ORGANIZATIONAL CULTURE AND ITS RELATIONSHIP WITH EMPLOYEE STRESS, PRODUCTIVITY, AND ENJOYMENT OF WORK

by

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Abstract

The purpose of this study was to explore which type/s of organizational culture are most closely related to employee levels of work-related stress, self-perceived productivity, and enjoyment of work, and whether there are gender differences. A secondary research interest was to identify the dominant culture type at the studied university. Staff members completed an online survey containing questions on organizational culture, stress, productivity, enjoyment of work, and demographics. Analyses revealed that the hierarchy culture was most prevalent at the institution. Multivariate analyses showed that the type of organizational culture was significantly related to stress, productivity, and enjoyment of work. Employees working in a clan culture reported the lowest levels of stress, and highest levels of productivity and enjoyment, followed by those in the adhocracy and hierarchy cultures, then the market culture. No gender effects emerged. These findings add insight to the limited literature on organizational culture in Canadian workplace settings.

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Acknowledgments

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Introduction

Organizational culture – the system of beliefs, rules, and values shared by organizational members – is central to the employee workplace experience (Schein, 1984). Shaped by factors such as management views, national culture, and the industry of a corporation, organizational culture can be either beneficial or detrimental to both employee wellbeing and the success of an organization (Cameron & Quinn, 2005; Lok & Crawford, 2004). Although studies have been conducted on the relationship between organizational culture and employee experiences, such studies rarely take into account employee characteristics (such as age and gender), and rarely examine specific types of organizational culture – clan, hierarchy, market, adhocracy (OCAI Online, 2012). As few studies have been conducted in Canadian workplace settings, there is high importance in exploring the potential relationship between types of organizational culture and employee experiences such as stress, productivity, and enjoyment of work in a Canadian organization. Such knowledge is crucial for not only understanding the relationship between organizational culture and employee experiences, but also for updating and filling gaps in Canadian literature, providing recommendations that can be used by organizational members, and offering insight into which employee characteristics might moderate such a relationship.

This thesis begins with a literature review and discussion of organizational culture theory, centered around a cultural model proposed by Cameron and Quinn (OCAI Online, 2012). Then, the relationship between organizational culture and employee stress, productivity, and enjoyment of work is reviewed; followed by a brief discussion of the potential role of gender in organizational culture and employee experiences. Finally, the present study is introduced, which employs a predominantly quantitative methodology by surveying a sample of staff members at a university in British Columbia. Survey data are analyzed to explore two research questions: 1)

the dominant type of organizational culture at the institution being studied, and 2) whether employee levels of work-related stress, self-perceived productivity, and enjoyment of work vary between four types of organizational culture (clan, market, hierarchy, adhocracy) and whether or not there are gender differences.

Literature Review

A work environment can be defined as a multi-dimensional system, rooted in the beliefs, rules, and values held by organizational members, which coalesce to form organizational culture (Schein, 1984). Organizational culture can be viewed as an organization's personality – the glue that holds a workplace together, which can either lead to organizational success or ineffective work practices (Denison, 1996; Goffee & Jones, 1996). The way employees perceive their work environment, and type of organizational culture, can greatly influence employee health, enjoyment, and quality of work (Hellriegel & Slocum, 1974). Over the past four decades there has been an increased research interest on dimensions of organizational culture; however, there are still gaps in the literature pertaining to its relationship with specific employee experiences and characteristics, such as gender. The following literature review summarizes existing research on organizational culture, which will be used to aid in the development of a survey to study the type of organizational culture at a post-secondary institution and its relationship with employee experiences.

Organizational Culture: Definition and Development

Organizational culture is a set of shared informal rules, assumptions, and values that provide cues on how members of an organization should behave (Deal & Kennedy, 2000; Schein, 1984; Trevino & Nelson, 1999). Workplace values are frequently shaped by

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organizational members, and tend to be implemented and followed by a majority of employees (Schein, 1984). Organizational culture acts as a medium that influences how goals are set, how tasks are performed, how resources are administered, and how employees think, act, and feel (Lok & Crawford, 2004). Organizational culture is dynamic, varying based on factors such as management beliefs and leadership styles, national culture, and industry of work (Lok & Crawford, 2004). Numerous studies have found that the manager/s of a workplace play an important role in the development and maintenance of organizational culture, such that the values, leadership style/s, routines, and goals of an organization are a reflection of those held by management (DeJoy, 2005; Kane-Urrabanzo, 2006; The Jossey-Boss Business & Management Series, 2006). Additionally, the nature of a job can influence the values and leadership styles of an organization, such that market industries are likely to differ in their culture from non-profit organizations. Although it is known that a dynamic interplay of forces meld to shape organizational culture, the exact nature of such forces is yet to be fully understood.

Types of Organizational Culture

In the literature, numerous types of organizational culture have been proposed, as well as several organizational culture assessment instruments. However, a superior assessment instrument has yet to be identified. The two organizational assessment instruments that are most commonly used are 1) the Organizational Culture Inventory (OCI), which evaluates culture as either constructive, passive/defensive, or aggressive/defensive (Balthazard, Cooke, & Potter, 2006), and 2) the Organizational Culture Assessment Instrument (OCAI), developed by Cameron and Quinn (OCAI Online, 2012). Cameron and Quinn proposed four types of organizational culture: clan, adhocracy, market, and hierarchy (OCAI Online, 2012). In the following sections, these four types of culture will be introduced.

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The clan culture operates on cooperation and group morale, and is defined as a pleasant environment to work. This culture takes employee loyalty and customer satisfaction into consideration. Clan cultures foster trust, teamwork, a sense of belonging, achievement of potential, and group maintenance (Denison & Spreitzer, 1991; Sherman, Leahy, Del Valle, Anderson, Tansey, & Lui, 2014).

The adhocracy culture is defined as a creative and dynamic workplace where risk-taking and innovation are key. Adhocracy cultures emphasize change, flexibility, and employee individuality (Denison & Spreitzer, 1991; Sherman et al., 2014). The market culture is the most competitive of the four cultures. This type of organization is goal-oriented and defined by achievement, competition, and success (Denison & Spreitzer, 1991; Sherman et al., 2014). The hierarchy culture is viewed as a structured, policy and procedure-governed environment, in which coordination between employees, stability, security, conformity, and efficiency are emphasized (Denison & Spreitzer, 1991; OCAI Online, 2012; Sherman et al., 2014).

Measuring Organizational Culture: Qualitative and Quantitative Methods

A mix of qualitative and quantitative research methods have been used in organizational research, and are believed to give a comprehensive perspective on organizational culture (Homburg & Pflesser, 2000). Interviews are commonly conducted before administering an assessment inventory to employees in an organization. Semi-structured and structured interviews are the most frequently used to explore dimensions of organizational culture, such as performance, beliefs, values, and task structure (Hofstede, Neuijen, Ohayv, & Sanders, 1990; Sheridan, 1992). Based on interview responses, a questionnaire (such as the OCI or OCAI) is then developed to gather quantitative data as a follow-up and/or quantify interview findings (Marcoulides & Heck, 1993). Although there is no superlative instrument for exploring

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organizational culture (Jung et al., 2009), structured self-report questionnaires (such as the OCAI) tend to be the most frequently used (Hellriegel & Slocum, 1974; Jung et al., 2009). Most questionnaires consist of 20 to 80 items, with nominal scales (Hellriegel & Slocum, 1974). Examples of typical questions include: "What general beliefs are held at your workplace?" and "Which events are most celebrated in your workplace?" (Hofstede et al., 1990).

Organizational Culture and Stress

Organizational culture plays a large role in the health of employees (Kane-Urrabanzo, 2006), such as the wellbeing of a corporation, and can be measured through factors such as employee illness, fatigue, and absenteeism (Peterson & Wilson, 2002). Research shows human physiological systems are highly responsive to social interactions, such that an individual's subjective experience of peer interactions can have instantaneous and enduring effects on bodily systems (Heaphy & Dutton, 2008). Work-related stress can alter one's health to the point that physical and mental wellbeing, and even life expectancy can be affected (Fletcher, 1988). Moreover, studies have found that organizational norms, peer relations, and job performance explain a significant amount of job stress variance (Hammer, Bayazit, Saksvik, Nytro, & Torvatn, 2004), and are important components in the development of work-related stress (Peterson & Wilson, 2002). Literature shows that feelings of amplified job stress are frequently associated with a lack of supervisor support, neglect of employee rights (e.g., protection from discrimination), feeling overloaded with work (Motowidlo, Manning, & Packard, 1986), perceived job insecurity (Sparks, Faragher & Cooper, 2001), extended work shifts (Maslach & Leiter, 1997; Rosa, Colligan, & Lewis, 1989), management having a type A (competitive, ambitious, aggressive) personality style (Ganster, Schaubroek, Sime, & Mayes, 1990), and workplace conflict (Hammer et al., 2004). Studies have found increases in employee absenteeism

when at least one of the previously mentioned factors was present (Vahtera, Kivimaki, & Pentii, 1997). Moreover, research has found bullying at work is linked to employee health, such that psychosomatic symptoms, anxiety, and depression can all result from poor management behaviour and unsupportive organizational culture (Hoel, Rayner & Cooper, 1999). Other studies have found the factors of low peer support, high workload, and low control over work contribute to employee stress only when there is conflict with the employee's own beliefs. When characteristics of organizational culture align with an employee's own views, there are fewer chances for work-related stress to occur (Peterson & Wilson, 2002).

Despite the many factors that contribute to work-related stress, there are also factors that help protect employees from, and minimize the effects of, such stress. Arguably, the most important protective factor is the presence of social support, which often comes from working in a team-oriented environment (Heaphy & Dutton, 2008). Having peers to communicate with can change how an individual views or solves a problem and can provide the individual with additional resources to manage stress, both of which are related to wellbeing (Heaphy & Dutton, 2008). Studies have found high employee health and happiness to be associated with an encouraging and positive work environment, one that emphasizes social connections among employees. A second protective factor against job stress is work hours and control over work tasks (Sparks, Faragher, & Cooper, 2001). Studies have found that when employees are given a say in the hours they work, stress levels and absenteeism are often reduced. Organizations that value shared control and collaboration often have better employee health (Sparks, Faragher, & Cooper, 2001). Finally, organizational and personal beliefs have been linked with work-related stress (Hackett & Guion, 1985). When an employee's personal beliefs about work match those of

management, that employee will be less likely to experience work-related stress. Although other protective factors may exist, further research is warranted to make any conclusions.

Organizational Culture and Productivity

Productivity has been deemed a major component of flourishing organizations and is easily influenced by organizational culture (Brown & Leigh, 1996; Cawsey, 1973; Dunnette, 1973; Frederickson, 1966; Friedlander & Greenberg, 1971; Kaczka & Kirk, 1968; Kane-Urrabanzo, 2006; Sheridan, 1992). Although multiple studies have indicated that working in a consistent environment is related to more consistent performance records (Hellriegel & Slocum, 1974), research has also identified several specific components of organizational culture that are correlated with higher productivity among employees. When the characteristics of trustworthiness, empowerment, consistency, and mentorship are present in a workplace, employees tend to produce greater quality of work, at a faster rate (Hellriegel & Slocum, 1974; Kane-Urrabanzo, 2006). A likely explanation is that traits such as trustworthiness and empowerment influence employee perceptions of the organization, thus influencing the level of job involvement, commitment, and effort applied to work tasks. Studies show that perceptions of organizational culture and management beliefs are directly related to work effort, which is related to performance (Brown & Leigh, 1996; Kane-Urrabanzo, 2006). Specifically, when employees sense the potential for their psychological needs to be satisfied (e.g., emotional support and safety), they will direct more effort and time towards work tasks (Hellriegel & Slocum, 1974; Kahn, 1990; Pfeffer, 1994). It has also been found that when employees hold positive views of their organization, and when organizational and personal goals align, employees will spend more time on work tasks and put more complete effort into their job (Brown & Leigh, 1996; Mathieu & Zajac, 1990). Finally, research has shown that employees

who are intrinsically motivated are more productive than those who are not, a finding likely related to the degree of relatedness of one's own beliefs with those of the organization (Hackman & Oldham, 1975).

In summary, researchers have suggested that increased involvement by management (Conger & Kanungo, 1988; Malone, 1997), consistency and support among employees and management (Hellriegel & Slocum, 1974), and increased employee responsibility and motivation are all associated with greater employee productivity (Hackman & Oldham, 1975). However, just as there are factors that increase employee productivity, there are also factors believed to hinder productivity. First, ego-depletion (exhaustion of one's mental resources) is a component of organizational culture that has been found to impede productivity (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Peterson & Wilson, 2002). When workplace culture is not supportive, operating in more of a dictatorship fashion than a democratic fashion, there is often deviation between employee and management views, and a decrease in employee motivation, dedication, and effort to work tasks. Second, changes in organizational culture have been linked to decreased employee productivity, such that a lack of consistency in organizational structure, values, and support is associated with inconsistent employee performance (Hellriegel & Slocum, 1974). One possible explanation is that an inconsistent organizational culture leads to confusion and frustration among employees, which slows down productivity.

Organizational Culture and Enjoyment of Work

Organizational culture is related to employee job satisfaction, involvement, commitment, and enjoyment of work (Lok & Crawford, 2004; Sparks, Faragher, & Cooper, 2001; Trice & Beyer, 1993; Williams & Hazer, 1986). There are specific characteristics of organizational culture that seem to influence overall enjoyment of and commitment to work (Cawsey, 1973;

Friedlander & Margulies, 1969; Kaczka & Kirk, 1968; Litwin & Stringer, 1968). When employees perceive there to be a participative management style (emphasizing group cohesiveness, cooperative strategies, and interpersonal relations), there is a trend for improved employee happiness and job satisfaction (Hellriegel & Slocum, 1974; Soonhee, 2002). A relationship has also been found between collectivism and job satisfaction, wherein the emphasis collectivistic cultures place on cooperation and group harmony, as opposed to competition, may account for this finding (Hui, Yee, & Eastman, 1995). Lastly, an organization's physical environment, also known as one's workspace, is known to affect employee enjoyment of work (Earle, 2003). Working in an open, welcoming environment influences employee happiness, such that natural light and personal space are considered ideal conditions (Earle, 2003).

Regarding commitment to work, several aspects of organizational culture have been found to influence employee retention and commitment. One study has found that an innovative, democratic, and supportive organizational leadership style has positive effects on employee commitment (Lok & Crawford, 2004). Furthermore, perceived control over one's work is thought to influence job commitment (Spector, 1986). Research on job retention has found that organizational culture yields the strongest influence on job termination by new employees (Sheridan, 1992). Organizational culture influences how employees are selected and placed, and also affects job development procedures (Kerr & Slocum, 1987; Kopelman, Brief, & Guzzo, 1990).

In summary, job commitment and job satisfaction are both influenced by organizational culture. However, there is still a lack of understanding concerning specific values and aspects of culture that make the biggest impact.

Organizational Culture and Gender

Gender is a common focus in organizational research, and has been linked with variables such as employee experiences of stress (Gyllensten & Palmer, 2005), job satisfaction (Hodson, 1989), perceptions of organizational fairness (Barak, Cherin, & Berkman, 1998), and productivity (Leahey, 2006). Moreover, gender differences have been explored among variables such as workplace values (Rowe & Snizek, 1995) and social and workplace influence tactics (Carli, 1999). Despite studies being conducted on employee experiences, gender, and organizational culture, specific types of organizational culture are rarely included in such research. As such, the interplay of gender and organizational culture remains under-studied, leaving a variety of questions unanswered (Mills, 1988).

Discussion

To summarize the findings of existing research, stress, productivity, and enjoyment of work are all affected by organizational culture. Through analyzing research findings, three key themes emerge regarding what appear to be beneficial aspects of organizational culture. First, organizations that believe in autonomy and personal-control (employee freedom and independence) rate high in employee health, productivity, job satisfaction, and commitment. Second, organizations that are viewed as trustworthy and encourage team collaboration, social support, and empowerment of employees have positive outcomes, including high levels of employee health. Third, when there is a match between personal values, goals, and beliefs with those held by an organization there is greater productivity, enjoyment of work, and commitment than when person-job fit is low. These three themes can be mapped onto Cameron and Quinn's

four types of organizational culture (OCAI Online, 2012) in an attempt to identify one superior type of culture.

Based on the findings that personal control, trust, stability, and cooperation between employees are the most beneficial for organizations, it appears the clan and hierarchy cultures promote organizational success. This connection is in agreement with previous research, which has found that hierarchy and clan cultures are the most prevalent of the four cultural systems, and are preferred by employees and management (OCAI Online, 2012). The clan culture, followed by the hierarchy culture, has been shown to contribute the most to organizational success. Alternatively, the factors found to decrease employee health, productivity, and enjoyment of work (including ego-depletion, lack of personal control, and competitiveness) fit with the market culture, suggesting this type of organizational culture is less desirable.

Limitations and future directions. While the existing body of research confirms that organizational culture can affect employee health, productivity, and enjoyment of work, there are several limitations. First, there is a lack of current research; many of the studies included in this review are from the 1970s to the 1990s, with few studies from the past decade. Theories of organizational culture and research regarding its relationship with various aspects of work may have changed in recent years. Therefore, it is important that new research is conducted to bring our knowledge up-to-date. Second, there is little research specific to Canadian organizations. Although it can be concluded that organizational culture has a relationship with productivity, enjoyment of work, and employee health, these variables are yet to be fully explored in a Canadian organization. For instance, specific dimensions of organizational culture (such as the clan, hierarchy, market, and adhocracy cultures) are scarcely applied in research examining employee feelings and health. Future studies could examine this, as well as explore how

individual characteristics (such as age and gender) moderate the effects of organizational culture on job enjoyment, stress, and productivity; as well as whether factors such as salary, position at work, and years at one's job influence such results. Finally, there is a lack of recommendations on how to improve organizational culture in order to increase employee productivity, job satisfaction, and health.

Conclusion

Organizational culture influences employee health, and plays a crucial role in employee productivity and enjoyment of work (Hellriegel & Slocum, 1974). Although characteristics representative of hierarchy and clan cultures appear to be positively related to employee health, productivity, and enjoyment of work, the existing body of literature is too narrow to draw firm conclusions and generalize findings. If future studies address the previously outlined limitations, a greater understanding of organizational culture in institutional settings could be gained, which could be of benefit to researchers, organizations, and employees.

Introduction to Present Study

Although previous studies have found that aspects of organizational culture appreciably contribute to workplace productivity, employee health, and enjoyment of work, the exact nature of the association between types of organizational culture and workplace experiences is unclear. This slim body of literature consists of few Canadian studies (Aycan, Kanungo, & Sinha, 1999; Gerowitz, Lemieux-Charles, Heginbothan, & Johnson, 1996; Mintzberg, 1979), and even fewer studies that examine gender, and specific organizational styles (e.g., clan; hierarchy; market; and adhocracy cultures). This is where the present study expands on existing research.

The present study continues to explore the effects of organizational culture on employee related variables by applying a predominantly quantitative methodology. The relationship of culture type and gender with job stress, productivity, and enjoyment of work will be examined in a sample of staff members at the University of Northern British Columbia (UNBC). UNBC is a small university located in Prince George, British Columbia, that is known for its research, teaching, and sustainability initiatives. The purpose of the proposed study is to find out what type/s of organizational culture UNBC staff members identify, and the relationship between types of organizational culture (clan; hierarchy; adhocracy; market) and gender with employee stress, productivity, and enjoyment of work.

The aim of the present study is to address the following research questions:

1. What is the dominant type of organizational culture at UNBC?

2. Are there differences in levels of employee enjoyment of work, work-related stress, and self-perceived productivity across four types of organizational culture (clan; hierarchy; market; adhocracy) and gender?

Methods

Participants

A total of 227 participants responded to the online survey. However, due to incomplete responses, only data from 193 participants (54 M; 131 F; 8 not disclosed) was analyzed. Participants were English-speaking staff members at UNBC, who were either regular part time or full time employees, ranging in annual salary from $30,000 to over $80,000, and having worked at UNBC for a minimum of four months. Most participants had worked at UNBC between four months and four years, although some employees identified working at UNBC for over 20 years. Participants' age varied, with the most common age range being 40-49 (followed by 30-39), and

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most participants rating their overall health as "good." They were employed in various sectors of work, including maintenance and facilities, administration, research, housing, finance, continuing studies, library services, the nursing department, registration, information technology services, instructional/course design, regional services coordination, lab support, the Northern Sports Center, retail, sustainability, communications, campus infrastructure, health services (e.g. The Peer Support Network), natural resources and environmental sciences, academic services (e.g. student advising), distribution services, external relations, risk and safety, ancillary services, student recruitment and engagement, general management, and the Northern Medical Program.

Apparatus and Materials

An online survey was used in this study, which consisted of 25 questions developed by the project researchers after conducting a thorough review of existing organizational culture survey questions. The survey was constructed in a fashion that questions corresponded with one of the five topic areas: organizational culture, work-related stress, enjoyment of work, self-perceived productivity, and demographics. These areas were selected to address research questions and give a rich description of the survey sample.

The majority of survey questions followed a 5-point Likert scale, although there were also rank-order and multiple-choice questions. Sample questions included "Do you enjoy going to work?" and "Do you feel your work environment brings out your highest productivity?" (see Appendix for the full questionnaire).

Simple Survey software was used for the survey and data collection (http://www.simplesurvey.com). As an incentive, participants were informed (at the onset of the survey) that there would be a draw at the end of the data collection with the opportunity of winning one of the two $10 gift cards to Degrees Coffee/The Thirsty Moose pub at UNBC.

Procedure

Existing literature and organizational culture questions were extensively examined before deciding to design a set of unique survey questions for the present study. After doing so, validity of questions was assessed by asking UNBC faculty and staff members to explain what the questions were asking and whether the questions and response options were clear. Feedback was used to fine-tune the questions.

Prior to the onset of the study, UNBC ethics approval was sought and obtained. Before the survey started, a trial run of the questionnaire was administered to a small sample of staff members[1] to pilot test the questions. Upon completion of the pilot test, any necessary questionnaire changes were made, and then the study began. Using Simple Survey software, the information letter/consent form and 25 survey questions were uploaded online and a URL was created for participants to access the survey.

A list of 466 UNBC employees was obtained from the UNBC phone and email directory (online). In the initial email, the purpose of the study was explained and a link to the online survey, as well as the consent form, were included. Before the onset of the survey, participants were asked to read the information letter/consent form, which explained the purpose of the study, assured confidentiality of personal information, and offered participants the option to withdraw from the survey at any time if they wished.

At this point, participants were asked whether or not they agreed to participate in the survey. If participants selected the box labeled "yes" they were able to begin the survey. When completed, a thank-you message appeared on the screen and participants were instructed to exit

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[1] Staff members involved in the trial run were not allowed to also participate in the study.

the survey. Two reminder emails were sent out during the three-month duration of the study to encourage participation.

Analyses

Data from completed questionnaires were downloaded into an excel spreadsheet, then imported and analyzed in IBM SPSS Statistics 23. Four types of statistical analyses were conducted: (1) a principal component analysis on work-related variables, serving as a manipulation check; (2) intercorrelations between stress, productivity, enjoyment of work, and demographic variables; (3) descriptive statistics to determine the dominant type of organizational culture for employees at UNBC; and (4) multivariate analyses of variance (MANOVA) and post-hoc tests to examine any effects of gender and organizational culture on employee stress, self-perceived productivity, and enjoyment of work.

Also included in the survey was an open-ended question (improvements UNBC could make to organizational culture to increase employee productivity). A thematic analysis was conducted on the responses of this question. This question was not analyzed in SPSS, but was analyzed with an inductive phenomenological approach (Bazeley, 2009; Braun & Clarke, 2006). This process allows openness to responses and for various perspectives to emerge from the data, a procedure especially useful in cultural research (Bazeley, 2009; Creswell, 2007).

<div align="center">

Results

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Preliminary Analyses and Validation of Variables

Principal components extraction with varimax rotation was performed through SAS FACTOR on 16 items from the survey (excluding demographic items). The analysis was conducted as a manipulation check to estimate the number of components survey questions

loaded on, and to ensure the items were related. Four components were extracted, although a scree plot indicated there were only three main components. Since the survey items were divided into four main areas (organizational culture; stress; enjoyment; productivity), this finding was not surprising. As indicated by *SMC*s, components were internally consistent and quite well defined by the variables, showing there was a substantial amount of variance (in the variables) being accounted for by the extracted components. Communality values tended to be moderate to high. Based on the four components, it is apparent that nearly 61% of variance was cumulatively explained, such that the components accounted for over half of the variability in responses. After rotation, it was found that component 1 accounted for over 23% of variance, component 2 nearly 18%, component 3 nearly 13%, and component 4 just above 7% of variance.

With a cutoff of .3 for inclusion of a variable in the interpretation of a component, all (16) of the variables loaded onto a component. The success of each item to load onto a component reflects homogeneity of items on the questionnaire. In sum (after rotation), component 1 was loaded onto by 11 items (opinion on work variables), component 2 was loaded onto by 8 items (satisfaction), component 3 by 4 items (stress), and component 4 by 3 items (comfort and culture). This finding will not be further discussed as the sole purpose of the analysis was to act as a manipulation check for measures, and as the test was passed we proceeded with analyses.

Intercorrelations among variables were conducted for the dependent variables of stress, productivity, and enjoyment of work; and for demographic variables. The findings that 1) stress level was strongly, negatively correlated with enjoyment of work; 2) stress level was moderately, negatively correlated with productivity; and 3) enjoyment of work was moderately, positively correlated with productivity supports the use of a MANOVA analysis. All three relationships

were significant at the $p = .01$ alpha level (two-tailed). Pearson correlations for nine variables are displayed in Table 1.

Table 1. *Intercorrelations between stress, enjoyment, productivity, and demographic variables.*

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Stress	-								
2. Enjoyment	-.681**	-							
3. Productivity	-.477**	.526**	-						
4. Salary satisfaction	-.294**	.268**	.856**	-					
5. Age	.214**	-.073	-.041	-.071	-				
6. Years at UNBC	.214**	-.195**	-.048	-.009	.433**	-			
7. Health	-.333*	.189**	.222**	.205**	-.081	-.174*	-		
8. Salary level	.174*	-.107	-.139	-.088	.194*	.261**	-.074	-	
9. Gender	-.030	-.002	.115	.053	-.013	.045	-.016	-.235**	-

Note. **$p < .01$; *$p < .05$

Principal analyses

Organizational culture at UNBC: Research question 1. Descriptive statistics were conducted to determine the dominant type of organizational culture at UNBC. For each dimension of organizational culture, frequencies are provided (as numbers and percentages) in Table 2. The dominant type of organizational culture at UNBC, as identified by employees, was the hierarchy culture. Over half of employees (54.07%) identified a working environment that matched characteristics of the hierarchy culture, characterizing their work environment as being focused on structure and efficiency. The second most commonly identified type of culture at UNBC was the adhocracy culture, with 19.19% of employees identifying their workplace as one that advocates innovation and creativity. The third most commonly identified type of culture at UNBC was the market culture, with 17.44% of employees classifying their work environment as

placing competition and achievement first. The least commonly identified type of organizational

culture at UNBC was the clan culture, with only 9.30% of employees identifying their work

environment as strongly valuing employee wellbeing, cooperation, and teamwork.

Table 2. *Descriptive statistics for employee stress, enjoyment of work, and productivity partitioned based on type of organizational culture and gender.*

Variable		Stress	Enjoyment	Productivity
Culture type (N = 172)				
Clan	Mean	11.50	15.75	7.13
N = 16 (9.3%)	SD	2.83	1.88	1.50
Hierarchy	Mean	14.49	14.53	6.72
N = 93 (54.07%)	SD	3.29	2.66	1.53
Adhocracy	Mean	14.15	14.67	6.70
N = 33 (19.19%)	SD	3.02	2.27	1.57
Market	Mean	16.37	12.83	5.77
N = 30 (17.44%)	SD	3.18	2.26	1.79
Gender (N = 178)				
Male	Mean	14.65	14.33	6.43
N = 51 (28.65%)	SD	3.29	2.52	1.51
Female	Mean	14.45	14.35	6.65
N = 127 (71.35%)	SD	3.45	2.62	1.65

Note. Stress score range is 5-25, with low numbers representing low stress and high numbers representing high stress. Enjoyment score range is 3-20, with low numbers representing low enjoyment and high numbers representing high enjoyment. Productivity score range is 2-10, with low numbers representing low productivity and high numbers representing high productivity.

The influence of employee gender and organizational culture on employee stress, self-perceived productivity, and enjoyment of work: Research question 2. To address the second research question of this study, two multivariate analyses of variances (MANOVAs) were performed. The composite variable scores for (1) stress, (2) self-perceived productivity, and (3) enjoyment of work were the dependent variables; gender and organizational culture were the independent variables.

Prior to conducting the MANOVAs, the three dependent variables were examined to see how they fit with MANOVA assumptions, which are the absence of univariate and multivariate outliers, adequate sample size, univariate and multivariate normality, orthogonality, homogeneity of variance-covariance matrices, linearity, and absence of multicollinearity (Tabachnick & Fidell, 2013). The assumptions of normality, homogeneity of variance-covariance matrices, adequate sample size, and orthogonality were satisfied. Mahalanobis tests did not reveal any multivariate outliers at $p < .001$, nor were there any univariate outliers. Missing data were removed from analyses. No other corrections were made, as there was a low percentage of missing data. The collinearity diagnostics revealed there was no multicollinearity. Although the assumption of linearity was approaching violation in two cases, we proceeded with analyses as other assumptions were met.

Although a 2 (Gender [male, female]) x 4 (Culture [clan, hierarchy, adhocracy, market]) MANOVA was originally planned, preliminary analyses for gender were conducted (due to highly similar gender means) in a MANOVA, and since multivariate results were not significant, $F(3, 174) < 1.00$, the gender independent variable (IV) was excluded from further analyses to

maintain simplicity[2]. Following this, employee stress, productivity, and enjoyment of work were analyzed by a one-way MANOVA with four independent groups: market culture, clan culture, hierarchy culture, and adhocracy culture.

Using Pillai's Trace criterion, it appeared that employee stress, productivity, and enjoyment of work were significantly affected by organizational culture, denoted by a significant multivariate main effect: $F(9, 504) = 3.18, p = .001, \eta^2 = .05$. To investigate the influence organizational culture exerts on each dependent variable and examine the significance of main effects, a series of three univariate tests (ANOVAs) were conducted. A Bonferroni-corrected alpha level of .02 (.05/3) was used to take into account the tendency of type 1 errors to result from conducting multiple tests. Significant main effects for stress, productivity, and enjoyment were followed by post hoc tests using Tukey's honestly significant difference (HSD) tests. Means and standard deviations are presented above in Table 2.

The univariate main effect of organizational culture was significant for stress, $F(3, 168) = 8.31, p < .001, \eta^2 = .13$, enjoyment of work, $F(3, 168) = 5.87, p = .001, \eta^2 = .10$, and productivity, $F(3, 168) = 3.56, p = .016, \eta^2 = .06$. The ANOVA for stress showed a large effect size, representing a strong relationship with organizational culture, while enjoyment and productivity had moderate effect sizes.

Post-hoc tests for stress revealed five significant mean differences between types of organizational culture. Employees working in a clan culture had significantly lower stress scores than employees working in a market culture, $M_{Difference} = 4.87, p < .001$, 95% CI [2.31, 7.42], as did employees in a clan culture compared to employees in a hierarchy culture, $M_{Difference} = 2.99, p$

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[2] Gender did not add any meaningful variation to the analysis. Males and females scored the same on measures of stress, enjoyment, and productivity. This pretest was warranted after noticing similarity in gender means, and the exclusion of this variable from further analyses increased simplicity and ease of interpretation. Cell sizes were too small to evaluate the interaction effect, although screening indicated non-significance.

= .004, 95% CI [.76, 5.23], employees in a clan culture compared to employees in an adhocracy culture, $M_{Difference}$ = 2.65, p = .034, 95% CI [.14, 5.17], employees in an adhocracy culture compared to employees in a market culture, $M_{Difference}$ = 2.22, p = .032, 95% CI [.13, 4.30], and employees in a hierarchy culture compared to employees in a market culture, $M_{Difference}$ = 1.87, p = .029, 95% CI [.14, 3.61]. Employees who identified working in a clan culture had the lowest levels of work-related stress, followed by employees in the adhocracy and hierarchy cultures (no significant difference), then employees in a market culture (which had the highest levels of employee work-related stress). Post-hoc test results are shown in Figure 1.

Figure 1. *Work-related stress scores broken down by organizational culture.* N = 172
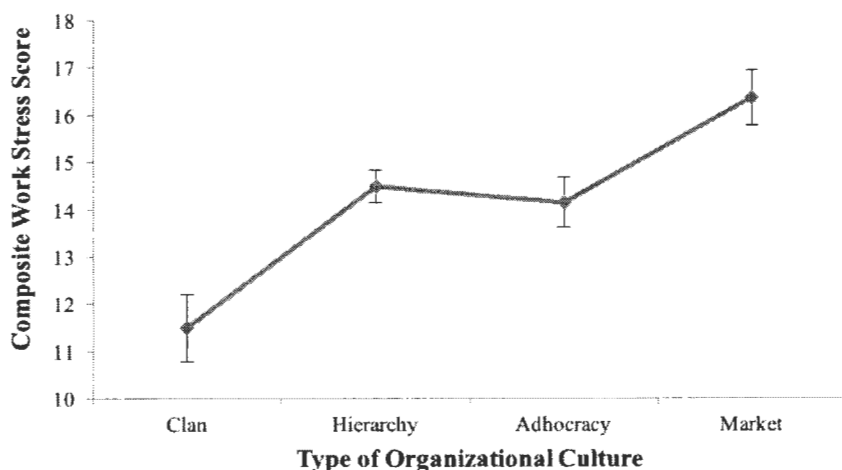
Post-hoc tests for enjoyment of work revealed three significant mean differences between types of organizational culture. Employees working in a clan culture had significantly higher levels of enjoyment of work from employees working in a market culture, $M_{Difference}$ = 2.92, p = .001, 95% CI [.94, 4.89], as did employees working in an adhocracy culture compared to employees working in a market culture, $M_{Difference}$ = 1.83, p = .019, 95% CI [.22, 3.44], and employees working in a hierarchy culture compared to employees working in a market culture, $M_{Difference}$ = 1.69, p = .007, 95% CI [.35, 3.03]. Employees in a clan culture had the highest

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enjoyment of work, followed by employees in the adhocracy and hierarchy cultures, with employees in the market culture having the lowest enjoyment of work. Working in a clan, hierarchy, or adhocracy culture was associated with having significantly greater enjoyment of work than working in a market culture. Post-hoc test results are shown in Figure 2.

Figure 2. *Enjoyment of work scores broken down by organizational culture.* N = 172
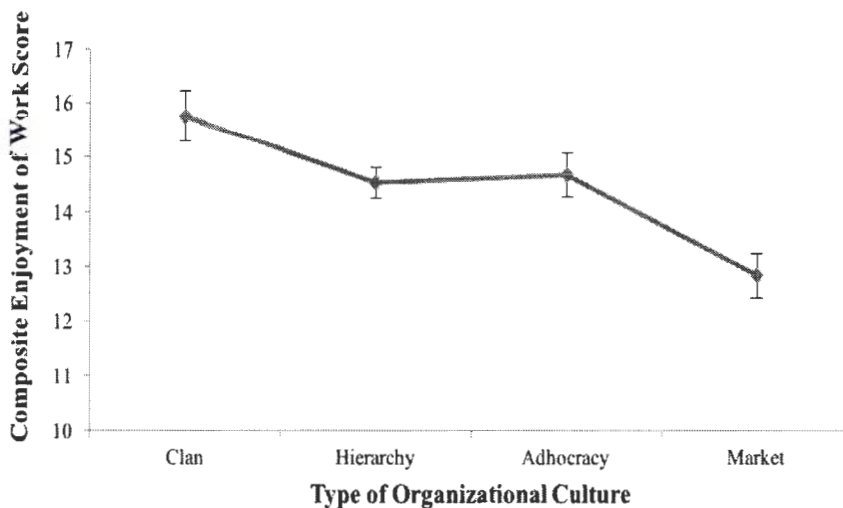
Post-hoc tests for productivity revealed two significant mean differences among types of organizational culture. Employees who identified working in a clan culture had significantly higher self-perceived productivity than employees working in a market culture, $M_{Difference} = 1.36$, $p = .032$, 95% CI [.08, 2.63], as did employees working in a hierarchy culture compared to employees working in a market culture, $M_{Difference} = .95$, $p = .024$, 95% CI [.09, 1.82]. Employees working in a clan culture had the highest self-rated productivity, followed by those in the hierarchy and adhocracy cultures, then employees in the market culture. Employees in the clan and hierarchy cultures had significantly greater self-perceived productivity than employees in the market culture. Post-hoc test results are shown in Figure 3.

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Figure 3. *Self-perceived productivity scores broken down by organizational culture.* N = 172
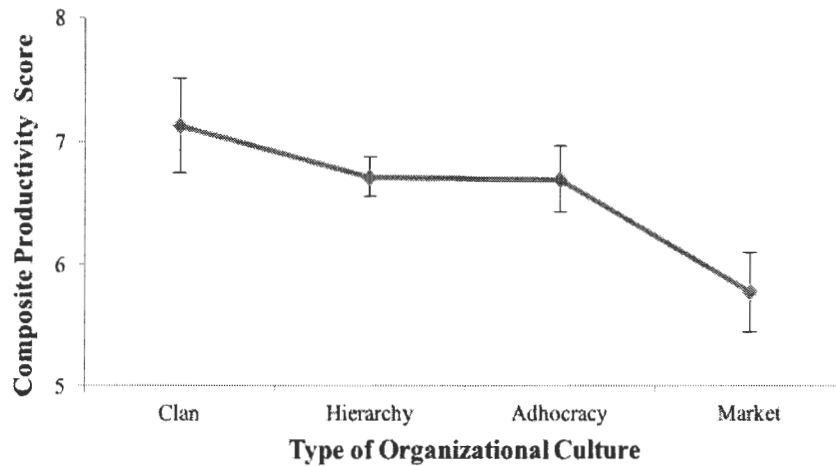
Qualitative Analysis

In line with the second research question of this study, open-ended responses to a survey question asking, "What changes to the organizational culture of UNBC would increase your productivity" were analyzed through a thematic analysis. This analysis provided a multitude of answers and rich descriptions of the way employees at UNBC believe organizational culture influences their productivity at work, and ways in which increased productivity could be promoted. During this analysis process, thematic units were recognized and then assigned to categories through the inductive process described by Braun and Clarke (2006). A phenomenological approach was used to guide analysis, with detailed coding leading to the creation of several specific categories (Bazeley, 2009). A total of three themes emerged from coding. Raw data was checked several times to ensure the three categories were the most prevalent and an appropriate summary of the thematic analysis.

The three general themes that emerged from analyses were: 1) The desire for a work structure that allows job flexibility; 2) A want for increased cooperation and care for UNBC employees; and 3) The desire for UNBC to share a common goal.

The desire for flexibility was illustrated by comments such as "...having a more flexible work schedule..." would increase productivity and "recognizing the need to balance work/home life and better recognition for a job well done" would make work more enjoyable. Employees voiced opinions that their "...department doesn't offer flex days. This may help with increasing productivity and overall morale" at the university. Additionally, there were comments that employees wished there were a "...more clear structure..." and that they were "...given more flexibility" in work positions that would allow for "...job advancement..." and the "...ability to grow" at UNBC. Such comments illustrate that a shift in job structure, which allows for worker flexibility, is desired at UNBC.

A majority of participants identified that a "shift in culture to value and respect all staff, students and faculty while encouraging cooperation and collaboration to create innovative solutions" could greatly improve employee productivity. Comments that UNBC should foster "open communication on all levels," as well as that " [people] need to realize that we are a TEAM..." and that creating "... a more positive morale for employees/staff..." frequently emerged. It is apparent that employees feel they work in a "bureaucratic" or "autocratic" environment, which suppresses employee creativity and freedom at work. Interestingly, there were comments that at UNBC "collaboration is a word used often, however it is not understood," which suggests there may be a disconnect between desires and reality at the institution. It was suggested that "increased team work..." and "...more departmental co-operation" could stem from a "more collegial environment... [and] positive leadership...", which could lead to the

"appreciation" that some employees seem to feel is lacking at UNBC. Overall, it can be summarized that at UNBC "we need more of a team environment where everybody is wanting to contribute to a solution rather than continually setting up roadblocks" in the institution.

A final theme that emerged had to do with the desire for UNBC to have "...alignment of a common vision" to "provide common direction and goals that everybody follows..." at the institution. This comment re-emerged in similar forms such as "a clear direction on what our universities mission, goals, and direction will be" and "we need a clear strategic vision with measureable goals," which illustrate the desire for salient goals at UNBC. As stated by one employee, "it would be great to have a vision the entire university is working towards...", which could increase staff collaboration as well as productivity.

In summary, while some employees could not identify areas to be improved upon, or they felt UNBC was "#1 in view of organizational/professional culture," many other employees felt that there was room for improvement through "appreciation...communication...inclusion and consultation," and having "...true collaboration and innovation, rather than just 'talking about it'."

Discussion

The two objectives of this study were to 1) determine the dominant type of organizational culture at UNBC, and 2) explore how gender and organizational culture influence employee work-related stress, self-perceived productivity, and enjoyment of work. Pearson correlations are interpreted in the following paragraphs, followed by a more important discussion of the research questions.

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Relationships Among Stress, Productivity, Enjoyment, and Demographic Variables

In addition to examining the correlations between stress, productivity, and enjoyment of work, intercorrelations for the demographic variables of salary level, salary satisfaction, age, years worked at UNBC, health, and gender were also performed (see Table 1 in results)[3]. In addition to the findings that stress, productivity, and enjoyment of work were correlated, several other findings emerged; the most interesting of which will be discussed. First, the variable of stress was positively correlated with age, years worked at UNBC, and salary level, and was negatively correlated with salary satisfaction and health status. Second, the variable of enjoyment was positively correlated with salary satisfaction and health status, and was negatively correlated with years worked at UNBC. Third, the variable of productivity was positively correlated with health status and salary satisfaction. Finally, the variable of gender was negatively correlated with salary level. Male employees reported earning more than female employees at UNBC.

Regarding correlates of stress, it is possible that employees earning a higher annual salary are more stressed due to higher work demands. Moreover, working at UNBC for a long period of time may mean one is more likely to hold a high-stress position, such as management. The finding that health status is negatively related to stress seems reasonable, as life stress is known to presage poor health (McEwen & Gianaros, 2010). Interestingly, it was found that salary satisfaction was negatively related to stress. Although salary level was positively related to stress, it seems that one's satisfaction with their salary may act as a buffer to stress, which aligns with research that reports pay satisfaction and pay fairness are not synonymous (Judge, Piccolo, Podsakoff, Shaw, & Rich, 2010; Scarpello & Carraher, 2008), and that job stress is related to satisfaction with work reward packages (Lu, While, & Barriball, 2005), such as pay.

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[3] Area of employment was excluded from correlational analyses due to the qualitative nature of the question.

Correlation analyses of enjoyment show that employees who enjoyed work were more likely to be of good health and satisfied with their salaries. Interestingly, there was an inverse function where employees at UNBC for 4 years or less, and 20 years or more, reported the highest enjoyment. Our findings support existing research as past studies have reported enjoyment of work to be strongly correlated with measures of health (Faragher, Cass, & Cooper, 2005) and pay satisfaction (Sharma & Bajpai, 2011).

Our findings on correlates of productivity overlap with those found in existing literature. Research identifies a strong relationship between productivity and employee health status, wherein poor health is linked with productivity loss (Van den Heuvel, Geuskens, Hooftman, Koppes, & Van den Bossche, 2010). Regarding salary satisfaction, it is logical that if an individual is not satisfied with their salary they will be less motivated to work at a high level of performance.

Organizational Culture at UNBC

With respect to the dominant type of organizational culture at UNBC, frequency analyses produced the following findings: First, all types of organizational culture (clan; hierarchy; adhocracy; market) were identified in varying degrees. This finding is in accordance with existing studies, which have found that no institution is characterized fully by one type of organizational culture (Cameron & Freeman, 1985). Second, the hierarchy culture was the dominant type of organizational culture at UNBC, with the clan culture being the least prevalent. Through screening and examining qualitative data, it appears that the hierarchy culture was most commonly identified in most (if not all) sectors of work: student services, information technology, administration, management, research, and other areas as well. This finding supports a meta-analysis in which Cameron and Quinn (2005) found that, out of 334 institutions, 236 had

consistent cultures. This means that there was cultural congruence in the institutions, with one type of organizational culture dominating nearly all sectors of the organization (Cameron & Quinn, 2005). Although there appeared to be cultural congruence in our study, with the hierarchy culture dominating various areas of employment, screening suggested different patterns in culture identification across areas of employment. Employees working in a research setting had the greatest representation of the adhocracy culture, and those in student services had the greatest representation of the clan culture. As organizations often contain sub-areas of employment, it is logical that not all subdivisions of an organization would show the same cultural patterns, even if all areas share a dominant type of culture. Other patterns may exist, but further research and analysis would be needed to make firm conclusions.

The above findings may lead one to question whether, by nature of some underlying factor, universities are predisposed to adopt a hierarchy culture, and whether such results are typically found in universities. It is possible the system structure and bureaucratic nature of universities create a backbone for a hierarchy culture to be adopted. Since the early days of Mintzberg, it has been shown that universities are typically governed by routine, rules, structure, and procedure-driven organizational cultures (Mintzberg, 1979). While originally referred to as a professional-bureaucracy culture, the characteristics Mintzberg found in university settings fit that of the hierarchy culture. The finding that universities (such as McGill University) resemble characteristics of a hierarchy culture (Mintzberg, 1979; Mintzberg, 1993) overlaps our findings, increasing generalizability of results to larger Canadian universities. Our findings support another study which found Canadian universities tend to be predominantly bureaucratic and structure driven, which seems to fit with the hierarchy culture and our results (Burnett & Huisman, 2009). This seems reasonable, as organizational literature claims similar organizations

tend to exhibit similar kinds of cultures (Chatman & Jehn, 1994). Interestingly, a limited body of research has identified that universities tend to embody a clan culture and not a hierarchy culture, contrasting what was found in the present study (Berrio, 2003). Indeed, Berrio (2003) has found that in one American university, the clan culture was dominant and also preferred by employees, with the hierarchy culture being the second most commonly identified. It was found that personnel differences accounted for whether a clan or hierarchical culture was predominant (Berrio, 2003). A potential reason the hierarchy culture was identified most at UNBC is that Canadian institutions may place a higher value on structure and efficiency, as compared to American counterparts, such as that studied by Berrio (2003).

According to Bartell (2003), universities share a unique set of characteristics and a specific culture type compared to other organizations, which is likely related to the highly organized management systems that must be in place for such an institution to function. This could explain why universities tend to identify clan or hierarchy cultures, and why large institutions commonly show hierarchy characteristics (Berrio, 2003; Cameron & Freeman, 2005). The unique set of characteristics that universities tend to share (Bartell, 2003) may override any unique attributes of specific areas of employment, explaining why a hierarchy culture appeared most prevalent in many sectors of work at UNBC. These findings point to a context-specific view of organizational culture in university settings, suggesting that the hierarchy and clan cultures may be more dominant than the adhocracy and market cultures at universities.

The Influence of Gender and Organizational Culture on Employee Stress, Self-perceived Productivity, and Enjoyment of Work

MANOVA results revealed a significant main effect of organizational culture, but no effects of gender. These findings are discussed below.

Gender and employee stress, productivity, and enjoyment of work. During pretesting no gender differences emerged, meaning that males and females scored the same on levels of stress, self-perceived productivity, and enjoyment of work. The non-significant main effect of gender supports previous findings by showing that gender does not influence enjoyment of work (Baruch-Feldman, Brondolo, Ben-Dayan, & Schwartz, 2002), and contradicts previous research by showing that gender is not related to work-related stress (Gyllensten & Palmer, 2005) and productivity (Baruch-Feldman et al., 2002). In line with our findings, some researchers have found that gender does not influence job enjoyment/satisfaction, wherein males and females will enjoy their jobs equally when controlling for confounding variables (Baruch-Feldman et al., 2002; Rast & Tourani, 2012). However, one study has reported that gender is related to enjoyment of work; sometimes men are more satisfied with their jobs than women and sometimes women are more satisfied than men (Rast & Tourani, 2012). With respect to stress, much research identifies that males and females differ in levels of work-related stress, with females having higher levels of stress than males (Cohen & Janicki-Deverts, 2012; Watson, Goh, & Sawang, 2015), although several studies have reported no gender differences (Gyllensten & Palmer, 2005). However, past research has not controlled for organization of employment, which may have confounded their results. Our study examined employees in the same institution, which might have influenced stress scores compared to studies that sampled employees from multiple organizations. Moreover, our study included self-perceived stress, which may be different from

actual physiological measures of stress. Past research has also found significant gender differences in workplace productivity with males often being perceived as more productive (Baruch-Feldman et al., 2002; Petersen, Snartland, & Meyersson Milgrom, 2006), contrasting what was found in the present study. A potential explanation for this difference is that self-perceived productivity could be much different from actual productivity. Our study explored how much self-perceived employee productivity was hindered or facilitated by organizational culture, whereas other research has defined productivity differently. Thus, our findings lend partial support for existing literature.

Organizational culture and employee stress, productivity, and enjoyment of work. After finding non-significant effects of gender, organizational culture was explored on its own. Statistical analyses showed that organizational culture significantly affects employee stress, self-perceived productivity, and enjoyment of work. A main effect was found for organizational culture on all three dependent variables, with significant post-hoc tests. The moderate-to-large effect sizes support the findings. When examining effect sizes, it is clear that stress had the greatest relationship with organizational culture, followed by enjoyment of work, then productivity. Thus, it can be stated that work-related stress was the most affected by organizational culture, then enjoyment of work and productivity. When individuals categorized themselves as working in a clan or hierarchy culture they had significantly lower levels of stress, higher levels of productivity, and higher enjoyment of work than employees who identified working in a market culture. Those in the clan culture had the lowest stress, and highest enjoyment and self-perceived productivity. Those who worked in an adhocracy culture had higher stress, lower productivity, and lower enjoyment than employees in a clan culture. However, they did show significantly lower levels of stress and higher enjoyment of work than

employees working in a market culture. Overall, the clan culture had the most positive outcomes, followed by the adhocracy and hierarchy cultures, and then the market culture. These results are consistent with a study reporting that clan and hierarchy cultures appear to be the most positive environments to work in (OCAI Online, 2012).

Regarding differences in stress levels, it can be posited that the collaborative, supportive, and loyal characteristics of the clan culture versus the competitive and harsh characteristics of the market culture contributed to such differences. Studies on Australian and United Kingdom sources of job stress among university staff identified major sources of stress were poor management practice, insufficient reward and recognition, poor relationships, job insecurity, and work overload (Gillespie, Walsh, Winefield, Dua, & Stough, 2001; Tytherleigh, Webb, Cooper, & Ricketts, 2005). The importance market cultures place on job advancement, and the amount of "whip-cracking" that is believed to occur in such organizations may explain why higher stress levels were found. Moreover, market cultures tend to have the highest levels of conflict, which can be considered to represent poor relationships, known to increase job stress. Finally, while rewards are offered in market cultures, it is only for high achievement, which means that many employees may go without recognition, which could lead to symptoms of stress (Cameron & Quinn, 2005). It appears these aspects of the market culture contribute to stress, which lends support for our findings. Conversely, variables such as support from management and co-workers, group morale, flexible work conditions, and recognition have been reported to help staff reduce and cope with job stress (Gillespie et al., 2001). These variables overlap with characteristics of the clan culture (Cameron & Quinn, 2005), which supports present findings that employees in the clan culture had the lowest levels of stress. Studies have shown that clan cultures have the highest employee health, followed by the adhocracy culture, then the hierarchy

and market cultures (Cameron & Freeman, 1985). The similarity of our findings to past research strengthens the conclusion that organizational culture is related to employee stress.

In our study, differences in employee enjoyment of work resembled the pattern found with the stress variable. The clan culture had the highest enjoyment, followed by adhocracy culture, then the hierarchy culture, and finally the market culture. Our findings seem to be consistent with a college study, which found that the clan culture strongly relates to satisfaction (Cameron & Quinn, 2005), and another study which found that employees working in a clan culture have the highest job satisfaction (Cameron & Freeman, 1985). It is believed the supportiveness and high group identity of the clan culture can explain such findings (Cameron & Freeman, 1985; Cameron & Quinn, 2005). Moreover, other studies identified that job satisfaction is positively associated with the clan and adhocracy cultures, and negatively associated with the hierarchy and market cultures (Lund, 2003). Past research also suggests that cultures which emphasize teamwork and value human interactions are strongly related to high job satisfaction (San Park & Hyun Kim, 2009). Findings that clan cultures have low job turnover could further support our findings, wherein the high enjoyment of work experienced by many clan culture employees may decrease intention to leave. Conversely, the high turnover rate of employees in market cultures could be a result of low enjoyment of work, such as that found in the present study (Banaszak-Holl, Castle, Lin, Shrivastwa, & Spreitzer, 2015). It is possible the adhocracy culture also leads to high employee enjoyment of work because of the creative, flexible, and innovative environment, while the rule driven environment of the hierarchy culture, and competitive and stressful aspects of the market culture are too rigid to foster enjoyment (Naranjo-Valencia, Jiménez-Jiménez, & Sanz-Valle, 2011).

Finally, significant differences in productivity occurred between the clan and market cultures, and the hierarchy and market cultures. Studies have found differences in workplace effectiveness across types of organizational culture. Our findings support previous research, as the clan culture has been found to have high productivity in our study. However, our finding that the hierarchy culture is second highest in productivity negates existing research, which shows that the adhocracy culture ranks after the clan culture (Cameron & Freeman, 1985). Both the clan and adhocracy cultures have scored highest on a majority of dimensions on the workplace effectiveness scale. Although initial perceptions may lead one to believe the market culture would have the highest productivity, the opposite finding can be explained in a few ways. First, as productivity was measured based on employee self-perceptions and variables strongly correlated with productivity, it is possible that actual productivity was not measured and that employees in a clan culture simply perceived themselves to be more productive. It is possible that the high goals and expectations of the market culture lead employees to feel they are never fully productive, whereas the employee-oriented environment of the clan culture makes employees believe they are productive. A second possible explanation is that the high stress from the market culture actually hinders employee productivity. Research has identified a link between job stress and productivity, with employee productivity being adversely affected by levels of job stress (Naqvi, Khan, Kant, & Khan, 2013), which offers support for this explanation.

Overall, our findings support existing research, which has shown that employees in clan cultures have the lowest job stress, highest enjoyment of work, and highest productivity; and that employees in market cultures show the opposite. Although our findings on the hierarchy and

adhocracy cultures are slightly different from previous findings, mean differences were slim, which suggests results are still inconclusive.

Qualitative analysis. The question on what changes UNBC could make to improve overall employee productivity showed emerging themes, the greatest of which was to improve teamwork, collaboration, and coordination. UNBC employees most commonly voiced desires fitting with aspects of the clan culture, yet this culture was the least commonly identified in the survey. It is apparent that UNBC employees want increased flexibility, cooperation, and communication, as well as shared goals and values. All three themes represent characteristics of the clan culture, wherein flexibility, cooperation, open communication, and shared values are all known to represent the clan culture. However, flexibility also shows overlap with the adhocracy culture. Moreover, the characteristics UNBC employees identified as being detrimental to productivity, such as autocratic environments, did not fit with the clan culture but may be characteristic of the market culture. This suggests that a majority of UNBC employees do not enjoy working in other culture types as much as they do the clan culture. There was little discussion on aspects of the hierarchy or adhocracy cultures, indicating these cultures may represent a middle ground in terms of employee preferences for productivity.

These aforementioned findings could be used by UNBC (and other organizations) to aid in organizational change efforts and the development of procedures to increase the employee workplace experience (Rothwell, Stavros, Sullivan, & Sullivan, 2009). Although hierarchy cultures might be necessary for the smooth functioning of universities, strategic planning paired with educational and team-building activities could be used to increase flexibility, a common vision, and cooperation at UNBC. This may help incorporate aspects of the clan culture (such as communication and cooperation) into the UNBC workplace as employees appear to desire.

When it comes to shifting organizational culture dynamics, it is often helpful to begin with a needs assessment, along with dialogue between management and employees on what outputs they would like to see from change efforts (Aguinis & Kraiger, 2009), which for UNBC was flexibility, shared goals, and cooperation. Following these steps, a schedule of educational sessions and activities could be set up to address common goal setting, problem-solving techniques, human relations, and clarification of roles and policies (Aguinis & Kraiger, 2009; Klein et al., 2009). This could be accompanied by supervisory training to cover details on creating a dynamic organizational culture to both maximize organizational procedures and productivity, while also maximizing the employee experience through team building.

Practical and Social Implications

Overall, the results of our study offer strong support to show that organizational culture influences employee stress, self-perceived productivity, and enjoyment of work; and that gender does not influence these three variables. Our study also provides valuable information that the dominant type of organizational culture at UNBC is the hierarchy culture. Knowledge gained from this research offers some practical implications. For instance, organizational leaders (e.g., managers, CEOs) can use our findings as a warning to be conscientious of how organizational culture can affect the behaviour (productivity) and feelings (stress; enjoyment) of employees. Organizational leaders should be cautioned about the threats of running a heavily market-oriented environment and should not assume that all employees can work under this type of culture. Instead, if achievement and competition are necessary, organizations could combine aspects of other cultures with the market culture to minimize negative outcomes. Additionally, organizational leaders should be aware of the potential benefits of fostering a clan-based work environment. For instance, findings that employee stress is lowest, and enjoyment and

productivity are highest in the clan culture suggest organizations should focus on communication, cooperation, and employee wellbeing. Finally, the present study offers ways for managers to assess organizational culture and stress, productivity, and enjoyment in their own organizations. Although existing assessment instruments are quite long and cumbersome, the instrument used in this study might be more feasible for use in day-to-day settings.

It can be suggested that instead of ignoring organizational culture, employers should use this new knowledge to their advantage to build successful workplace environments. This practice could lead to an increased application of research and a greater understanding of how organizations, specifically universities, can decrease employee stress, and increase employee self-perceived productivity and enjoyment of work. The results and knowledge gained from our study can be used to inform and shape organizational change.

Limitations

Limitations of this study include the self-report nature of the measures and the single measure of organizational culture used in the analyses. The measure used merely provides information on perceived organizational culture, which may not line up with the actual type of culture that was present. This could be further confirmed with the use of an organizational culture instrument such as the OCAI.

Secondly, the predominantly female sample could be considered a limitation. Although only 54 participants identified as being male, and 131 female, it is important to note that the gender distribution of the sample matches that of the UNBC employee population. Out of the 185 participants who disclosed their gender, over 29% of participants were male. At the time of survey dissemination, there was roughly a 26% male staff, which makes gender a small limitation.

Thirdly, research findings may not be generalizable to populations outside of Canada, or even outside of a university environment. It is possible that different results and influences of organizational culture would emerge across different industries.

Fourthly, we had unequal sample sizes in our MANOVA analyses for both gender and organizational culture. Although this can pose the risk of decreased interpretation (Tabachnick & Fidell, 2013), MANOVA analyses are quite robust to unequal sample sizes if other assumptions are met, and if the smallest group is four-to-five times larger than the number of variables included in analysis (Poulsen & French, 2008). Although one should be cautious when working with unequal sample sizes, as we passed MANOVA assumptions and met unequal sample size conditions, we do not view this as a major limitation of our study.

Finally, this study did not explore a fit perspective, which measures personal characteristics, to organizational culture and workplace outcomes. It is possible that the results obtained on organizational culture and stress, productivity, and enjoyment may be moderated by the fit between personal attributes and those of the organization. As studies have found the fit between individual characteristics and organizational attributes can predict job satisfaction and commitment (O'Reilly, Chatman, & Caldwell, 1991), it is important for future research to explore the combination of fit perspectives with culture perspectives.

Future Research

In addition to addressing the above limitations, future studies could expand upon the present findings by doing the following. First, our study was conducted in a Canadian university setting, among English-speaking employees. Future studies could investigate whether such results are seen among other Canadian organizations, in other countries, and even among university faculty as opposed to university staff. This could improve the generalizability of

results. Second, it would be informative to examine the role other variables (e.g., area of employment) play in this relationship between culture and the dependent variables. Other factors might interact with organizational culture to influence employee stress, productivity, and enjoyment of work. Organizational culture could be quantitatively studied across various areas of employment within a university (or other organization) to determine whether all areas of a university such as UNBC tend to embody a hierarchy culture or whether there are different patterns of culture identification across sectors of work. Third, replication studies should be conducted to determine validity of the measure used, and reliability of results. Finally, as stated in the limitations section, taking a person-organization fit perspective could increase the value of present research and expand on knowledge in the field.

Conclusion

In summary, the present study advances existing knowledge in the following ways: First, by exploring organizational culture in a Canadian institution, new insight is provided into how organizational culture influences employee stress, self-perceived productivity, and enjoyment of work. It was found that the hierarchy culture was the most commonly identified, and that organizational culture, but not gender, significantly affects these three dependent variables. Employees who identified working in a clan culture had the lowest stress symptoms, and highest enjoyment of work and self-perceived productivity; those in the market culture reported the opposite. Overall, it seems that work-related stress levels were the most strongly influenced by organizational culture.

These unique findings expand on existing research by studying a Canadian organization, exploring specific variables such as stress, and examining gender and organizational culture.

Second, this study offers a fast and, what appears to be, appropriate assessment measure to be used in organizations.

Third, the knowledge gained from our study can be used to inform organizational change efforts. For instance, results suggest that fostering employee wellbeing, cooperation, and loyalty are pertinent to having a healthy, productive, and flourishing organization for employees to work in. Furthermore, organizations could use this information to recognize certain aspects of the market culture that can hinder workplace effectiveness and try to minimize the occurrence of such practices. Results add to the limited body of research on organizational culture in Canadian workplace settings and also offer insight into the management of UNBC.

Overall assessment of organizational culture

1. In your opinion, what is valued the most in this organization? Rank order with the most important being 1 and the least important being 5.

    ☐ Hard work/productivity

    ☐ Teamwork

    ☐ Employee happiness

    ☐ Loyalty

    ☐ Fairness

2. Do you feel you are treated fairly at your place of work?

--------1--------------2--------------3-------------4--------------5--------
  Not at all   Rarely   Sometimes   Often   Always

3. Does your workplace value achievement?

--------1--------------2--------------3-------------4--------------5--------
  Not at all   Rarely   Sometimes   Often   Always

4. Does your workplace value cooperation among colleagues?

--------1--------------2--------------3-------------4--------------5--------
  Not at all   Rarely   Sometimes   Often   Always

5. How democratic is your work environment?

--------1--------------2--------------3-------------4--------------5--------
  Not at all   Hardly   Somewhat   Mostly   Completely

6. Describe the focus/orientation of your workplace? (Select the one that most applies)

☐ Family/employee well-being

☐ Innovation/invention

☐ Competition/achievement

☐ Structure and efficiency

Work-related stress

7. How often do you feel pressured to meet deadlines at work?

```
--------1--------------2--------------3-------------4--------------5--------
     Never      Rarely    Sometimes     Often       Always
```

8. Do you feel you have enough freedom in what you do at work?

```
--------1--------------2--------------3-------------4--------------5--------
     None       Little      Some       A lot    A great deal
```

9. How often do you feel you have the support of your supervisor(s)?

```
--------1--------------2--------------3-------------4--------------5--------
     Never      Rarely    Sometimes     Often       Always
```

10. How often during the past year have you felt anxious about your job?

```
--------1--------------2--------------3-------------4--------------5--------
     Never      Rarely    Sometimes     Often       Always
```

11. How frequently during the past year have you felt worn out because of your job?

```
--------1--------------2--------------3-------------4--------------5--------
     Never      Rarely    Sometimes     Often       Always
```

Enjoyment of work

12. Please rank the importance of these factors based on how much they contribute to your enjoyment of work. Rank order with the most important being 1 and the least important being 7.

☐ Control over work

☐ Fit between work and personal values

☐ Relationships with coworkers

☐ Salary/benefits

☐ Work tasks

☐ Work hours/schedule

☐ Feeling appreciated by supervisor/s

13. How comfortable are you with your coworkers?

--------1------------------------2--------------3--------------------------4--------------5-------
Not at all comfortable   Rarely   Somewhat comfortable   Often   Always comfortable

14. How satisfied are you with the leadership style of your immediate supervisor?

--------1------------------------2--------------3-------------------4--------------5-------
Not at all satisfied   Rarely   Somewhat satisfied   Often   Always satisfied

☐ Not applicable (I do not have an immediate supervisor)

15. How satisfied are you with the organizational culture of UNBC?

--------1--------------------------2-------------------3----------4------------------5-------
Not at all satisfied   Rarely   Somewhat satisfied   Often   Always satisfied

16. Do you enjoy going to work?

--------1---------------2----------------3--------------4-------------5--------
Not at all   Rarely   Sometimes   Often   Always

Productivity at work

17. Do you feel your work environment brings out your highest productivity?

--------1--------------2----------------3--------------4-------------5--------
  Not at all   Rarely   Sometimes   Often   Always

18. How satisfied are you with your salary?

--------1----------------------2--------------3-------------4--------------5--------
  Not at all satisfied   Rarely   Somewhat   Mostly   Very satisfied

19. What changes to the organizational culture of your workplace would increase your

productivity?

_____

_____

_____

Demographic variables

20. What is your age? (Select one)

    ☐ Under 20

    ☐ 20-29

    ☐ 30-39

    ☐ 40-49

    ☐ 50-59

    ☐ 60+

21. What is your gender? (Select one)

    ☐ Male

    ☐ Female

22. How many years have you worked at UNBC? (Select one)

☐ 4 months-4 years

☐ 5-9 years

☐ 10-14 years

☐ 15-19 years

☐ 20+ years

23. How would you rate your overall health? (Select one)

☐ Poor

☐ Fair

☐ Good

☐ Excellent

24. What is your area of employment/work at UNBC?

_____

25. What is your annual salary level working at UNBC? (Select one)

☐ Under $30, 000

☐ $30-39, 000

☐ $40-49, 000

☐ $50-59, 000

☐ $60-69, 000

☐ $70-79, 000

☐ $80, 000+

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