36	38.7	38.7	67.7
5 Strongly Agree	30	32.3	32.3	100.0
Total	93	100.0	100.0	

Table E34. KAU 5 Advance Technologies Leveraged

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	10	10.8	10.8	11.8
3 Neutral	23	24.7	24.7	36.6
4 Agree	44	47.3	47.3	83.9
5 Strongly agree	15	16.1	16.1	100.0
Total	93	100.0	100.0	

Table E35. Clan 1 Honest Communication

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	10	10.8	10.8	12.9
3 Neutral	14	15.1	15.1	28.0
4 Agree	49	52.7	52.7	80.6
5 Strongly agree	18	19.4	19.4	100.0
Total	93	100.0	100.0	

Table E36. Clan 2 Respect for People

	Frequency	Percent	Valid Percent	Cumulative Percent
2 Disagree	12	12.9	12.9	12.9
3 Neutral	29	31.2	31.2	44.1
Valid 4 Agree	38	40.9	40.9	84.9
5 Strongly agree	14	15.1	15.1	100.0
Total	93	100.0	100.0	

Table E37. Clan 3 Trust

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	9	9.7	9.7	10.8
3 Neutral	21	22.6	22.6	33.3
Valid 4 Agree	47	50.5	50.5	83.9
5 Strongly agree	15	16.1	16.1	100.0
Total	93	100.0	100.0	

Table E38. Clan 4 Cohesive Relationships

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	4	4.3	4.3	4.3
2 Disagree	13	14.0	14.0	18.3
3 Neutral	19	20.4	20.4	38.7
Valid 4 Agree	37	39.8	39.8	78.5
5 Strongly agree	20	21.5	21.5	100.0
Total	93	100.0	100.0	

Table E39. Adhocracy 1 Creative Problem Solving

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	3	3.2	3.2	3.2
2 Disagree	19	20.4	20.4	23.7
3 Neutral	34	36.6	36.6	60.2
Valid 4 Agree	30	32.3	32.3	92.5
5 Strongly agree	7	7.5	7.5	100.0
Total	93	100.0	100.0	

Table E40. Adhocracy 2 Innovation

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	18	19.4	19.4	20.4
3 Neutral	31	33.3	33.3	53.8
Valid 4 Agree	36	38.7	38.7	92.5
5 Strongly agree	7	7.5	7.5	100.0
Total	93	100.0	100.0	

Table E41. Adhocracy 3 Trying New Concepts

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	23	24.7	24.7	26.9
3 Neutral	35	37.6	37.6	64.5
Valid 4 Agree	29	31.2	31.2	95.7
5 Strongly agree	4	4.3	4.3	100.0
Total	93	100.0	100.0	

Table E42. Adhocracy 4 Visionary Thinking

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	4	4.3	4.3	4.3
2 Disagree	16	17.2	17.2	21.5
3 Neutral	38	40.9	40.9	62.4
Valid 4 Agree	31	33.3	33.3	95.7
5 Strongly agree	4	4.3	4.3	100.0
Total	93	100.0	100.0	

Table E43. Market 1 Goal Attainment

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	24	25.8	25.8	28.0
3 Neutral	34	36.6	36.6	64.5
Valid 4 Agree	25	26.9	26.9	91.4
5 Strongly agree	8	8.6	8.6	100.0
Total	93	100.0	100.0	

Table E44. Market 2 Getting the Job Done

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	9	9.7	9.7	10.8
3 Neutral	35	37.6	37.6	48.4
Valid 4 Agree	40	43.0	43.0	91.4
5 Strongly agree	8	8.6	8.6	100.0
Total	93	100.0	100.0	

Table E45. Market 3 Direction and Goal Clarity

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	3	3.2	3.2	3.2
2 Disagree	16	17.2	17.2	20.4
3 Neutral	22	23.7	23.7	44.1
Valid 4 Agree	43	46.2	46.2	90.3
5 Strongly agree	9	9.7	9.7	100.0
Total	93	100.0	100.0	

Table E46. Market 4 Outcome Excellence

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	11	11.8	11.8	14.0
3 Neutral	24	25.8	25.8	39.8
4 Agree	38	40.9	40.9	80.6
5 Strongly agree	18	19.4	19.4	100.0
Total	93	100.0	100.0	

Table E47. Hierarchy 1 Order

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	8	8.6	8.6	9.7
3 Neutral	26	28.0	28.0	37.6
4 Agree	39	41.9	41.9	79.6
5 Strongly agree	19	20.4	20.4	100.0
Total	93	100.0	100.0	

Table E48. Hierarchy 2 Stability and Continuity

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	2	2.2	2.2	2.2
2 Disagree	5	5.4	5.4	7.5
3 Neutral	22	23.7	23.7	31.2
Valid 4 Agree	46	49.5	49.5	80.6
5 Strongly agree	18	19.4	19.4	100.0
Total	93	100.0	100.0	

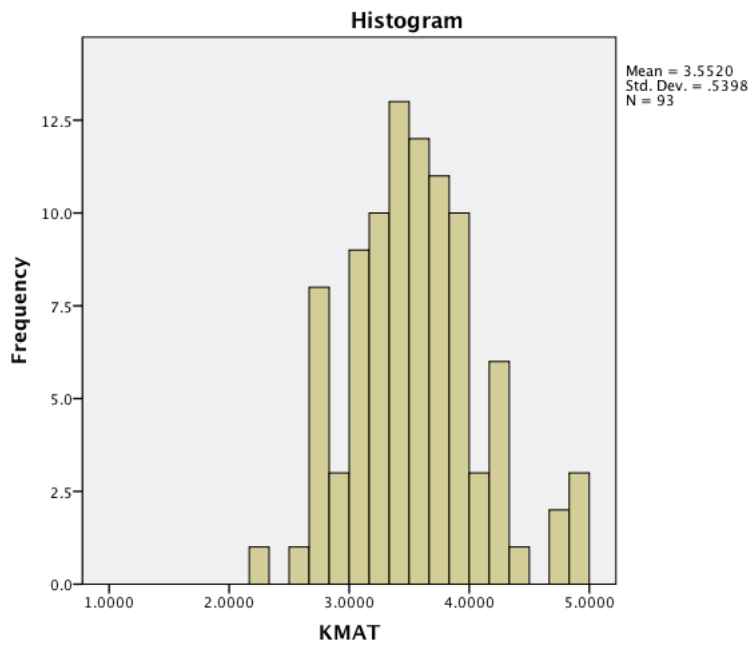
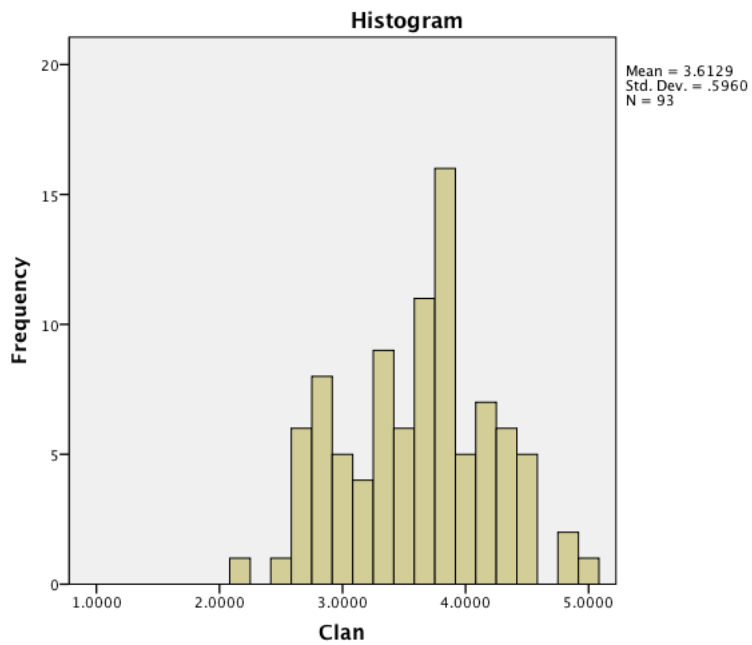
Table E49. Hierarchy 3 Analysis and Control

	Frequency	Percent	Valid Percent	Cumulative Percent
1 Strongly disagree	1	1.1	1.1	1.1
2 Disagree	7	7.5	7.5	8.6
3 Neutral	20	21.5	21.5	30.1
Valid 4 Agree	49	52.7	52.7	82.8
5 Strongly agree	16	17.2	17.2	100.0
Total	93	100.0	100.0	

Table E50. Hierarchy 4 Predictable Outcomes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 Disagree	7	7.5	7.5	7.5
	3 Neutral	31	33.3	33.3	40.9
	4 Agree	31	33.3	33.3	74.2
	5 Strongly agree	24	25.8	25.8	100.0
	Total	93	100.0	100.0	

Appendix F: Histograms of Continuous Variables

*Figure F1. KMAT Histogram.**Figure F2. Clan Culture Type Histogram.*

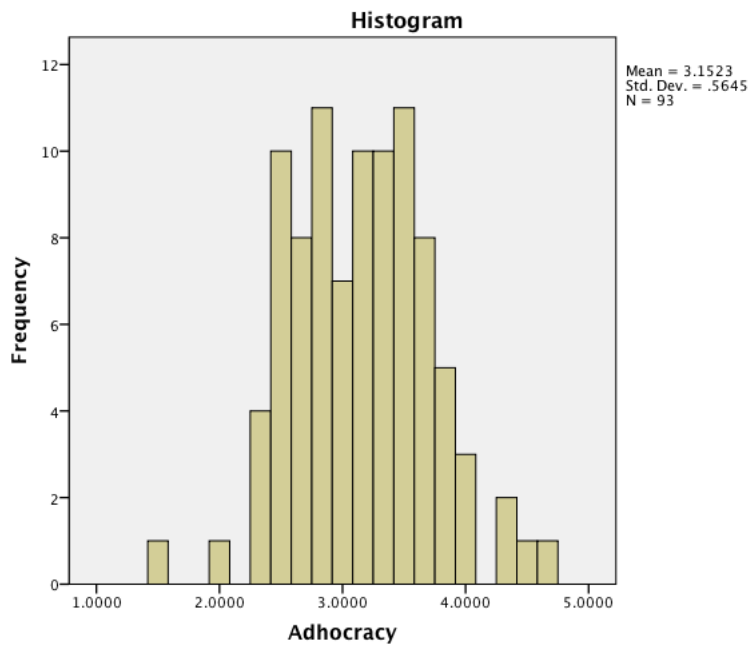


Figure F3. Adhocracy Culture Type Histogram.

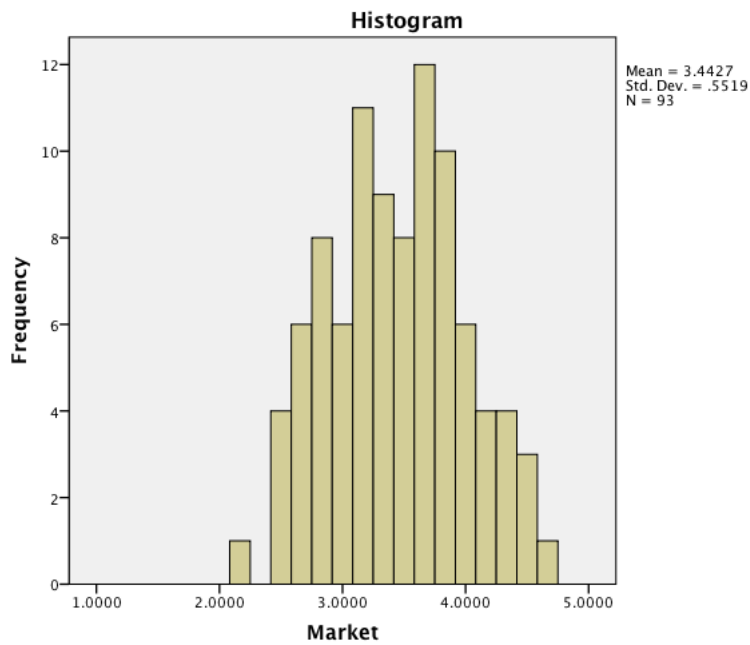


Figure F4. Market Culture Type Histogram.

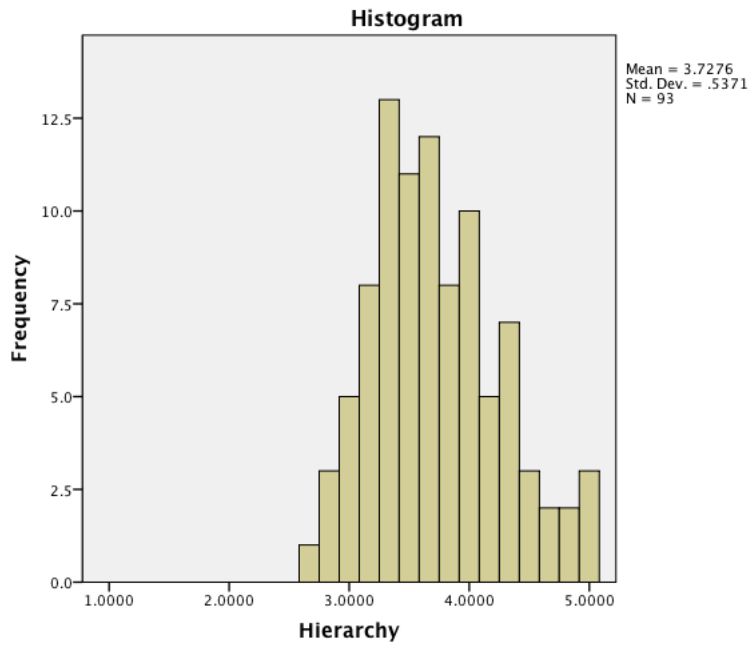


Figure F5. Hierarchy Culture Type Histogram.

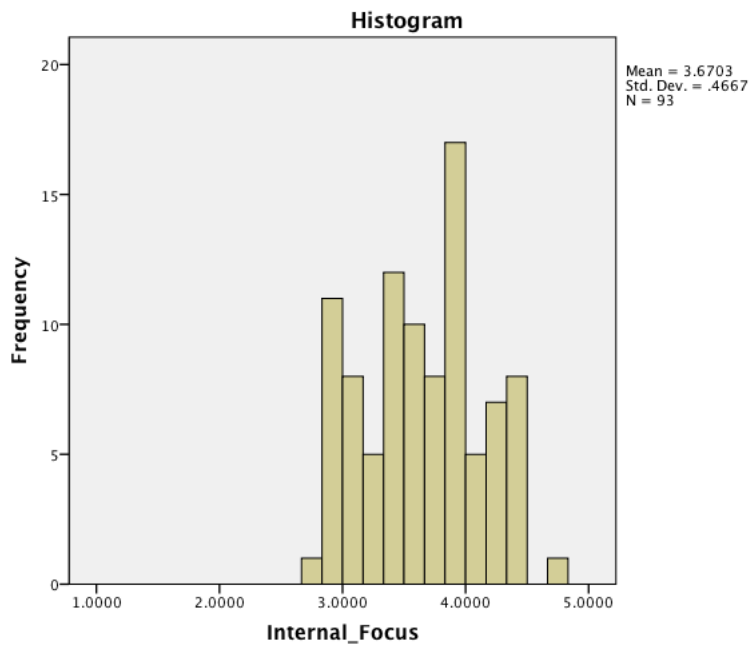


Figure F6. Internally Focus Culture Histogram.

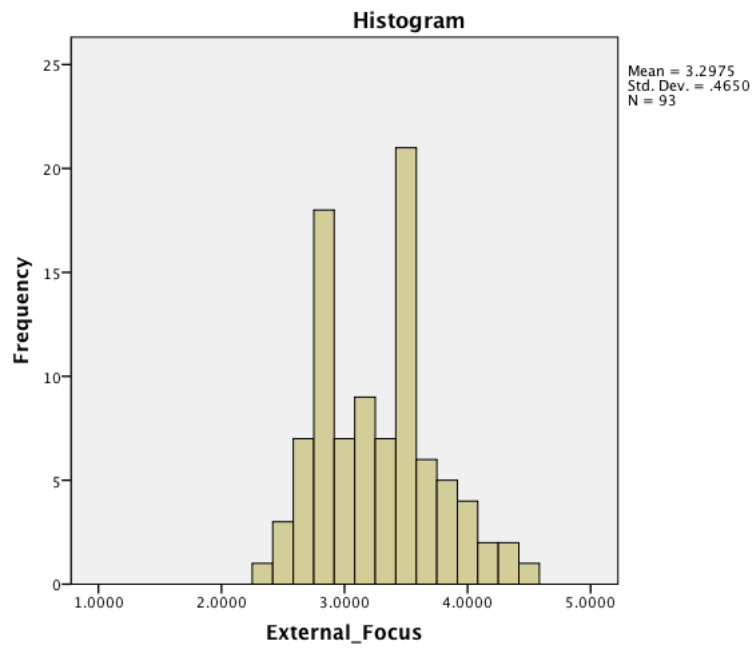


Figure F7. Externally Focus Culture Histogram.

Curriculum Vitae

Gregory P. Allen

EDUCATION

2013 (expected)	PhD	Management Walden University
2004	MBA	Management George Fox University
1989	BS	Education George Fox University

TEACHING EXPERIENCE

2005-Present	Assistant Professor	George Fox University
		Courses: Strategic Management, Operations Management, Organizational Communications, Organizational Behavior, Organizational Theory, International Dynamics, Management,

Project Management, Managing Information Systems, and
Leadership

- | | |
|-----------|---|
| 2001-2005 | Adjunct Instructor George Fox University

Courses: Organizational Communications, Managerial Accounting,
Ethics in the Workplace, Introduction to Business, Management,
and Fundamentals of Information Technology |
| 2003-2004 | Adjunct Instructor Warner Pacific College

Courses: Management, Organizational Communications |
| 2002-2003 | Adjunct Instructor Heald College

Course: Transmission Media & Networking |

PRESENTATIONS

- | | |
|-----------|--|
| July 2010 | Poster Presentation: Walden University

Organizational Culture and Flexible Knowledge Management |
| June 2007 | Guest Speaker: Regence Blue Cross Blue Shield

Trust in a time of Change: Earning and Keeping Trust |

April 2001 **Featured Speaker:** Enron Broadband Service
 Managing International Teams in a Virtual Environment

EXPERIENCE

2007-2012 **Higher Ed. Consultant, Regence Blue Cross Blue Shield**
 Portland, OR.

1999-2001 **Director of Training, Enron Broadband University,** Portland, OR,
 Houston, TX, and London, England

1997-1999 **Training Manager, Enron Broadband Service,** Portland, OR

SUBMITTED FOR PUBLICATION

Journal of Knowledge Management: Knowledge Sharing: A Generational Perspective

Journal of Knowledge Management: Trust: A Critical Factor of Knowledge

Management?

REASEACH IN PROCESS

Investigating The Impact of Organizational Culture on Knowledge Management: An Assessment of Northwest Hospitals

RESEARCH INTERESTS

Organizational Culture's Impact on Knowledge Management

Knowledge Sharing and its Impact on the Learning Organization

Vertical and Horizontal Trust Development

Examining the Trust Behaviors of Individuals who are Boundary Spanners

SERVICE

2011 – Present	Consultant, Blue Cross, Portland, OR
2010 – Present	Volunteer, Love Inc., Newberg, OR
1999 – Present	Volunteer, Habitat for Humanity, Newberg, OR
1999-2010	Volunteer, Newberg School District, Newberg, OR
2006-2009	Volunteer, Chehalem Park and Rec., Newberg, OR
2005-2008	Archive Associate, Evergreen Aviation Museum, McMinnville
2006-2007	Advisor, Service Learning Project Grace Baptist Church, Newberg,

ASSOCIATION MEMBERSHIP

Operations Research Society

Academy of Management

Greenleaf Servant leadership Society