

***What is it that satisfies faculty?:
Rank as a consideration in factors related to job satisfaction***

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Introduction

“Faculty members are rarely satisfied with their own institutions. They see administrators as incompetent, communication as poor, and their influence as declining. This discontent with their institutions is in stark contrast to their satisfaction with their intellectual lives, the courses they teach, and their collegial relationships.”

(Johnsrud & Rosser, 2002, p. 518)

Despite the frustrations encountered in their jobs, those who teach, participate in research, and provide service to their communities as higher education faculty find satisfaction with their work.

Though there have been recent calls for increased accountability in the higher education sector, such as the Bush Administration’s Spelling’s Commission on the Future of Higher Education, colleges and universities have enjoyed a relatively high level of respect and people continue to seek post high school degrees in large numbers. At the same time, the supply of new faculty is decreasing in areas such as science, math, nursing, and special education (Berlin & Sechrist, 2002; Pion, Smith & Tyler, 2003). How will the higher education community fill the positions vacated by retiring faculty? The traditional methods of retention and recruitment will be critically important as the shortage of qualified faculty increases in tandem with increased demand. A logical way to retain faculty is to create a satisfactory work environment.

Salary enticement can serve as a recruitment tool. It is also one factor in faculty retention as it factors into job satisfaction. However, as the recent economic downturn has taught university administrators, there is not always enough flexibility in the budget to increase the salaries of faculty. The most recent version of the American Association of University Professors’s annual Report on the Economic Status of the Profession (2009) is filled with projected bad news in the coming budget cycle of many states that will negatively impact the funding sources of colleges and universities. The authors foresee potential hiring freezes, benefit cuts, dismissals and possible furloughs as colleges and universities deal with decreased funding from the states. With less flexibility in salary and benefits

budgets, higher education decision makers must be creative in developing appealing workplaces in order to recruit and retain quality faculty in times of budget strain. In this environment, understanding the factors that lead to faculty job satisfaction is crucial.

Traditionally, when one thinks of a faculty member at a college or university, one may picture a tenured or tenure-track person at the rank of assistant professor, associate professor, or professor. However, given higher education's tripartite mission of teaching, research, and service, there are a number of other professionals at colleges and universities that perform job duties related to this mission who could be considered faculty-like, especially those who teach. The National Survey of Postsecondary Faculty (NSOPF) conducted by the National Center for Education Statistics includes instructors, lecturers, and others considered faculty by their institution, but with titles other than assistant professor, associate professor, and professor, in their national survey of postsecondary faculty. To fully understand the factors related to the overall job satisfaction of faculty and those who perform faculty-like duties at institutions of higher education, one must survey all those who fit the job description, and not just those who are tenured or on the tenure track. Though some studies on faculty job satisfaction have focused on tenured and tenure-track faculty, (Ehrenberg, Kasper, & Rees, 1991; Olsen, Maple, & Stage, 1995; Smith, Anderson, & Lovrich, 1995; Johnsrud & Heck, 1998), others have also included job titles such as instructors, lecturers, and other faculty-like employees of an institution (Kerlin & Dunlap, 1993; Nienhuis, 1994; Johnsrud & Rosser, 2002; Rosser, 2004), this study follows the lead of the latter group of researchers as it seeks to uncover the differences in factors related to job satisfaction among different types of faculty-like groups at one research intensive, doctoral degree granting institution in order to present a picture of these differences for the enhanced understanding of administration and faculty alike.

Theoretical Framework

Faculty Satisfaction

A review of the literature indicates a general satisfaction by faculty with their work lives (Kerlin & Dunlap, 1993; Boyer et al, 1994; Johnsrud & Heck, 1998; Johnsrud ,2002). However, satisfaction with specific areas, such as compensation, can become more or less important to overall job satisfaction due to external pressures on higher education as a whole. Perennial issues of special concern seem to be salary and relations with institutional administration (Kerlin & Dunlap, 1993), and strength of chair and department relations (Johnsrud & Heck, 1998).

Researchers have explored faculty satisfaction in a number of ways, including change over time (Johnsrud & Heck, 1998), relation to turnover and intention to leave (Ehrenberg et al, 1991; Tamada & Inman, 1997; Dee, 2002; Johnsrud & Rosser, 2002; Rosser, 2004), relation to stress factors (Lease, 1999; Smith, Anderson, & Lovrich, 1995), the role of the department chair (Nienhuis, 1994; Miller et al, 2001), gender and minority differences (Tack & Patitu, 1992; Olsen, Maple, & Stage, 1995), and the relationship of discipline-specific factors (Xu, 2008). Johnsrud (2002) summarizes the goals of the faculty work life literature and presents a framework for studying the topic, with organizational and individual characteristics feeding into the quality of work life and attitudinal and behavioral outcomes projecting out. This study is primarily concerned with attitudinal outcomes in that the major outcome under consideration is overall faculty job satisfaction, what Johnsrud refers to as a Group 2 study.

A number of the authors cited above recommended follow-up studies in their conclusions, including Olsen, Maple, and Stage's (1995) suggestion to conduct a faculty satisfaction study in a homogeneous environment, such as a doctoral-degree granting institution, and Johnsrud and Rosser's (2002) suggestion for an institution to conduct its own measure of faculty members' perceptions of their satisfaction with their institution. The research summarized in this paper is an institution-specific study designed to answer this call to research the factors associated with faculty satisfaction. It is also

intended to obtain useful data for the administration of the University under study in determining the factors that impact satisfaction of faculty of differing ranks.

Beyond the call to study the factors related to overall faculty job satisfaction in a homogenous group, this study also seeks to present those factors not only in regard to tenured and tenure-track faculty, but in those who are faculty-like; those whose primary duties may lie in one or more parts of the tripartite higher education mission of teaching, research, and service. As Johnsrud (2002) points out, institutions of higher education have not traditionally concerned themselves with human resource issues. The studies highlighted above have delved into the topic of faculty job satisfaction, and some included instructors in their general conclusions about faculty, but none paid particular attention to the differences among the ranks of both faculty and faculty-like professionals employed in higher education. This study seeks to understand how these groups differ. This understanding may help higher education administrators better work with the people who are teaching, researching, and providing service at their institution and understand what it is that makes them want to return day after day as a faculty member, instructor, or other academic professional. Awareness of different factors related to satisfaction for different ranks of faculty may assist administration in targeting professional development opportunities to those who would most benefit from them. Understanding what factors lead to satisfaction among faculty-like employees, such as instructors and other academic professionals, may help University administration further understand what draws people to these jobs rather than tenure-track positions or careers outside of academe, which may lead to improved recruitment and retention of these individuals.

Factors related to faculty satisfaction

Demographic Factors

Previous research indicates a relationship between job satisfaction and a number of demographic variables. Possible correlations between certain faculty characteristics and satisfaction

factors also warrant inclusion of certain demographic characteristics in the research model. Following is a description of the demographic characteristics most cited in the faculty satisfaction literature, which were subsequently considered in this study.

Gender – There is evidence that male and female faculty react differently to stress and strain on the job (Lease, 1999) and have different considerations related to job satisfaction (Olsen, Maple, & Stage, 1995). Olsen, Maple and Stage also indicated a confound between both female and minority status and academic rank, as a smaller percentage of women and minorities have obtained the rank of professor. Gender, therefore, may have an impact on the results of a study of faculty satisfaction, particularly since some disciplines remain dominated by male faculty.

Ethnicity – As with gender differences in satisfaction considerations, research has also shown differences based on minority status (Olsen, Maple, & Stage, 1995). Alarm has been expressed for the future of minority faculty based on their lower level of satisfaction as compared with their Caucasian peers (Tack & Patitu, 1992). As mentioned above, the smaller percentage of minority faculty in the rank of professor may impact the findings of any study due to lower sample size.

Years at institution – Since rank is somewhat indicative of years of work as a faculty member due to the tenure process, it is important to account for the number of years a person has been employed at the University. Precedent also exists in the literature on faculty satisfaction for including the number of years employed at the current institution in the research model (Dee, 2002; Xu, 2008). Factors related to overall job satisfaction may change with the years of service to an institution, which may manifest themselves as differences due to rank, since faculty generally move up the ranks the longer they stay at an institution, with the majority of time spent in the rank of professor. Hagedorn (1994) also found that the proximity to retirement can have an impact on the job satisfaction of faculty, and those who are closer to retirement would often be those with more years of service to an institution.

Tenure status – Tenure status was included in the regression model of faculty satisfaction constructed by Xu (2008) and was mentioned in the models presented by others. It was included in Xu's model due to its identification as an influential factor in faculty turnover and the variety in employment experiences of tenured and non-tenured faculty. As previously mentioned, tenure status also presents a possible confounding effect with gender and ethnicity due to the lower numbers of women and minorities who have achieved the rank of professor.

Salary – Salary, measured as gross pay, should be considered in any study of faculty job satisfaction because there is often a wide spread in salary among the faculty of a university and that spread may be disproportionally shared across different disciplines which may or may not impact the overall satisfaction a faculty member has with his or her job. In this paper, salary is considered a demographic factor since it is measured in dollars. It is distinguished from pay, summarized later in this paper, as that construct is measured in terms of satisfaction, rather than dollars earned.

Work Life Factors

Different models of work life factors exist in the faculty satisfaction literature (Smith, Anderson, & Lovrich, 1995; Johnsrud, 2002; Xu, 2008). The work life factors used in this research study were chosen based on their inclusion in multiple studies in the faculty satisfaction literature, and also based on pragmatism. In exploring the possible variables extractable from the PULSE survey data, explained in detail later in this paper, there are a limited number of questions and indices that can be utilized in a study of the factors related to faculty satisfaction. The following work life factors represent variables included in the PULSE survey that have been linked to faculty satisfaction in previous studies. Inclusion was also based on factors having the greatest potential for impact by policy changes and other administrative action. Since a major purpose of this study was to inform University administration of the job satisfaction factors important to the different groups of faculty, factors that can be affected by change are the factors of most interest to University administration.

In particular it should be noted that variables for both satisfaction with university support and satisfaction with students are missing from the list of variables used in this analysis. Though the research literature indicates that these factors are related to overall faculty satisfaction, and questions related to these variables are included in the PULSE survey, the non-validated index containing items related to these two variables contains twenty-five items and these items have not been separated into indices. A factor analysis should be completed to obtain indices for these variables before they are included in statistical analyses of PULSE survey data.

Pay – Previous research has shown a link between faculty salaries and job satisfaction (Smart, 1990; Kerlin & Dunlap, 1993; Boyer et al, 1994; Xu, 2008). Kerlin and Dunlap (1993) found evidence of frustration with resource inequities among faculty in their study, and anecdotal and interview data from their research support the connection between faculty views on salary and morale. But compensation of faculty is not merely measured in dollars and cents. Therefore, assessing the relationship between salary and overall job satisfaction must be expanded beyond monetary reimbursement for work completed. Faculty who make the same amount of money may have varying levels of satisfaction with their compensation, so it is important to understand the relationship between various pay satisfaction measures and overall job satisfaction, including the level and quality of benefits received.

Department Chair – The importance of the department chair in faculty job satisfaction has been previously documented in the literature (Kerlin & Dunlap, 1993; Nienhuis, 1994; Johnsrud & Heck, 1998; Miller et al, 2001). The quotation that introduced this paper highlighted the satisfaction faculty have with collegial relationships and the frustrations they have with university administration. Depending on the hierarchy of an institution, the department chair can fall into either category, which makes them an integral part of faculty satisfaction. Nienhuis (1994) found a difference in the level of satisfaction with department chair support between the faculty ranks of assistant professor and professor and associate professor, with associate professors indicating a lower level of satisfaction. Johnsrud and Heck (1998)

discuss the fact that faculty have the most confidence in the administrators in closest relation to them. With the department chair being the closest administrator to faculty, it is particularly important to assess the relationship his or her support has with the overall job satisfaction of faculty.

Coworkers – Relationships with colleagues also play a role in job satisfaction for faculty (Boyer et al, 1994; Johnsrud & Heck, 1998). Boyer and his colleagues found that, even internationally, faculty report a high level of satisfaction with their relationships with colleagues. And, once again, Johnsrud and Heck emphasize the importance of collegial relations with coworkers in faculty finding satisfaction with their jobs.

Job Security– Many studies point to the relationship between job security and overall job satisfaction (Olsen, Maple, & Stage, 1995; Lease, 1999; Rosser, 2004; Xu, 2008). However, job security may be viewed quite differently by tenured faculty than by those on the tenure track or those who have no tenure system available to them. The tenure process lends a level of security to a person's position that non-tenure track faculty-like instructors and academic professionals may not have as part of their employment at an institution. Therefore, faculty at different ranks may assign different levels of importance to job security in relation to their overall job satisfaction.

Impacts of Job on Life Outside of Work – The impacts that a person's job has on his or her life outside of work is an important aspect of job satisfaction (Johnsrud & Heck, 1998; Johnsrud & Rosser, 2002). Johnsrud and Heck include Personal Time in the Professional Priorities section of their model of Faculty Worklife. This section of their model attempts to present the "extent to which faculty perceived they had been adequately prepared for the time pressure as a faculty member" (p. 545). Faculty members may find themselves working unusual hours as they are assigned to teach classes at night or on the weekends, are asked to attend functions outside of the traditional nine to five work day, answer student emails at all hours of the day and evening, and complete the vast variety of work inherent in their lives in higher education. Therefore, newer faculty must learn quickly how to find a balance

between work and home lives that is acceptable to them and those with whom they interact. Because expectations are likely to change over the course of a person's career, both at work and home, it is possible that faculty of different ranks will view the relationship between this factor and job satisfaction differently.

University Characteristics - Support for innovation, such as new ideas and processes, can be related to overall satisfaction with an organization, with higher levels of support for this factor leading to higher levels of job satisfaction (Dee, 2002). Johnsrud and Heck (1998) highlight the importance of administration's support for faculty autonomy and the critical balance that must be struck between accountability demands from outside a university and protection of faculty control of their own work. Similarly, in their study measuring factors related to faculty intention to leave, Johnsrud and Rosser (2002) present the construct of administrative relations and support and indicate its relation to faculty job satisfaction. To these authors, administrative relations and support includes the confidence of faculty in leadership and the advocacy provided to faculty for their work.

PULSE Survey background

The PULSE survey began as an initiative to better understand whether faculty and staff at the University of Minnesota generally like their jobs. The group charged with measuring the general job satisfaction of employees of the University chose to take the approach of surveying the multiple facets of satisfaction rather than simply measuring the overall satisfaction of faculty and staff since the human resources office and others in the University community were seeking data that would support actionable changes to improve satisfaction. Many of the questions, particularly those that make up the various indices on the survey, are based on indices created by human resources professionals. Other survey items were added to answer specific queries of interest to the group. Following is a short description of the background research related to the specific PULSE survey factors used in this study.

Satisfaction with Pay Sub-indices – The sub-indices measuring satisfaction with benefits, pay raise, pay level, and pay structure are all based on the Pay Satisfaction Questionnaire created by Herbert Heneman and Donald Schwab (1985). The factors associated with the questionnaire were confirmed by Mulvey, Miceli and Near (1992) and its dimensions were validated for use as an assessment of pay satisfaction by Judge and Welbourne (1994). For the 2008 version of the PULSE survey, the University trimmed questions for a number of reasons, including a desire for an increase in response rates, and subsequently a number of items were removed from the overall pay index. The decision as to which items to remove was made using factor analysis, whereby the item in each sub-index with the lowest factor loading was removed from the PULSE survey.

Satisfaction with Department Chair Support Index – The index measuring satisfaction with support from one’s supervisor is based on work by Robert Eisenberger and colleagues (2002). These researchers found that an employee’s perception of supervisor support was positively related to change in perceived organizational support. In addition, they found a possible relationship between perception of supervisor support and employee retention. There is some challenge in translating this work to higher education faculty as it is sometimes difficult to define one’s supervisor in the academic setting. Some faculty may view the chair of their department as more of a colleague than a supervisor, but the chair, by definition, does have certain administrative duties, and his or her performance of those duties will impact faculty within the department. Therefore an understanding of the level of satisfaction with this relationship is important to measure.

Satisfaction with Coworkers /Job Security Indices – Both of these indices were taken from the abridged version of the Job Descriptive Index (Russell, Spitzmuller, Lin, Stanton, Smith, & Ironson, 2004). This tool was selected by the University as the basis for the indices included on both the faculty and staff versions of the PULSE survey due to its brevity and the applicability of the questions across a broad level of jobs as well as the readability level of the items. As mentioned previously, tenure in itself

can be viewed as a form of job security. Therefore it was decided that tenured and tenure-track faculty would receive a version of the PULSE survey that included specific questions about the tenure process in place of the job security index. Faculty-like employees received a version of the PULSE survey that included the job security index, but not the tenure questions.

Work/Family Conflict Index – The index measuring the effects of work on home life is based on the Work-Family Conflict Scale developed by Richard Netemeyer, James Boles, and Robert McMurrin (1996). An independent validation study of the scale was completed by Boyar, Carson, Mosley, Maertz, and Pearson (2006). The authors define work-family conflict as conflict in which the amount of time devoted to one's job, the level of strain created by the job, and the demands of the job interfere with the performance of responsibilities related to one's family. This strain on one's ability to perform family responsibilities is likely to cause dissatisfaction with one's job, so a higher score on this index on the PULSE survey is likely to be negatively correlated with overall job satisfaction. The extent to which this factor is related to overall satisfaction for the different ranks of faculty remains to be seen.

University Characteristics – The set of questions measuring satisfaction with the characteristics of the culture of the University is not based on an externally existing and validated scale. The questions in this index were selected from text included in the University's mission statement as well as transcripts from focus groups created during the University's strategic planning process of 2004-2005. Questions presented in this category include support in efforts to: be innovative, perform high quality work, provide high quality service, be collaborative and have a team orientation, adapt and change, promote efforts that work towards the good of society, and others. Future research on the PULSE survey may eventually yield an index for this set of questions. For the purposes of this study, the mean score for the set of questions for each respondent was calculated and used as a proxy for an index score.

Research Objective

The preceding review of the literature on factors related to the overall job satisfaction of faculty in higher education shows that there are a number of established variables to consider when measuring satisfaction. The purpose of this study was to build on this body of research by exploring the differences in factors related to overall job satisfaction by faculty rank. Because faculty from one institution were used in the study and the data source included results from a survey taken by only some of the faculty, generalizability of the findings may be limited. The findings of this study are meant to be utilized by the administration of the University of Minnesota to further understand the job satisfaction factors of the faculty. Therefore, this research study was designed to be practical and useful to a specific audience, but may also be helpful in furthering the general understanding of the issue.

Methodology

Data Source

Data for this study included the results of the PULSE survey completed by faculty at the University of Minnesota, Twin Cities Campus in the spring of 2008. Out of 3,671 faculty members who were provided the opportunity to take the survey, 1,253 completed it, for a response rate of 34.1%. A comparison of respondents and non-respondents on four demographic variables is presented in Table 1.

Table 1. PULSE Survey Respondents and Non-Respondents

	Total	Respondents	Non-respondents
% Male	64.0%	56.8%	67.7%
% Tenure/T Track	60.4%	70.9%	54.9%
Age – Range	22-84	23-84	22-83
Age – Mean	48.15	49.1	47.6
Salary – Range	\$0-384,851	\$16,617-230,000	\$0-384,851
Salary - Mean	\$75,379.21	\$81,705.35	\$72,101.02

Based on these indicators, it is apparent that there are some demographic differences between the survey respondents and non-respondents. It appears that a smaller percentage of males responded to the PULSE survey than appear in the total population of faculty members at the University. Tenure

and tenure-track faculty appear to be overrepresented in the survey population as compared to their actual proportion in the total population of faculty at the University. This is also quite likely reflected in the slightly higher than average salary of the respondents as compared to the total population. The mean ages of faculty who responded to the survey appears similar to the mean age of faculty at the University. These demographic factors are only one measure of similarities and differences between respondents to the survey and the faculty population as a whole. While there appear to be some differences, it is unknown whether these differences indicate a biased sample. Because the PULSE survey is intended to be a census rather than a random sample of the population, it is possible that the responses of the 34.1% of faculty who did complete the survey are in some ways not representative of the faculty as a whole and this potential bias should be taken into consideration when reviewing the results of the study.

Variables

The dependent variable under consideration was the **overall job satisfaction** of the respondents to the PULSE survey. A number of possible questions from the survey could have been used to represent this concept, including: "Overall, I am satisfied with my employment at the University", "Would you recommend employment here to a friend or colleague?", and "If I were doing it again, I would accept a position at the University." One index also offered a possible option to represent overall job satisfaction. This was an index that asked respondents to answer yes, no, or not sure/uncertain to five items listed after the prompt, "Do the following items describe your work most of the time?"

The question that was selected to provide the data for the dependent variable of overall job satisfaction was the question, "Overall, I am satisfied with my employment at the University." Not only did this question best represent the concept under consideration based on its wording, but it was also measured on a 5-point scale of agreement, where one of the other possible questions and the index under consideration were both measured on a yes/no basis that was coded on a 0-3 scale, with no

coded as 0, not sure/uncertain coded as 1, and yes coded as 3. A level of agreement scale for the overall job satisfaction question was preferable for use as the dependent variable. Recommendation of employment, accepting a position again, and overall satisfaction with work were not deemed sufficient indicators of the concept. However, it is clear from analysis that these four measures are strongly related to one another, as a bivariate correlation matrix of the factors yielded values greater than .7 between each pair of the three questions listed above. (Correlations between these questions and the satisfaction with work index ranged from .48 to .55).

The independent variables described above in the section on the PULSE survey included:

Demographic variables:

- **Gender:** dichotomous, measured as male or female
- **Ethnicity:** dichotomous, measured as white or non-white due to the relatively small sample sizes of individual ethnicities and persons self-reporting as mixed ethnicity
- **Years at Institution:** self-reported on the survey, measured to the half-year
- **Tenure Status:** dummy coded on three levels - tenured, on tenure track, and not on tenure track/without faculty status
- **Salary:** provided by human resources, measured to the cent

Other Variables:

For the variables described below, an index was created by calculating the mean of each respondent's answers to the questions contained in that set of questions. For the satisfaction with coworkers and job security indices, the following weights were used in the index calculation: Yes=2, Not sure/Uncertain=1, No=0. All others were given the value of the selection they chose on the relative scale (5-point or 7-point.)

- **Satisfaction with Pay:** The index for pay satisfaction on the PULSE survey included ten questions measured on a 5-point scale from very dissatisfied to very satisfied. Questions

referred to salary, benefits, raise, pay policy and structure, and salary relative to colleagues. To further understand the pay factors and how they relate to overall job satisfaction, four sub-indices were calculated and used in this analysis. From the ten questions related to pay, two questions made up the sub-indices: **Satisfaction with Benefits**, **Satisfaction with Pay Level**, and **Satisfaction with Pay Raise**. Three questions made up the sub-index **Satisfaction with Pay Structure**. These four indices were created using factor analysis by researchers interested in the Pay Satisfaction Questionnaire, summarized earlier in this report.

- **Satisfaction with Support from Department Chair/Responsible Administrator:** This index included eleven questions related to the supportiveness of the respondent's department chair on factors including career goals, professional development, work-home life balance, and others. The questions were measured on a five-point agreement/disagreement scale, ranging from strongly disagree to strongly agree.
- **Satisfaction with Coworkers:** This index included five descriptive items that required the survey respondent to answer yes, no, or not sure/uncertain to items that described the people he or she works with most of the time.
- **Job Security:** The index for perceptions of job security was similar to the satisfaction with coworkers index. It included six questions that required the survey respondent to answer yes, no, or not sure/uncertain to items that described the future of his or her job with the organization. As mentioned previously, this index was not included in the surveys taken by assistant professors, associate professors, and professors as their surveys included questions about their satisfaction with the tenure process instead. Therefore this index score was included in the analyses for instructors and academic professionals only.
- **Work-Family Conflict:** This index included seven questions related to the extent to which a person's work life interferes with his or her home life. Respondents were asked to indicate

their level of agreement/disagreement with the questions on a seven-point scale ranging from strongly disagree to strongly agree.

- **University Characteristics:** An index of innovation and support did not exist in the PULSE survey, but a set of questions related to these areas was included. An index was created using these twelve questions in the same way the other indices were created. This index used a five-point agreement/disagreement scale ranging from strongly disagree to strongly agree.

Analytical Method

Due to the exploratory nature of this study, it was determined that a stepwise approach to multiple linear regression was the appropriate method of analysis. The creation of individual models for the different ranks of faculty allowed comparison across groups in regard to the factors most related to overall job satisfaction. Though there was some indication from previous studies which factors were most important to faculty as a whole, given the fact that the design of this study involved faculty at a single institution divided by rank and survey data that, though portions of it have been validated for use in similar situations, was relatively untested in regression analyses, the researcher felt it was best to allow the factors to enter the equation based on statistical analysis. It was important to understand whether the faculty-like groups were different from the tenured and tenure track faculty and from one another. The stepwise approach to regression allows the computer software to select the strongest predictor first, the next strongest second and so on until the remaining variables are not statistically significant at the .05 level (Nardi, 2006).

Limitations

As mentioned previously in this paper, this study was designed as an exploration of the factors related to faculty job satisfaction at a single doctoral degree-granting institution. The PULSE survey was designed as a census to gather the opinions of all faculty at the University. Due to the 34% response

rate to the survey, it is unclear whether the survey results represent the true feelings of all members of the faculty. Female faculty and faculty with tenure or who are on the tenure track are overrepresented in the respondents to the survey as compared to their relative percentage in the faculty population as a whole and it is unclear how this may impact the results of the analysis. Due to these limitations, not only should caution be taken when generalizing the results of this study to the faculty at the University as a whole, it most certainly should be taken when generalizing the findings to the larger population of higher education faculty. Multiple linear regression is best completed on data that has been randomly sampled from a population. This random sampling allows for generalizability of inferences based on the analyses. Since the data used in this study was provided only by those faculty who completed the PULSE survey, generalization to higher education faculty is not appropriate. Further studies should be completed to test for replicability of findings before general statements are made.

A further limitation is the relatively small sample of instructors as compared to the other faculty ranks in the study. In a random sampling model, it is likely that this group would be oversampled to account for their fewer number as compared to other faculty groups. However, in a census survey situation, this is not possible. As mentioned previously, another limitation of this research is the lack of inclusion of the job security index on surveys taken by tenured and tenure-track faculty. The factor has previously been shown to be related to overall faculty job satisfaction, and therefore was included in the analyses for instructors and academic professionals, whose surveys included the index. It is impossible to accurately compare the resulting models, however, without having the variable available for inclusion in the models for assistant professors, associate professors, and professors. This is a serious limitation of the models comparison design of this study, but because of the potential importance of job security for the non tenure-track faculty groups included in the study, the researcher chose to include the variable for the groups for which it was available.

The research literature on factors related to faculty satisfaction is rich and varied. Due to the practical nature of this research study, it should be considered exploratory research within the context of a relatively well established framework. That is, the literature led the author to select particular factors for inclusion in the model, but the relationship of those factors to job satisfaction for faculty at various ranks at the University of Minnesota, Twin Cities Campus is what is specifically under exploration.

Results

A correlation matrix of the variables under consideration shows statistically significant, moderate, and positive correlations among the variables measuring different aspects of pay, which is not surprising. An overall index measuring satisfaction with pay was included in the PULSE survey, but the researcher chose to include the sub-indices in the analysis to determine which specific aspects of pay satisfaction were related to overall job satisfaction for the different groups of faculty. Other variables that were statistically significantly positively correlated with one another, though not as highly, included satisfaction with department chair support, satisfaction with coworkers, and university characteristics. This is also not a surprising finding as these are all variables that measure satisfaction with elements of the University community. Overall, other than those just mentioned, the variables under consideration did not show evidence of correlation. None of the variables were removed from the model due to high correlation.

Table 2. Variable Correlations

	Gen	Eth	Yrs	Sal	Ten	PayL	PayB	PayR	PayS	Dept	CoW	JSec	WFC	UMC
Gen														
Eth	-07													
Yrs	-14	-.18												
Sal	-21	0	.34											
Ten	-14	-.07	.47	.56										
PayL	.02	.04	-.04	0	0									
PayB	-.03	.01	.02	-.06	-.04	.37								
PayR	0	.03	-.01	-.02	-.01	.69	.33							
PayS	.02	.05	-.04	-.03	-.04	.65	.32	.62						
Dept	.04	-.01	-.01	-.05	-.04	.37	.21	.49	.42					
CoW	.02	-.02	.02	.03	0	.24	.21	.29	.26	.39				
JSec	-.01	.11	-.08	-.01	.01	.29	.08	.37	.26	.37	.13			
WFC	-.01	-.05	.13	.05	.04	-.09	-.05	-.09	-.16	-.07	-.03	-.06		
UMC	.03	-.02	.02	-.01	-.02	.34	.25	.43	.42	.67	.47	.24	-.12	

*Correlations in bold are significant at the .05 level.

The potential multicollinearity of the variables must also be considered when conducting a regression analysis. None of the variables in this study showed a problem with multicollinearity as all had a VIF value <10. (VIF values for the variables ranged from 1.0 to 1.812).

Five multiple regression models were created using stepwise multiple linear regression, one for each of the faculty ranks at the University. The only difference in the stepwise process among the five ranks was the variable job security, which was included only in the instructor and academic professional regression analyses, as those were the only two groups who were given that set of questions on the survey. Following are the resulting five models from the stepwise multiple linear regression analyses (variables listed in order of stepwise entrance into each equation):

Table 3. Model Summary – Academic Professional (N=147)

	R^2	ΔR^2	F_{chg}	sig_F
Sup Support	.240	.240	40.1	<.001
Pay Level	.296	.056	10.0	.002
W-F Conflict	.319	.023	4.2	.044

Table 4. Model Summary – Instructor (N=60)

	R^2	ΔR^2	F_{chg}	sig_F
Pay Level	.234	.234	7.028	.014
Job Security	.384	.149	5.334	.031

Table 5. Model Summary – Assistant Professor (N=275)

	R^2	ΔR^2	F_{chg}	sig_F
U Characteristics	.313	.313	106.2	<.001
Coworkers	.383	.070	26.4	<.001
Sup Support	.435	.052	21.3	<.001
W-F Conflict	.461	.026	10.9	.001

Table 6. Model Summary – Associate Professor (N=289)

	R^2	ΔR^2	F_{chg}	sig_F
U Characteristics	.341	.341	129.1	<.001
Coworkers	.393	.052	21.5	<.001
Pay Level	.419	.026	10.9	.001

Table 7. Model Summary – Professor (N=425)

	R^2	ΔR^2	F_{chg}	sig_F
U Characteristics	.363	.363	206.5	<.001
Benefits	.418	.055	34.1	<.001
Pay Level	.441	.023	14.8	<.001
W-F Conflict	.460	.019	12.4	<.001
Coworkers	.477	.017	11.7	.001

The first result of note from this analysis is the failure of the demographic variables shown by previous studies to appear in the stepwise multiple linear regression analyses for the faculty groups. Gender, ethnicity, years employed at the institution, tenure status, and salary failed to enter into the models at the .05 significance level. It is understandable that tenure status failed to appear in the faculty rank models as there is very little variation in the tenure status variable within each faculty group, with the exception of assistant professor and associate professor. It was included in the analyses due its historical inclusion as a variable in faculty satisfaction studies and to test for a relationship between tenure status and overall job satisfaction in ranks below professor.

Table 8. 2008 PULSE Survey Results (for Variables that Entered at Least One Regression Equation)

	Overall Job Sat	Pay Level	Benefits	Sup Support	Coworkers	Job Security	W-F Conflict	U Charac
All Faculty								
<i>Mean</i>	4.02	2.98	4.00	3.38	2.67	N/A	4.88	3.77
<i>SD</i>	.99	1.14	.82	1.00	.58	N/A	1.51	.86
Academic Professional								
<i>Mean</i>	3.88	2.92	4.03	3.46	2.65	.77	4.95	3.73
<i>SD</i>	.88	1.13	.79	.99	.58	1.01	1.50	.82
Instructor								
<i>Mean</i>	4.10	3.10	4.02	3.38	2.64	.58	4.80	3.88
<i>SD</i>	.88	1.15	.86	1.02	.61	.76	1.49	.84
Assistant Professor								
<i>Mean</i>	4.10	3.06	4.03	3.42	2.71	N/A	4.59	3.82
<i>SD</i>	.96	1.11	.80	1.03	.53	N/A	1.50	.86
Associate Professor								
<i>Mean</i>	3.91	2.93	4.00	3.34	2.63	N/A	4.97	3.70
<i>SD</i>	1.03	1.18	.85	1.04	.64	N/A	1.61	.95
Professor								
<i>Mean</i>	4.09	2.97	3.97	3.35	2.70	N/A	5.00	3.78
<i>SD</i>	1.03	1.14	.82	.97	.57	N/A	1.43	.80

*Note: all indices are measured on a 5-point scale, with the exception of Coworkers and Future of Job (scale from 0 to 3) and Work-Family Conflict (7-point scale). For all indices, the higher the score, the more positive the outcome, with the exception of Work-Family Conflict where higher scores indicate more conflict.

** Means in bold indicate significant factors based on multiple linear regression analyses.

University Characteristics

The predictor most strongly associated with faculty job satisfaction for the tenured and tenure-track faculty ranks was satisfaction with university characteristics. It is interesting to note that this factor appeared in the models for assistant professor, associate professor, and professor, but neither for academic professional nor instructor. Administrators most concerned with the overall job satisfaction of tenured and tenure track faculty should take note of the importance of this factor as it was the strongest predictor for the three ranks most often in the tenure system. Factors such as support for innovation, collaboration, and risk taking as well as support for the performance of high quality work, high quality service, and a sense of community appear to be important to tenured and tenure track faculty. These results should not lead the reader to assume that these same factors are not important to those not on the tenure track or in positions where tenure is not offered, but that there are other factors more important to them as related to overall job satisfaction. Knowing that tenured and tenure-

track faculty value the characteristics of the university at which they are employed helps administrators understand where to focus efforts to further improve job satisfaction. PULSE survey means for the satisfaction with university characteristics variables were 3.82 for assistant professors, 3.70 for associate professors, and 3.78 for professors on a 5-point scale from strongly disagree to strongly agree with the statement, "In my current work setting, I am supported in my efforts to:", with the scores for each question in the section averaged together to create an index score.

Pay Level

Satisfaction with pay level entered the stepwise regression equations of all ranks but assistant professor. More than satisfaction with pay benefits, pay raise, and pay structure, the level of pay a faculty member receives is important in predicting her overall satisfaction with her job. PULSE means for this index were 2.92 for academic professionals, 3.10 for instructors, 2.93 for associate professors, and 2.97 for professors. These means represent index scores on a 5-point scale ranging from very dissatisfied to very satisfied. Further analysis related to faculty's perception of pay level would be useful in determining who they consider to be their comparison group when assessing their satisfaction with this factor. This information might give those in charge of pay level decisions a more precise measure of salary range when conducting negotiations with new and returning faculty.

Coworkers

Satisfaction with Coworkers was shown to be an important factor related to overall job satisfaction for tenured and tenure-track faculty. This scale measured from 0 to 3, described earlier in this paper, requires the survey respondent to answer yes, no, or not sure to various descriptions of the people with whom he works and the index reflects general satisfaction with these coworkers. PULSE means for this index were 2.71 for assistant professors, 2.63 for associate professors, and 2.70 for professors, indicating relatively high satisfaction with coworkers for all three of these faculty ranks. These results indicate that satisfaction with coworkers is important to those likely intending to stay at

the University for a significant portion of their careers. The fact that these same faculty appear highly satisfied with their coworkers shows a positive indication of job satisfaction for these University faculty groups.

Work-Family Conflict

Level of work-family conflict entered the stepwise regression equations of academic professionals, assistant professors, and professors and was negatively correlated with overall job satisfaction for these ranks. This index is made up of questions about conflicts work creates with life outside of work. The questions are measured on a 7-point scale from strongly disagree to strongly agree. Scores closer to 7 indicate more conflict between work and home life. PULSE means for this index were 4.95 for academic professionals, 4.59 for assistant professors, and 5.00 for professors, indicating higher levels of work conflicting with the home lives of respondents.

Department Chair / Supervisor Support

Satisfaction with department chair support entered the stepwise regression equations of academic professionals and assistant professors. This index was created by taking the mean of each respondent's answers to eleven questions beginning with, "My department chair or responsible administrator:". The questions are measured on a 5-point scale from strongly disagree to strongly agree. PULSE means for this index were 3.46 for academic professionals and 3.42 for assistant professors. It is interesting to note that support from one's supervisor is an important factor in overall job satisfaction for assistant professors but not for associate professors or professors. This is perhaps the case because assistant professors are more likely to be newer faculty than the faculty in the other two ranks and therefore are possibly more in need of a helpful and interested supervisory relationship.

Table 9. Significant Standardized Beta Weights

	Academic P	Instructor	Asst Prof	Assoc Prof	Professor
Tenure		N/A			
Pay Level	.219	.460		.172	.184
Benefits					.149
Sup Support	.401		.280		
Coworkers			.249	.236	.149
Job Security		.387	N/A	N/A	N/A
WF Conflict	-.155		-.167		-.146
U Charac			.236	.425	.409

Based on the different variables that entered the stepwise regression equations for each group of faculty, it is clear that, for the respondents to the 2008 PULSE survey, the factors associated with overall job satisfactions do differ by faculty rank. For academic professionals, satisfaction with supervisor support, satisfaction with pay level, and level of work-family conflict were shown to be the significant factors related to overall job satisfaction. For instructors, only satisfaction with pay level and satisfaction with job security were significantly related to overall job satisfaction. Even the three ranks within the tenure/tenure-track system showed differences in which factors entered the regression equations. While it did not appear in the equations of the mostly non-tenure track ranks of academic professional and instructor, satisfaction with university characteristics was the factor that was first to enter all three tenure/tenure-track rank equations. Satisfaction with coworkers also appeared in all three equations, but after this factor, the groups diverged. While level of work-family conflict was a significant factor for both assistant professors and professors, it was not significant for associate professors. Satisfaction with supervisor support entered the equation for assistant professors, but was not a significant factor for associate professors or professors. However, both associate professors and professors indicated the importance of satisfaction with pay level while assistant professors did not and professors were the only group for which satisfaction with pay benefits was a significant factor related to overall job satisfaction.

Discussion/Implications

It is clear from the results of this study that, for faculty respondents to the 2008 PULSE job satisfaction survey, there is a difference in factors related to overall job satisfaction based on faculty rank. Understanding which factors are most critical to job satisfaction for each group may help University administrators better understand the job satisfaction of the faculty who work at the institution. Awareness of these differences can also highlight ways in which various programs and policy decisions may impact faculty on campus. Specific programs and policies may be developed to target the different faculty groups. As Miller, Jackson, and Pope (2001) found in their survey of department chairs, financial resources are often the greatest challenge an institution faces to retaining faculty. The preceding results highlight the numerous factors beyond salary that faculty groups consider when determining their overall satisfaction with their positions. Administrators and others concerned with retaining satisfied faculty should consider the following discussion when deciding where to spend faculty retention and satisfaction resources.

Specific Considerations by Rank

Academic Professional

The three factors shown to be statistically significantly related to the overall job satisfaction of academic professionals were satisfaction with supervisor support, satisfaction with pay level, and level of work-family conflict. Those employees categorized as academic professionals may have a variety of job titles and descriptions at the University, with lecturer and research associate the two examples given in the PULSE survey question related to academic rank. Given the variety of job titles fitting under the umbrella of academic professional, it is difficult to generalize the findings of the factors important to this group. Similar to instructors, who also had the satisfaction with pay level factor enter their stepwise regression equation, academic professionals are likely to view their level of pay as a statement of their

worth to the University. When the pay freezes forced by the current economic recession thaw, it will be important for administrators to remember that level of pay is an important factor for the overall job satisfaction of academic professionals. The tendency may be to use the increased budget dollars to retain tenured faculty with other job offers at the expense of those not on the tenure track. However, as their salaries are likely smaller than tenured faculty, it will be wise to spread the funds so as to retain as many faculty and faculty-like professionals as possible. Like their tenured and tenure-track colleagues, many academic professionals have skills valued outside of academe. Without the security of tenure, academic professionals may be easily lured to the corporate world by higher paying positions from companies less affected by the funding levels of the state.

Because they are completing some similar job tasks as tenured and tenure-track faculty, but do not have the same level of prestige, they may have added job pressures that impact their home lives, particularly those in this category who hope to obtain a tenure-track faculty position, as they would feel pressured to prove themselves in the field while simultaneously completing all the duties assigned to them as an academic professional. Finally, the importance of supervisor support is interesting to note for this group. Though the lecturers in the group may have the freedom to be creative within the lecture hall, those researchers in the group may rely more heavily on their direct supervisor to provide interesting and challenging opportunities for them in the projects with which they are involved.

Instructor

The primary duty of instructors at the University is the teaching of undergraduate and graduate courses. Often these faculty-like professionals are employed on one or three year contracts. In order for the University to stay flexible in the event of a tenured faculty member returning to teach more courses in the department, instructors are left uncertain about their long-term employment. These issues are reflected by the findings of this study, that the only two statistically significant factors related to overall job satisfaction that entered the stepwise regression equation of this group were satisfaction

with pay level and satisfaction with job security. Due to the somewhat at will nature of their employment at the University, it is natural for these professionals to be concerned with job security. When security is unavailable, satisfactory pay may make the difference in whether they choose to continue employment at the University or seek a more secure tenure-track position elsewhere or even a higher paying job outside of academe. And since they likely have been employed by the University for a relatively short amount of time as compared to their colleagues at the rank of academic professional, instructors are perhaps less likely to feel a sense of loyalty to the University. It is important to note that the instructors who responded to the 2008 PULSE survey averaged an overall job satisfaction score of 4.10 (just above satisfied) on a 5-point scale and a satisfaction with pay level score of 3.10 (just above neither satisfied nor dissatisfied) on a 5-point scale, indicating relatively high overall satisfaction with their jobs and a moderate level of satisfaction with their pay. However, their satisfaction with job security score was .58 on a scale from 0 to 3, indicating a very low level of satisfaction with that variable. It may be important for administrators to understand the importance of these two factors in the satisfaction of instructors so that they might find a balance between the two when possible. For instance, if job security is not possible for a particular position, perhaps that uncertainty can be made up for in salary.

Assistant Professor

Like their tenured and tenure-track colleagues who have reached the rank of associate professor or professor, assistant professors who responded to the 2008 PULSE survey were concerned with both the characteristics of the University and the quality and collegiality of their coworkers. In fact, these were the first two factors to enter the stepwise regression equation for this group. Administrators concerned with losing new faculty to transfer to other institutions should be cheered both by the finding that, for assistant professors, satisfaction with university characteristics is related to overall job satisfaction, and that assistant professors at the University showed a mean score of 3.82 (just below

satisfied) on a 5-point scale of satisfaction with the characteristics of the University. Dee (2002) found a relatively strong, negative correlation between organizational support for innovation (one of the concepts measured in the university characteristics index) and faculty turnover intent. Assistant professors at the University value innovation, risk taking, work integrity, and high quality service and are satisfied with the level of support the University provides them in their efforts to maintain their personal standards in these aspects.

Unlike their colleagues with higher faculty rank, however, satisfaction with department chair support was a factor related to their overall job satisfaction. This is perhaps due to the fact that many faculty at this rank are relatively new to their jobs and therefore rely on more experienced faculty and their department chair for support and guidance. Johnsrud and Heck (1998) highlight the importance of the strength of relationship between a department and its chair in faculty success and retention. Those faculty members at the rank of assistant professor are most likely to need assistance navigating the academic system. Though faculty at the ranks of associate professor or professor may be hired by the University, those hired at the rank of assistant professor are likely to be new both to the institution and to academe itself and are therefore looking for the support of their supervisor, most often their department chair. This finding complements the research of Hagedorn (1994), who found that satisfaction with administration is significantly related to job satisfaction only for novices to academe.

Also unlike their colleagues at the ranks of associate professor and professor, assistant professors in the study did not show a relationship between satisfaction with pay level and overall job satisfaction. This finding corroborates the research of Hagedorn (1994) who found that, for novices, salary concerns may indirectly affect job satisfaction through the creation of negative stress, rather than the more direct affects of pay and job satisfaction found for longer term faculty.

Level of work-family conflict is the final concern of assistant professors, which is possibly due to the fact that they are relatively new to balancing the demands of a faculty position at a large, research

university with the demands of their lives outside of academia. Olsen and Near (1994), in their study of newly hired faculty at the end of their first and third years of academic employment, found that a successful balance between work and home lives may take a very long time to achieve for faculty due to academia's heavier than average work demands and lack of formal boundaries. Faculty at this rank may have recently moved to the area, be in new relationships, have young children, or feel the pressures of any number of other factors outside of work. Administrative support for these findings may point to the importance of mentoring, since both the quality of coworkers and amount and quality of support from their supervisor is linked to the overall job satisfaction of these newer faculty and they may need assistance transitioning to the demands of faculty life on their lives outside of work.

Associate Professor

Though there are some similarities between this group and their colleagues at the ranks of assistant professor and professor, including the entrance of satisfaction with university characteristics and satisfaction with coworkers into their stepwise regression equation, there are some differences in what factors appeared, and also what factors did not appear. Like their colleagues at the rank of assistant professor, associate professors at the University value characteristics of their institution that support them in their efforts to perform high quality work, be innovative, promote a sense of a common university community, and promote diversity of ideas. Again, administrators should take note and take heart that, not only is this factor important to the overall satisfaction of associate professors at the University, but the mean score on a 5-point scale for this index was 3.68 (just below satisfied), indicating a higher than average level of satisfaction with this factor.

Besides satisfaction with university characteristics and satisfaction with coworkers, the only other factor that entered the equation of associate professors was satisfaction with pay level. This finding mirrors that of Hagedorn (1994) who found that satisfaction with salary plays a more important role in overall job satisfaction for those faculty in mid- and later-career stages (equivalent to associate

professors and professors in this study, though there may be instructors and academic professionals who are at these same career points, but satisfaction with pay level did enter their regression equations as well). These findings point to the importance of these three factors in the overall job satisfaction of this group of faculty. Their concerns relate to the university for which they work, the colleagues with whom they work, and the level of compensation they receive for the work that they do. This group can no longer be considered new to academia nor are they generally at the end of their careers, though some faculty do not reach the rank of professor before retirement and therefore may be included in this group. Associate professors have perhaps moved past the point of having young children at home, are relatively settled in the area having perhaps joined the faculty of the University at the assistant professor level, but have not yet reached the point of having retirement benefits be a primary concern. Like their colleagues who may be lured away from the University or away from academe by a higher salary in these times of lowered state funding to higher education, the importance of pay level on the overall job satisfaction of associate professors is important for University administration to note. The mean score on the 5-point satisfaction with pay level scale for this group was 2.93 (just below neither satisfied nor dissatisfied), indicating a close to average level of satisfaction with their level of pay. Given the pay freezes at the University in the past year, it will be interesting to compare this score with the score on the PULSE survey to be given in the spring of 2010 to see if satisfaction levels change though pay levels have not.

Professor

Perhaps because this is a somewhat diverse group due to the length of time an individual may remain at the rank of professor through his or her tenure at a university, the professors who responded to the 2008 PULSE survey had a variety of factors that related to their overall job satisfaction. This group shared the concern with the characteristics of their university and the quality of their coworkers that their colleagues at the ranks of assistant and associate professor had. Like their colleagues,

professors indicated a higher than average level of satisfaction with the characteristics of the University, with a mean score of 3.78 (just below satisfied) on this 5-point scaled factor. Administrators concerned with the “stealing” of faculty by other research universities will be glad to see both the level of satisfaction professors have with the characteristics and the importance these characteristics play in the overall job satisfaction of the professoriate.

Like associate professors, those at the rank of professor continue to be concerned with the level of pay they receive. Since tenure status has already been achieved at this point in their careers, pay level may be a strong measure of perceived worth to this group. As universities deal with the lingering effects of the recession through possible pay freezes or even cuts, it will be important to remember the importance of this variable in the overall satisfaction of professors at the University. While the institutions that may steal professors away from the University are likely to play on this importance by offering a higher salary, these institutions may be constrained in the coming years by pay freezes of their own. A balance must be struck between apathy due to perceived across the board cuts to faculty salaries and vigilance to the point of misuse of budget. Administrators should consider the overall results of this analysis when they decide on which factors related to overall job satisfaction to focus their limited budget funds.

Like assistant professors, professors at the University are also concerned with conflict between their work and home lives. Some may be asked to take on administrative tasks that demand extra time or unusual work hours. Some may have other work-related tasks that come in conflict with the demands they encounter at home. It is interesting to note, however, that the mean score for associate professors was higher than that of assistant professors or professors on this index, indicating higher levels of work-family conflict for this group. Associate professors have higher levels of conflict, but this conflict is not as impactful on overall job satisfaction as it is for professors and assistant professors. These findings are somewhat similar to those found by Smith, Anderson, and Lovrich (1995), who

analyzed the stress levels of faculty at different ranks. Their findings indicated that assistant professors were the least likely of the three tenured and tenure-track ranks to indicate high levels of task-based stress, and associate professors the most likely, with professors in between. Perhaps associate professors, some of whom are in the process of achieving tenure, expect more conflict between work and home life, whereas professors have reached the stage in their careers when they expect to see a decrease in these conflicts since they are tenured and, except for those who made a recent transfer to the University, are relatively settled in their careers. This continued conflict has an impact on professor's overall job satisfaction because it is less expected for those at this rank.

Unlike their tenured and tenure-track colleagues, however, satisfaction with pay benefits is a factor shown to relate to their overall job satisfaction. Rosser (2004) claims that benefits plans have an impact on both overall job satisfaction and faculty morale. A University might make a relatively large difference in morale and satisfaction, then, by securing a benefits package that is deemed satisfactory by those in the rank of professor. Given the larger proportion they represent in total faculty and the relationship this study showed between satisfaction with benefits and overall job satisfaction for professors, benefits may be a more critical factor in professorial satisfaction and retention than it may appear for University faculty as a whole. It is unlikely that health benefits would be targeted differently to different groups of faculty, but there may be other benefits such as retirement incentives that may be of special concern to this group. It is also important to note that, when the University polls faculty about potential changes to benefits, that all faculty ranks should be represented when the information is gathered, since pay benefits may not be of equal concern to all groups.

Conclusion

The research question under consideration in this study was whether factors related to overall job satisfaction varied among different groups of faculty and faculty-like employees of the University, categorized by rank. Based on the stepwise multiple linear regression analyses conducted on the data

from the 2008 PULSE survey, there do appear to be differences in the satisfaction factors for faculty with the rank of academic professional, instructor, assistant professor, associate professor, and professor. Satisfaction with university characteristics appeared to be an important factor for tenured and tenure-track faculty, but not for faculty with the rank of academic professional and instructor. Satisfaction with pay level shared a relationship with overall job satisfaction for all faculty ranks but assistant professors, though possibly to different degrees. If a thorough understanding of the factors that relate to overall job satisfaction for all faculty is desired, considering the varying needs of the different groups is critical to creating a complete picture.

Further Research

Given the fact that satisfaction with university characteristics was the first factor to enter the stepwise regression equations of all three tenured and tenure-track faculty ranks, further research into the questions that make up this section of the PULSE survey would lead to a deeper understanding of this construct. These questions were locally designed in that they were based not on a previously validated index but were instead written by a task force concerned with strategic planning at the University. While a culture scale was reviewed to give guidance to the group, the questions were based mostly on the mission statement of the University and the results of focus groups with faculty and staff. The questions in this section of the survey, therefore, represent characteristics that are important to the University as a whole and it is a positive result to see that these same characteristics are strongly related to the overall job satisfaction of the tenured and tenure-track faculty at the University. These survey questions should be further analyzed to assess the validity of their use as an index measuring overall satisfaction with university characteristics.

This study attempted to sort out the differences between the faculty ranks, and particularly to shed light on the factors related to the overall job satisfaction of instructors and academic professionals, as those ranks have not previously appeared as often in the research on faculty job satisfaction. Due to

its exploratory nature, further research on possible interactions between the variables might be explored to better understand the relationships between the variables for each rank. The results of future PULSE surveys may be more easily analyzed if factors are explored in the areas of university characteristics, satisfaction with university support, and satisfaction with students. This research study highlighted the cyclical nature of institutional satisfaction surveys in that one of the underlying goals of the study was to publicly share information from the survey in the hopes of increasing the response rate of future surveys and the limitations of the analysis point to potential improvements to the survey itself. Analysis of future PULSE surveys will only improve based on the knowledge gained from the completion of this study.

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