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A Comparison of Health-Related Quality of Life and Job Satisfaction in Physically Active and Sedentary Faculty Members

Mohammad Reza Keramati *

Associate professor, Faculty of psychology and education, University of Tehran, Tehran, Iran.

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Health-related quality of life (HRQOL)
Physical Activity (PA)
Quality of Work Life (QWL)
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Abstract

Introduction: The aim of this study was to compare health-related quality of life and job satisfaction between active and sedentary faculty members.

Materials and methods: 304 faculty members were selected by random sampling method from the statistical society (1620). Considering the subjects' physical activity level and amount of exercise per week, they were placed in an active group (N=150) and a sedentary group (N= 154). HRQL was estimated using a Health-related quality of life questionnaire (SF-36) and job satisfaction was estimated using the Berifield and Roth questionnaire. The data was analyzed by T-Test (α=0.05).

Results: Results indicated that physical activity limitations, psychological problems, bodily pain and mental health were not significantly different in active subjects compared to sedentary subjects ($P<0.05$). Physical problems, social functioning, vitality and total health were significantly higher in active subjects compared to sedentary subjects ($P<0.026$, $P<0.008$, $P<0.01$, $P<0.032$). The job satisfaction was significantly higher in active subjects compared to sedentary subjects ($P<0.034$).

Conclusion: The studies have identified higher levels of fitness may positively influence faculty members' productivity, job satisfaction and absenteeism. The findings of the present study suggest that HRQL and job satisfaction are better in active faculty members compared to sedentary faculty members. Applied implications for planners and managers in higher education are discussed.

* **Corresponding author:** Email: mkeramaty@ut.ac.ir

1. Introduction

Studies found that workplace factors in terms of job demand, job control, job strain, satisfaction and meaningful work are significantly associated with HRQOL (Edimansyah et al., 2007; Scroggins, 2008) and the job satisfaction of the faculty members has a high priority of importance (Khavari and Yousefian, 2006). Like positive psychology, which does not claim to have discovered the importance of job satisfaction (Peterson, 2006), the recently emerging positive organizational behavior field recognizes that much of the early history (Maslow, 1954) and contemporary theories and research (e.g., job satisfaction, organizational commitment, core self-evaluations, organizational citizenship, intrinsic motivation, among others) are positively oriented. Positive organizational behavior has been defined as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement" (Luthans, 2002; Turner et al., 2002; Wright 2003; Wright 2007; Luthans et al. 2007).

Over the past several decades, considerable research has examined voluntary turnover, with organizational behavior, job attitudes, job satisfaction and job alternatives (Griffeth et al., 2000), as mediated by intent to quit (Mitchell et al., 2001). More recent research indicates that additional factors, besides job attitudes and job alternatives, are important to understanding turnover (Maertz and Campion 1998; Steel, 2002; Mobley, 1982). These studies have focused almost exclusively on conditions in the non-work domain, rather than on healthy, cognitive or affective responses to these conditions. Despite the recent focus on non-work variables, very little attention has been given to the possible effects of life satisfaction, health and exercise on job satisfaction. Therefore, I studied to compare health-related quality of life and job satisfaction between active and sedentary personnel, in a large sample of faculty members in universities.

1.1. Review of literature

1.1.1. Quality of work life and Job satisfaction

Although the expression ''Quality of Work Life'' was not used in the late 19th century, certain isolated efforts had already been made to improve conditions for workers (Goode, 1989). The early 1970s were a fertile period for research and attempts to clarify the definition of QWL. Lawler (1975) found, in retrospect, that no clear and widely accepted definition of QWL had yet been formulated. He attributed this fact to the wide range of interests of the groups that coexisted within organizations. He emphasizes the limits of the job satisfaction paradigm and finds that the two constructs are not the same. He first mentions that a certain degree of dissatisfaction is necessary to motivate workers to achieve their goals. Moreover, if all workers reach a state of satisfaction, productivity is more likely to be harmed than improved. Finally, he points out that any definition of QWL must include measures of stress and tension likely to be present in the workplace, which are generally ignored by job satisfaction research.

QWL reflects each individual's experiences (Elizur and Shye, 1990), is an organizational goal, which the business is perpetually striving to achieve (Carlson, 1980), is a way of thinking about people, work, and organizations (Nadler and Lawler, 1983), is an individual's interpretation of his/her role in the workplace and the interaction of that role with the expectations of others (Kiernan and Knutson, 1990). QWL is employee satisfaction with a variety of needs in the work place; it is both a goal and an ongoing process for achieving that goal (Martel and Dupuis, 2006).

Job satisfaction is one of the most important factors in productivity (Ebrahimzadeh, 1997) and although it is defined as the rate of feelings and positive attitude that people have about their jobs (Moghimi, 1998), It has been examined under different perspectives, including economics (Vila, 2000), industrial psychology (Hackman and Oldham, 1980) and theories of vocational choice (Holland, 1997). There are several factors tied to job satisfaction. Such as income, years of schooling (Cohn and Addison, 1998), the characteristics associated with the job itself (Locke and Latham, 1990), personal characteristics of the job holder (Blackburn and Bruce 1989), the degree of match between a job holder's personality type and her or his work

environment (Elton and Smart, 1988). Other factors include the level of congruence between college major and the job (Kressel, 1990; Vila and Garcia-Mora, 2005; Wolniak and Pascarella, 2005), the economic sector where the job is located (De Santis and Durst, 1996), and the type of job held (Karl and Sutton 1998; Vila and Garcia-Mora, 2005).

Adherents of the human capital perspective seek to explain job satisfaction in terms of returns of investment when becoming qualified to enter the labor force (Vila et al., 2007). Industrial psychologists (Robbins, 1997), emphasize the connection between intrinsic and extrinsic rewards associated to a particular job and the individual needs of the job holder himself/herself. Satisfaction with work itself has been particularly high among managerial jobs, independent employees, and college professors (Chiu and Chen 2005; Olsen et al., 1995; Smerek and Peterson, 2007).

The vocational psychology perspective seeks to explain the connection between college experiences and such work-related outcomes as job satisfaction (Holland, 1997). It does so by examining the level of congruency between the personality, vocational interests and competencies of the individual and the major pursued in college (Spokane et al., 2000). According to Cabrera et al. (2008) who graduated in traditional majors do not show high unemployment or low satisfaction. On the contrary, the lowest levels of job satisfaction and the highest rates of unemployment are found among the graduates of non-traditional majors.

As in the case of industrial psychology, the vocational approach also sees job satisfaction as the outcome of the successful match or congruence between the individual and the work environment. However, it regards the major itself to be the embodiment of a college graduate's vocational preferences and competencies whose match with the work environment would lead to successful or unsuccessful working experiences. The closer the level of congruence between one's major and the work environment, the higher job satisfaction would be (Elton and Smart, 1988; Fricko and Beehr 1992; Wolniak and Pascarella, 2005).

1.1.2. Health-related Quality of life and Job satisfaction

In the beginning, QWL was synonymous with employability rate, job security, earnings and benefits (Elizur and Shye, 1990). This listing of objective criteria soon gave way to job satisfaction as the target assessment criterion. Despite this shift to a more subjective construct, some researchers remained convinced of the need for objective criteria to measure QWL. This contradiction between the theoretical way of thinking of the construct and the means used to measure it is exacerbated by the different meanings given to QWL based on an individual or organizational point of view (Walton, 1975). The same problem was manifest in work on Quality of Life (QOL) related to health problems. Nevertheless, researchers realized that QOL goes well beyond the disability imposed by the disease and that some patients with a given disease have a much better QOL than other patients with the same disease.

Many authors agree that QOL is a subjective construct (Cella, 1992; Dazord et al., 1993; Ferrans, 1990) and that the physical aspects must be considered as factors able to influence it to varying degrees depending on the individual (Dupuis et al., 2000). According to Research employees with high physical activity (Cox et al., 1981) high emotional intelligence (Shimazu et al., 2004; Cooper and Sawaf, 1997; Sy et al., 2005) are likely to experience high level of job satisfaction because they can utilize their ability to appraise and manage behaviors and emotions in others. Hildebrand and Mannell (1996) after a survey on 103 university teachers concluded that job satisfaction and physical activity have a significant relation. In this survey 82% of the cases believed that physical activity has a positive impact on their job satisfaction. Other research results show that participation of the personnel in sport activities (Bernacki and Baun, 1984; Jasnoski et al., 1981; Shephard et al., 1981; Wattles and Harris, 2003), organizational support (Swafford, 2005), income (Herak, 2005; Goodull, 2003), interpersonal communication (Dua, 1994) and working conditions (Bellamy et al., 2003) improves their job satisfaction. One of the aspects of HRQL is satisfaction, hygiene and health. HRQL has been defined as a look at the physical, mental, and social aspects of health (Rakhshandeh Rou, 2002).

Although in the different definitions of HRQL the physical, psychological and social aspects can be witnessed but while measuring HRQL such factors as the limitation of physical activity, physical problems, psychological problems, bodily pain, energy and vitality, mental health, social functioning and total health are considered. Various researches have pointed to the effects of exercise and PA on the physical, mental, emotional, and social aspects of man. Therefore, it seems that PA and exercise are related with HRQL. Many researchers, too, have studied this subject. However, in most researches old or ill cases have been used (Stewart et al., 2003; Koltyn, 2001; Schroll et al., 2002; Manns and Chad, 1999; Wood et al.1999; Macrae et al., 1996).

Although life quality has been investigated in middle age and healthy cases (Jennifer et al., 1999; Lean et al., 1999; Li et al., 2003), it has great effect on their functioning and the organizational goals. It seems employees with higher levels of health-related quality of life may also be more satisfied with their job. For example, the previously noted exploratory study of the production workers at the small factory found a relationship with their score on life quality and their job satisfaction (Larson and Luthans, 2006). Peterson and Luthans (2003) found fast-food store managers' level of hope correlated with financial performance of their unit and employee retention and job satisfaction. Findings of Rode et al. (2007) revealed that life satisfaction was a significant predictor of intent to quit after controlling for job satisfaction. The relationship between job satisfaction and intent to quit is well established in the literature (Griffeth et al., 2000). The theoretical basis regarding the role of job satisfaction in the voluntary turnover process is derived from the other works (Lee and Maurer, 1999). I was interested in studying the relation between job satisfaction and health-related quality of life. The purpose of study was to compare health-related quality of life and job satisfaction between active and sedentary faculty members. Therefore hypothesis is as follows:

There are a significant differences between Active and sedentary faculty members in quality of life and job satisfaction.

2. Method

2.1. Participants

Statistical population for this research comprises 1620 faculty members who work in state universities in Iran in academic year of 2011-2012 including Ferdowsi University and University of hakim Sabzevari, Payam Noor University of Mashhad and Payam Noor University of Sabzevar). By employing the random sampling method, 314 people randomly, comprised statistical samples. Two questionnaires were given to 312 faculty members.

2.2. Measurement

The study used a structured questionnaire consisting of three parts. The first part asked for basic personal information, including gender, age, marital status, number of children, religion, title, and place of work. The second part consisted of SF-36 quality of life scale which included the two aspects of a physical component summary (PCS) and a mental component summary (MCS), as well as eight dimensions, with a total of 36 questions. The eight dimensions were as follows: physical functioning (PF), role limitation due to physical problems (RP), bodily pain (BP), general health (GH), vitality (VT), role limitation due to emotional problems (RE), social functioning (SF), and mental health (MH). It was graded according to 3-point, 5-point, and 6-point Likert Scales, with the potential total score ranging from 35-145 points. The scores for each dimension needed to be converted into standard scores, and after the conversion, the standard score for each dimension was 100 points. If a total score of 50 or more was reached, then it represents a good quality of life. The higher the score, the better the quality of life, while lower scores indicate a lower quality of life.

The third part of the questionnaire was faculty member's job satisfaction scale. The scale was developed specifically for the faculty members and it included four dimensions: interpersonal relations, benefits and promotion, working conditions and workload. The scale had a total of 18 questions, with responses rated from 5, meaning "very satisfied," to 1, meaning "very unsatisfied." Thus, the higher the score, the greater the job satisfaction and vice versa

3. Results

Table 1 reports significant difference job satisfaction in active and sedentary groups.

Table1. T test for comparing Job Satisfaction in Active and Sedentary Groups

Group	Number	Age	Mean	Standard Deviation	T	Sig.
Active	80	35.2	2.83	0.35	2.39	0.034*
Sedentary	84	35.8	2.71	0.36		0.034*

Note: * stands for Statistical Meaningful Difference (p<0/01) T and sig. stands for t test and significance

As shown in table 1 the active participants and the sedentary participants had no significant difference in age and job satisfaction of the active group is significantly higher than the sedentary group.

Table2.T test for comparing quality of life in Active and Sedentary Groups

Index	Group	Mean	Standard	T	Sig.
Physical activity	Active	20.31	23.34	2.84	0.087
	Sedentary	26.54	22.94		
Physical Problems	Active	28.78	22.32	2.31	0.026 *
	Sedentary	32.96	24.83		
Psychological Problems	Active	37.63	18.55	1.50	0.90
	Sedentary	37.27	17.61		
Bodily Pain	Active	24.65	26.15	1.11	0.647
	Sedentary	22.85	24.05		
Energy and Vitality	Active	63.12	15.99	5.21	0.01 *
	Sedentary	56.31	17.24		
Mental Health	Active	67.81	15.19	0.19	0.066
	Sedentary	63.32	15.74		
Social Functioning	Active	55	14.28	7.21	0.008 *
	Sedentary	61	15.59		
Total Health	Active	61.80	13.85	5.81	0.032 *
	Sedentary	56.92	14.92		

* Statistical Meaningful Difference

As shown in table 2, quality of life in active group is significantly higher than the sedentary group. in addition; Active participants displayed less physical problems than the sedentary participants ($p < 0.026$). The active participants enjoyed a meaningful higher level of energy and vitality, social functioning and total health than the sedentary participants (respectively $p < 0.01$, $P < 0.008$, $P < 0.032$). The active participants and sedentary participants have no meaningful difference in, PA limitations, psychological problems, mental health, bodily pain, (respectively $p = 0.087$, $p = 0.9$, $p = 0.066$, $p = 0.647$).

4. Discussion

One of the advantages of PA is its effect on physical health. Many researchers have shown that active participants are less subject to cardio-vascular, muscular, and skeletal diseases; diabetes, cancers, and respiratory diseases, obesity … than the sedentary participants. Thus there must be a meaningful relationship between PA and physical problems in terms of quality of life (QOL). Koltyn (2001) has observed this relationship. Researchers realized that QOL goes well beyond the disability imposed by the disease and that some patients with a given disease have a much better QOL than other patients with the same disease. Many authors now agree that QOL is a subjective construct (Cella, 1992; Dazord et al., 1993; Ferrans, 1990) and that the physical aspects must be considered as factors able to influence it to varying degrees depending on the individual (Dupuis et al., 2000). However the close connection of age with physical problems is to be closely attended to. The older individuals get, the more their physical problems become. So in advanced ages as physical problems increase PA becomes more urgent to such a degree that the

afore-mentioned researchers, too, have used old and ill subjects. But in this survey the groups do not have a significant difference regarding their age and probably the less physical problems of the active groups is related to their more PA.

According to the researches it seems that PA increases mental health and reduces mental problems. The absence of this point in the present research may be the result of the equal conditions of the subjects such as workplace, social status, income, and geographical environment. Under such conditions, exercise and PA should be conducted with greater density and intensity so that it could bear on mental health and mental problems much forcefully, probably 2-3 hours of weekly PA cannot have a meaningful influence on these items. Of course, in terms of mental health the difference between all individuals is great and it is close to being meaningful (p= 0.066).

It seems that exercise and PA are a means that can bring unity and conformity among human beings. PA, especially when done as teamwork, results in deeper friendly relations and more developed human ties. Koltyn (2001) and Schroll et al. (2002) have also observed a meaningful relationship between social functioning and PA. In this study, social functioning difference between active and sedentary groups is statistically significant.

The active faculty members were in a less meaningful degree subject to the PA limitation and bodily pain unlike the sedentary faculty members. (Wood et al., 1999; Schroll et al., 2002; Stewart et al., 2003). In this survey, although the PA limitation of the active group (P=0.087) is less than the sedentary group, their difference is not statistically significant. The lower PA limitation in active faculty members was possibly due to the positive influence of exercise and PA on strength, muscular endurance, cardio-vascular endurance, flexibility, speed, agility, balance … Therefore it is natural for active faculty members to experience less activity limitation than the sedentary participants and perform daily activities with fewer limitations. Today, many diseases can be treated by PA and sport. Active individuals and athletes are healthier than sedentary faculty members and non-athletes. But in this study, bodily pain index in active and sedentary groups does not have a significant difference. Active faculty members displayed higher levels of energy, vitality, and total health than sedentary faculty members (P= 0.01). Physical and recreational activities are the main sources of joy, too. This joyful sensation has physiological and biochemical grounds.

Although multiple researches refer to the effect of PA on quality of life, some researches show that PA has no effect on quality of life. Manns and Chad (1999) and MacRae et al (1996) approve this last point. The divergence of these researches may be due to the difference existing in the type of physical activities, assessments and subjects. Moreover, in this survey, job satisfaction of the active group is significantly higher than the sedentary group (p=0.034). From an economic perspective, job satisfaction is the outcome of maximizing an individual's utility function (Vila and García-Mora, 2007). Lawler (1975) suggested it was deemed necessary to consider job satisfaction as an important part of quality of work life. In fact by increasing the job satisfaction we can improve other aspects of job attitude like organization commitment, job devotion and organizational climate. This point can be clearly seen in the presented model by Khavari and Yousefian (2006). Results Rode et al. (2007) revealed that both job and life satisfaction mediated the effects of role conflict between work and non-work on intent to quit. It seems faculty members with higher levels of health-related quality of life may also be more satisfied with their job.

Many investigations have confirmed variations in mood and satisfaction of workers reduce in fatigue and consequent increase in performance, reduce in disease and reducing the anxiety, stress and aggression, resulted by participation in physical fitness programs (Jasnoski et al., 1981; Shephard et al., 1981; Bernacki and Baun, 1984). Other investigations show that the job satisfaction improves by the participation of staff in physical activities (Bernacki and Baun, 1984; Jasnoski et al., 1981; Shephard et al., 1981). It is important to note that the correlates of job satisfaction among Iranian faculty members are remarkably consistent with the literature. On the whole, one can conclude from the

present research that active faculty members have a higher quality of life and job satisfaction than the sedentary faculty members and it is suggested to consider by the university managers and policy makers.

Findings would seem to have many practical implications for policy makers in higher education. Faculty members, who are more active, may be more likely to satisfy. Although continued investment in financial, human, and social capital is certainly necessary, it may no longer be sufficient in this environment. Besides investment in and development of overall human resources, another implication would be further focus on linking exercise and physical activity. In conclusion, this study provides initial evidence that exercise and physical activity may have a common core that I have labeled for convenience as psychological capital that can be measured and related to job satisfaction.

The present study indicates that PA increases job satisfaction. It also indicates that job satisfaction enriches the likelihood meaningful work can facilitate performance (Scroggins, 2008). The concept of job satisfaction offers one additional approach in which human resource professionals may facilitate the development of meaningful work of faculty members. These faculty members may view themselves as successfully advancing through the organization and attaining positions of greater influence. These faculty members will also work for and intrinsic rewards that accompany promotion through the university structure, and the advancement and increased compensation will facilitate self-esteem as they verify the faculty members' self-concepts of being successful faculty members. These faculty members need to be coordinate with career paths that will allow those orientations to be actualized and realized. To the extent that this match occurs, these faculty members will be more likely to experience job satisfaction. Human resource planning professionals in higher education can help in these activities by preparing more innovative plans for faculty members. Human resource planning professionals in higher education can also attempt to develop health-related quality of life and job satisfaction scales for faculty members through career planning.

This study focuses attention physical activities. Future research should examine the effects of emotional intelligence, social intelligence and intrinsic motivation on job satisfaction in active and sedentary faculty members.

Research has indicated for some time that faculty members' health-related quality of life and job satisfaction can be affected by the social information they receive from others in the workplace through communications and interactions. Research is needed on managerial communications and interactions that can foster the development health-related quality of life and job satisfaction in faculty members. Managers and policy makers in higher education might facilitate the development of high faculty members' health-related quality of life and job satisfaction in faculty members by strategic planning. It is also possible that managers and policy makers can create high job satisfaction through the feedback they provide and communications they have with faculty members. Future research needs to explore management behaviors and practices that facilitate the development of job satisfaction.

References

Bellamy, S., Morley, C., & Watty, K. (2003). Why business academics remain in Australian University? *Journal of Higher Education Policy and Management, 25,* 13-28.

Bernacki, E. J., & Baun, W. B. (1984). The relationship of job performance to exercise adherence in a corporate fitness program. *Journal of Occupational Medicine, 26*, 529-531.

Blackburn, J. W., & Bruce, W. M. (1989).Rethinking concepts of job satisfaction: The case of Nebraska municipal clerks. *Review of Public Personnel Administration, 10*(1), 11-28.

Cabrera, A. F., Vries, W. D., & Anderson, Sh. (2008). Job satisfaction among Mexican alumni: a case of incongruence between hunch-based policies and labor market demands. *The International Journal of Higher Education and Educational Planning, 56,* 699-722.

Carlson, H. C. (1980). *A model of quality of work life as a developmental process*. In W. W. Burke and L. D. Goodstein (eds.), Trends and Issues in OD. Current Theory and Practice (University Associates, San Diego, CA), pp. 83–123.

Cella, D. F. (1992). Quality of life: The concept. *Journal of Palliative Care, 8,* 8–13.

Chiu, S. F., & Chen, H. L. (2005). Relationship between job characteristics and organizational citizenship behavior: The mediation al role of job satisfaction. *Social Behavior and Personality, 33*(6), 523-540.

Cohn, E., & Addison, J. (1998).The economic returns to lifelong learning in OECD countries. *Education Economics, 6*(3), 235-307.

Cooper, R., & Sawaf, K. (1997). *Emotional intelligence in leaders and organizations.* New York: Grosset/Putnam.

Cox, M., Shephard, R. J., & Corey, P. (1981). the Influence of an Employee Fitness Program upon Fitness, Productivity, and Absenteeism. *Ergonomics, 24*, 795 -806.

Dazord, A., P. Gerin, C., Brochier, M., Cluse, J. L., Terra & Seulin. C. (1993). Un modele de qualite de vie subjective adapte aux essaisthera-peutiques: Interet chez les patients depressifs. *Sante Mental au Quebec,* XVIII, 49-74.

De Santis, V. S., & Durst, S. L. (1996).Comparing job satisfaction among public and private sector employees. *American Review of Public Administration, 26*(3), 237-343.

Dua, J. D. (1994). Job stressors and their effects on physical health, emotional health, and job satisfaction in a University. *Journal of Educational Administration, 32*(1), 59-78.

Dupuis, G., Taillefer, M. C., Etienne, A. M., Fontaine, O., Boivin, O. S., & Von Turk. A. (2000). *Measurement of quality of life in cardiac rehabilitation.* In J. Jobin F. Maltais and P. Leblanc (eds.), Advances in cardiopulmonary rehabilitation (Human Kinetics Publishers, Champaign), pp. 247-273.

Ebrahimzadeh, H. (1997). *Job satisfaction of teachers in Iran.* Unpublished M.A Thesis, Ferdowsi University of Mashhad, Iran [In Persian].

Edimansyah, B. A., Rusli, B. N., Naing, L., Mohamed Rusli, B. A., & Winn, T. (2007). Relationship of psychosocial work factors and health-related quality of life in male automotive assembly workers in Malaysia. *Industrial Health, 45*, 437-448.

Elizur, D., & S. Shye. (1990). Quality of work life and its relation to quality of life. *Applied Psychology: An International Review 39*(3), 275-291.

Elton, C. F., & Smart, J. C. (1988). Extrinsic job satisfaction and person-environment congruence. *Journal of Vocational Behavior, 32,* 226-238.

Ferrans, C. E. (1990). *Quality of life: Conceptual issues*. Seminars in Oncology Nursing 6, pp. 248-254.

Fricko, M. M., & Beehr, T. A. (1992).A longitudinal investigation of interest congruence and gender concentration as predictors of job satisfaction. *Personnel Psychology, 45*, 99-117.

Goode, D. A. (1989). *Quality of life, quality of work life*. In W. E. Kiernan and R. L. Schalock (eds.), Economics, Industry and Disability: A Look Ahead (Paul H. Brookes, Baltimore), pp. 337-349.

Goodull, D. (2003). *The effect of salary on job satisfaction among college faculty member*. University of Texas at Austin.

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of correlates and antecedents of employee turnover: Update, moderator tests and research implications for the next millennium. *Journal of Management, 26,* 463–488.

Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison-Wesley.

Herak, S. M. (2005). *Job satisfaction characteristics of full time faculty members at Montana Tribal College*. Unpublished Dissertation, University of Montana.

Hildebrand, M., & Mannell, R. C. (1996). *Leisure and the job satisfaction of teachers*. Leisure Research Symposium, October 23 - 27, Kansas City, MO.

Holland, J. L. (1997). *Making vocational choices: A theory of vocational personalities and work environments* (3rd ed.). Odessa, FL: Psychological Assessment Resources Inc.

Jasnoski, M. L., Holmes, D. S., Solomon, S., & Aguiar, C. (1981). Exercise, changes in aerobic capacity, and changes in self-perceptions: An experimental investigation. *Journal of Research in Personality, 15*, 460-466.

Jennifer, T. F., (1999). A Prospective study of weight change and health-related quality of life in women. *JAMA, 282*, 2136-2142.

Karl, K. A., & Sutton, C. L. (1998). Job values in today's workforce: A comparison of public and private sector employees. *Public Personnel Management, 27*(4), 515-527.

Khavari, L., & Yousefian, J. (2006). The place of exercise in job satisfaction of faculty members in Yazd University. *Journal of Olympic, 37*, 49-60 [In Persian].

Kiernan, W. E., & Knutson, K. (1990). *Quality of work life*. In R. L. Schalock M. J. Begab (eds.), Quality of

Life: Perspectives and Issues (American Association of Mental Retardation, Washington, DC, US: xii).

Koltyn, K. F. (2001). The association between physical activity and quality of life in older women. *Women's health issues, 11*(6), 471-80.

Kressel, N. J. (1990). Job and degree satisfaction among social science graduates. *Teaching of Psychology, 17*(4), 222-227.

Larson, M., & Luthans, F. (2006). Potential added value of psychological capital in predicting work attitudes. *Journal of Leadership and Organizational Studies, 13*, 44-61.

Lawler, E. E., (1975). *Measuring the psychological quality of working life: The why and how of it*. In L. E. Davis and A. B. Cherns (eds.). The Quality of Working Life, Vol. 1 (Free Press, New York), pp. 123-133.

Lean, M. E., Han, T. S., & Seidell, J. C. (1999). Impairment of health and quality of life using New US Federal guidelines for the identification of obesity. *Archives of Internal Medicine, 159*, 837-843.

Lee, T. W., & Maurer, S. D. (1999). The effects of family structure on organizational commitment, intention to leave and voluntary turnover. *Journal of Managerial Issues, 11*, 493-513.

Li, L., Wang, H. M., & Shen, Y. (2003). Chinese SF-36 Health Survey: translation, cultural adaptation, validation, and normalization. *Journal of Epidemiology and Community health, 57,* 259-263.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Englewood Cliffs, NJ: Prentice-Hall Inc.

Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior, 23*, 695-706.

Luthans, F., Avey, J. B., Avolio, B. J., Norman, S., & Combs, G. (2007). Psychological capital development: Toward a micro-intervention. *Journal of Organizational Behavior, 27*, 387-393.

MacRae, P. G., Asplund, L. A., Schnelle, J. F., Ouslander, J. G., Abrahamse, A., & Morris, C. (1996). A walking program for nursing home residents: Effects on walk endurance, physical activity, mobility, and quality of life. *Journal of American Sociology, 44*(2), 175-80.

Maertz, C. P., & Campion, M. A. (1998). *Twenty-five years of voluntary turnover research: A review and critique.* In: C. L. Cooper, & I. T. Robertson (Eds.), International Review of Industrial and Organizational Psychology, 13, 49-81. New York: Wiley.

Manns, P. J., Chad, K. E. (1999). Determining the relation between quality of life, handicap, fitness, and physical activity for persons with spinal cord injury. *Archives of Physical Medicine and Rehabilitation, 80*(12), 1566-71.

Martel, J. P., & Dupuis, G. (2006). Quality of work life. *Social Indicators Research, 77*, 333-368.

Maslow, A. J. (1954). *Motivation and personality*. New York: Harper& Row.

Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablynski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *Academy of Management Journal, 44*, 1102-1121.

Mobley, W. H. (1982). *Employee turnover: Causes, consequences and control*. Menlo Park, CA: Addison-Wesley.

Moghimi, M. (1998). *Organization and management: a research survey*. Tehran: Termeh Pub.

Nadler, D. A. & Lawler, E. E. (1983). Quality of work life: Perceptions and direction. *Organizational Dynamics 11*(3), 20-30.

Olsen, D., Mapple, S. A., & Stage, F. K. (1995). Women and minority faculty job satisfaction: Professional role interests, professional job satisfaction, and institutional fit. *Journal of Higher Education, 66*(3), 267-293.

Peterson, C. (2006). *A primer in positive psychology*. New York: Oxford University Press.

Peterson, S., & Luthans, F. (2003). The positive impact of development of hopeful leaders. *Leadership and Organization Development Journal, 24*, 26-31.

Rakhshandeh Rou, S. (2002). *Studying the influence of education on the QOL of diabetic patients referring to Iran Diabetic Society*. Unpublished Thesis, Tarbiat Modares University, Iran [In Persian].

Robbins, S. P. (1997). *Essentials of organizational behavior* (5th ed.). Upper Saddle River, NJ: Prentice Hall.

Rode, J. C., Rehg, M. T., Near, J. P., & Underhill, J. R. (2007). The effect of work/family conflict on intention to quit: The mediating roles of job and life satisfaction. *Applied Research in Quality of Life,* 2(2), 65-82.

Schroll, M., Sehlettwein, D., Staveren, W. V., & Schlienger, J. L. (2002). Health related quality of life and physical performance. SENECA 1999. *The Journal of Nutrition Health and Aging, 6*(1), 15-9.

Scroggins, W. A. (2008). The Relationship between Employee Fit Perceptions, Job Performance, and Retention: Implications of Perceived Fit. *Employee*

Responsibilities and Rights Journal, 20(1), 57-71.

Shephard, R. J., Cox, M., & Corey, P. (1981). Fitness program participation: Its effect on worker's performance. *Journal of Occupational Medicine, 23*, 359-363.

Shimazu, A., Shimazu, M., & Odahara, T. (2004). Job control and social support. *Psychological Reports, 94*(2) 449-456.

Smerek, R. E., & Peterson, M. (2007). Examining Herzberg's theory: Improving job satisfaction among non-academic employees at a university. *Research in Higher Education, 48*(2), 229-250.

Spokane, A. R., Meir, E. I., & Catalana, M. (2000). Person-environment congruence and Holland's theory: A review and reconsideration. *Journal of Vocational Behavior, 57*, 137-187.

Steel, R. P. (2002). Turnover theory at the empirical interface: Problems of fit and function. *The Academy of Management Review, 27,* 346-360.

Stewart, K. J., Turner, K. L., Bacher, A. C., DeRegis, J. R., Sung, J., Tayback, M., & Ouyang, P. (2003). Are Fitness, activity, and fatness associated with health-related quality of life and mood in older persons? *Journal of Rehabilitation, 23*(2), 115-21.

Swafford, L. G. (2005). *Job satisfaction among faculty in higher education*. Unpublished Dissertation, Virginia Common Wealth University.

Sy, Th., Tram, S., & Ohara, L. A. (2005). Relation of employee and manager emotional intelligence to job satisfaction and performance. *Journal of Vocational Behavior, 68*(3) 461-473.

Turner, N., Barling, J., & Zaharatos, A. (2002). *Positive psychology at work*. In Snyder CR, Lopez S (Eds.), Handbook of positive psychology (pp. 715-728). Oxford, UK: Oxford University Press.

Vila, L. E. (2000). The non-monetary benefits of education. *European Journal of Education, 35*(1), 21-32.

Vila, L. E., & García-Mora, B. (2005). Education and the determinants of job satisfaction. *Education Economics, 13*(4), 409-425.

Vila, L. E., García-Aracil, A., & Mora, J. G. (2007). The distribution of job satisfaction among young European graduates: Does the choice of study field matter? *Journal of Higher Education, 78*(1), 97-118.

Walton, R. (1975*). Criteria for quality of work life*. In L. E. Davis and R. L. Cherns (eds.), the Quality of Working Life: Problems, Prospects, and the State of the Art Vol. 1 (Free Press, New York), pp. 12-54.

Wattles, M., & Harris, C. H. (2003). The relationship between fitness levels and employer's perceived productivity, job satisfaction and absenteeism. *Journal of ASEP, 6*(1), 24-32.

Wolniak, G. C, & Pascarella, E. T. (2005). The effects of college major and job field congruence on job satisfaction. *Journal of Vocational Behavior, 67*, 233-251.

Wood, R. H., Reyes-Alvarez, R., Maraj, B., Metoger, K. L., Welsch, M. A. (1999). Physical fitness, cognitive function, and Health Related quality of life in older Adults. *Journal of Aging and physical activity, 7*, 217-230.

Wright, T. A. (2003). Positive organizational behavior: An idea whose time has truly come. *Journal of Organizational Behavior, 24*, 437-442.

Wright, T. A. (2007). *A look at two methodological challenges for scholars interesting in positive organizational behavior.* In Nelson DL, Cooper CL (Eds.), Positive organizational behavior (pp. 177-190.). Thousand Oaks, CA: Sage.