

Evaluating the Job Satisfaction in Iranian Petrochemical Industry: A Case Study

Mohammad Torkabadi¹ (Corresponding author), Behdad Kheirkhah²

¹ MBA student, Universiti Teknologi Malaysia, Malaysia

mhmd.torkabadi@gmail.com

² MSc student of Industrial Management, University of Tehran, Tehran, Iran

b.kheirkhah@ut.ac.ir

Abstract: Job satisfaction is of great importance to improve the productivity level of the employees. Regular measurement of the level of job satisfaction should be taken into account more than ever specifically in risky work environments such as petrochemical industry where the performance of employees plays a major role in achieving the objectives of the organization. The purpose of this research is to evaluate the level of job satisfaction in Iranian petrochemical industry based on MSQ. A comprehensive literature study is presented by this paper. Related theories and previous researches are introduced and classified in terms of the objective, methodology and results. This research testifies and compares the significance of all facets from Minnesota questionnaire in studied industry. The research applies the survey method to testify the hypothesis.

[Mohammad Torkabadi, Behdad Kheirkhah. **Evaluating the Job Satisfaction in Iranian Petrochemical Industry: A Case Study.** *N Y Sci J* 2013;6(5):54-60]. (ISSN: 1554-0200). <http://www.sciencepub.net/newyork>. 9

Keywords: Job Satisfaction, Minnesota Questionnaire, Petrochemical Industry

1. Introduction

The petrochemical industry has a vital role in developing countries that have oil and gas resources such as Iran. Because this industry can create an eye-catching profit for countries with its value adding processes and makes this opportunity for other industries to facilitate their access to the required feedstock (Hosnavi.R & Ramezan.M, 2010).

As petrochemical companies classified in high-tech industries, hence human resource plays a key role in conducting these companies. Almost all of employees in petrochemical companies are well-trained and skillful. Accordingly human resource maintaining is a big challenge for managers.

Petrochemical is a progressing industry with a significant role in job market of Iran, with regards to this matter and also the vast number of specialized personnel in this field; the number of comprehensive examinations of the main contributing factors to increase or decrease the level of job satisfaction in Iranian industry is limited. Regarding the inaccurate recognition of these impacting factors, the managers would not be able to adopt proper actions in job satisfaction context.

Petrochemical environments have specific features and personnel encounter specific difficulties in this kind of work environments especially in terms of exhausted production situation, high temperature, fire hazard, explosion and incendiary materials. Hence, existent hazards and risks are more intensive in case of lower level staff such as operators (Sutherland & Cooper, 1991).

Besides, the petrochemical centers in Iran are located far from urban centers in such an inappropriate climate and usually existent. Therefore, the health and

safety risks are inseparable specifications of petrochemical environments and the situations goes worse because the technical facilities belong to 70s or 80s.

As a result it could be mentioned that job satisfaction have to be permanently measured and monitored and controlled by managers to maintain and increase it based on suitable action plans. The Minnesota Satisfaction Questionnaire (MSQ) was applied in order to measure the level of job satisfaction of personnel.

The main research questions can be stated as the following terms:

"In what level is the job satisfaction of studied company's personnel in terms of all facets of job satisfaction?"

Hypothesis

According to the expressed questions, the research hypothesis can be stated as follow:

H1: co-workers have a significant effect on job satisfaction.

H2: supervision-human relation has a significant effect on job satisfaction.

H3: supervision-technical has a significant effect on job satisfaction.

H4: the working condition has a significant effect on job satisfaction.

H5: the variety has a significant effect on job satisfaction

H6: social status has a significant effect on job satisfaction

H7: security has a significant effect on job satisfaction.

H8: responsibility has a significant effect on job satisfaction

H9: recognition has a significant effect on job satisfaction

H10: moral value has a significant effect on job satisfaction

H11: independence has a significant effect on job satisfaction

H12: existent creativity has a significant effect on job satisfaction.

H13: compensation has a significant effect on job satisfaction

H14: company policies & practices have a significant effect on job satisfaction.

H15: authority has a significant effect on job satisfaction

H16: advancement has a significant effect on job satisfaction

H17: the type of activity has a significant effect on job satisfaction

H18: achievement has a significant effect on job satisfaction.

H19: ability utilization has a significant effect on job satisfaction.

H20: social service has a significant effect on job satisfaction.

H21: Intrinsic Factors are highly contributing to the level of job satisfaction.

H22: Extrinsic factors are highly contributing to the level of job satisfaction.

H23: employees with different genders have a different level of job satisfaction

H24: employees with different age have a different level of job satisfaction

H25: employees with different position have a different level of job satisfaction

H26: University certification holder employees and others with no university certification have a different level of job satisfaction

With regards to the stated research question, the research objective can be expressed as follows:

"Measuring the level of employees job satisfaction in terms of all facets of job satisfaction.(these facets are: ability utilization, achievement, activity, advancement, authority, company policies, compensation, co-workers, creativity, independence, security, social service, moral values, recognition, responsibilities, supervision, human relations, supervision-technical, variety and working conditions)

Literature review

Paying enough attention to the human resource sufficiently is the most efficient way to increase the organizational problem and economic, social and cultural development. Efficient staffs are the most fundamental factor of the organization success. In the recent years the new changes in management, leadership methods, resources management, expanding

the participative management and considering to the personnel's mental characteristics and behavior could be seen obviously due to these approaches. Considering the job satisfaction and preventing employee dissatisfaction is a part of management efforts to develop human resource.

The definition of Job satisfaction is basically, the affective orientation that an employee has towards his or her work (Price, 2001). It means that, it is an impressive reaction to a job that results from the comparison of apparent outcomes with those that are most wanted and desired (Kam, 1998). Briefly, job satisfaction explains the feelings, attitudes or favorite of individuals regarding work (Chen, 2008).

In 1930's, researches defined job satisfaction as "any combination of psychological, physiological, and environmental circumstances" that make people satisfied (Hoppock, 1935). Then people like Edwin A. Locke stated that job satisfaction was "job satisfaction is a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Locke, 1976). This description is the famous one and many people followed the theory. In 1982 another definition was been given by Vroom which said that it was the "affective orientations on the part of individuals toward work roles which they are presently occupying" (Vroom, 1982). The recent definition was declared in 2002, researchers argued that "job satisfaction is an attitude" (Weiss, 2002). Weiss suggested that job satisfaction is a kind of feelings, beliefs and behaviors coming of people toward to their jobs.

As a kind of emotion, job satisfaction could be influenced by many factors. Many studies from different angles had been built on the factors. One of the biggest previous literatures was the Hawthorne studies from 1924 to 1933 which was primarily published by Elton Mayo of Harvard Business School. The studies tried to find the effects of different conditions on worker's productivity. Results which are called Hawthorne Effect showed that productivity can be increased by changing work conditions. The most important finds of these studies were that people work for purposes other than pay, which paved the way for researchers to investigate other factors in job satisfaction.

Several innovative studies have shown the influences of a person's disposition on job satisfaction. Staw & Ross (1985) researches which are one of the first studies in job satisfaction area, demonstrated that a person's job satisfaction scores have stability over time, even if the persons change their job or their companies. In an associated study, childhood nature and character was found to be statistically related to adult job satisfaction up to 40 years later (Staw, Bell, & Clausen, 1986). Data and evidence indicates that the

job satisfaction of the same twins reared apart is similar (see Arvey, Bouchard, Segal, & Abraham, 1989).

Even though evidence indicates that differences in job satisfaction across employees can be marked out, partly, to differences in their disposition or character or their nature (House, Shane, & Herold, 1996).

Furthermore, it is possible to see a several of theories developed to identify its nature in literature. Vroom (1964), need/value fulfillment theory, shows that job satisfaction is negatively associated to the difference between individual needs and the amount and level to which the job supplies these needs. In contrast, Porter & Lawler (1968) gather the influences on the job satisfaction in two groups which are: internal and external satisfactory factors.

Due to them, internal satisfactory factors are connected the work directly (for example: feeling of independence, feeling of attainment and success, feeling of victory, self-esteem, feeling of control and some other related feeling gained from work), while external satisfactory factors such as high salary, good benefits, welfare and utilities and good relationships with colleagues are not exactly related to work itself.

Thus, the factors which can influence on job satisfaction can be also separated into work-related and employee-related factors (Glisson & Durick, 1988).

Arvey et al. (1976), On the other hand, for their study sample, took 271 scientists, and they understood that the level of job-satisfaction of the workers with high achievement motivation went beyond that of workers with low achievement motivation. Independence and self-sufficiency is an important concern for employees' job satisfaction. As an example, Abdel-Halim (1983) examined 229 supervisory and non-supervisory employees in a big retail-drug company and accomplished that individuals who have high need-for-independence carried out better and they were more happy and satisfied with high contribution for non-repetitive tasks (Kam, 1998).

In addition, professional status, administrative styles and pay are identified as very important factors which can influence on job satisfaction. For instance, Carr and Kazanowsky (1994) showed in the successful way that insufficient salary was very associated to employees' dissatisfaction. And recent studies showed that a participative management style or democratic one was mostly chosen and preferred by today's managers to raise their employees' job satisfaction (Dogan, 2009) (Knoop, 1991).

Furthermore, the relationships between job satisfaction and a lot of variables such as motivation, stress, salary, promotion, workload, educational level, emotional intelligence, role conflict, distributive and procedural justice, role ambiguity, autonomy, leadership style are still being analyzed in different area as an important topic of management literature

(Reskin and Ross, 1992; Agho et al., 1993; Stordeur et al., 2001; Chu et al., 2003; Kafetsios and Zampetakis, 2008). For instance, Sengin (2003), and Hinshaw and Atwood (1984) found variables that can influence on employee job satisfaction which include:

(1) Demographic variables: education, experience, and position in the hierarchy

(2) Job characteristics: autonomy, tasks repetitiveness, and salaries

(3) Organizational environment factors: degree of professionalization, type of unit.

Mrayyan (2005) says that the variables of encouragement, feedback, a widening pay scale and clear job description, career development opportunity, supportive leadership style, easy communication with colleagues and social interaction positively affect job satisfaction, whereas role stress has a negative influence on it. In the same way, the research which has done by Chu et al. (2003) make obvious that satisfaction is positively related to participation, positive affectivity, independence, distributive fair dealing, practical justice, promotional chances, supervisor support, co-worker support, but it is harmfully related to negative affectivity, role uncertainty, work-load, resource inadequacy and reutilization.

The studies showed above are from practical research. Maslow's hierarchy of needs theory which is called motivation theory was from physiological filed. Many people thought the theory is the foundation of job satisfaction theory. In 1943, Abraham Maslow developed a theory of personality that has influenced a number of different fields, including education. Maslow has set up a hierarchic theory of people's needs. He argued that people seek to satisfy five instinct needs which are physiological needs, safety needs, needs of love, affection and belongingness, needs for esteem, needs for self-actualization (Maslow, 1943). This model became a good basis for researchers developing job satisfaction theories.

Based on the foundations, a lot of job satisfaction models have been established in the previous studies. Edwin A. Locke's affect theory and Frederick's theory is the major ones.

Edwin A. Locke's Range of Affect Theory (1976) is the most famous job satisfaction model. Locke argued that satisfaction is determined by a discrepancy between what one wants in a job and what one has in a job. Further he stated that when a person values a particular facet of a job, his satisfaction is more greatly impacted both positively (when expectations are met) and negatively (when expectations are not met). According to this theory, the appearance of certain factors leads to job satisfaction while disappearance of another set of factors leads to job dissatisfaction. These certain factors (motivation and hygiene factors) which

could be contents of work will impact on job satisfaction.

The theory which was built by Frederick Herzberg in 1968 tried to find the links between job satisfaction and motivation. It showed that job satisfaction and dissatisfaction are driven by different factors (motivation and hygiene factors). Employees' motivation to work is continually related to job satisfaction. Motivation is defined as an inner force that drives individuals to attain personal and organizational goals (Porter et al., 2007), such as achievement in work, recognition, promotion opportunities. The other factors, which are Hygiene factors, include aspects of the working environment. For example the factors can be employees' salary, corporation policies, management practices, and other working conditions (Hackman & Oldman, 1976).

Finding the factors of job satisfaction has significant impact both in academic word and business word. Based on the above theories, many methods have been designed to measure employees' job satisfaction. The measurement is divided into two kinds, global measure and facet measure.

The Minnesota Satisfaction Questionnaire (Weiss, 2002) and the Job Descriptive Index (Smith, Kendall, & Hulin, 1969) are among the most popular instruments for measuring job satisfaction (Cherrington, 1994). The job descriptive index (JDI) is a kind of facet measurement which was created by Smith et al. (1969). The questionnaire measures job satisfaction in five facets: pay, promotions and promotion opportunities, coworkers, supervision, and the work itself. The [Minnesota Satisfaction](#)

[Questionnaire](#) (MSQ) measures job satisfaction in 20 facets and has a long form with 100 questions (five items from each facet) and a short form with 20 questions (one item from each facet).

Method:

The questioner used in this study is a modified version of Minnesota Satisfaction Questionnaire (MSQ) (Weiss, 2002). This modified questioner is used to assess petrochemical staff's job satisfaction. The reason that this questioner is used to measure is that MSQ is widely used in job satisfaction studies globally and the questioner is reported to result reliable results (Cook, Hepworth, Wall, & Warr, 1981).

The Short-Form of Minnesota questioner is used to measure the level of satisfaction in the company. This form which developed on 1977 based on the revised long-form consists of 20 items from the long-form MSQ. Each of the items in this form corresponds to one of the 20 mentioned facets. The items are listed in the exhibit above. The 20 items result two factors make the general satisfaction level. Intrinsic and Extrinsic Satisfaction are the two factors resulted from the short-form of MSQ items. For example the items in the questioner which are related to Extrinsic factors are: number 5, 6, 8, 10, 12, 13, 14, 17, 18, and 20. Apparently the other items are Instinct satisfaction items (Weiss et al., 1967, p. 1). As like MSQ the five-point Likert scale measures each of the indicants (1977 version). (Very Satisfied, Satisfied, "N" (Neither Satisfied nor Dissatisfied, Dissatisfied, and Very Dissatisfied). The item of each domain is shown in

Table 1.

Table 1: The item of each domain

Q1	Activity: Being able to keep busy all the time.
Q2	Independence: The chance to work alone on the job.
Q3	Variety: The chance to do different things from time to time.
Q4	Social status: The chance to be "somebody" in the community.
Q5	Supervision-human relations: The way my boss handles his/her workers.
Q6	Supervision-technical: The competence of my supervisor in making decisions.
Q7	Moral values: Being able to do things that don't go against my conscience.
Q8	Security: The way my job provides for steady employment.
Q9	Social service: The chance to do things for other people.
Q10	Authority: The chance to tell other people what to do.
Q11	Ability utilization: The chance to do something that makes use of my abilities.
Q12	Company policies and practices: The way company policies are put into practice.
Q13	Compensation: My pay and the amount of work I do.
Q14	Advancement: The chance for advancement on this job.
Q15	Responsibility: The freedom to use my own judgment.
Q16	Creativity: The chance to try my own methods of doing the job.
Q17	Working conditions: The working conditions
Q18	Co-workers: The way my co-workers get along with each other.
Q19	Achievement: The feeling of accomplishment I get from the job.
Q20	Recognition: The praise I get from doing a god job.

Since Minnesota questioner is developed in United States and the original version is in English, the issue of translating it for the use of Iranian participants had importance in this research. The task of translating

a questioner for the people with another cultural background and language is a critical and complicated task (Candell & Hulin, 1987). Some cross-cultural researches suggest that the concepts in one culture

cannot be completely meaningful for another culture (Sperber, 1994). The back-translation technique is used by the use of bilingual translators is used to translate the questioner from English to Persian. This technique is suggested by Sperbeeb et al., (1994). Minor modifications have been made to make the survey instrument more concentrated on the company's staff context.

The target population marked in this research is limited to the staff of the studied petrochemical Company. Among total 182 staffs of the company 165 questioners have been spreaded and all of them collected. After analysing the frequency of the data 7 of the questioners has been disqualified and other 158 are used to the aim of this study.

Cronbach's α reliability test which is commonly used for measuring the level of consistency and reliability has been used for the purpose of this study. The result of $\alpha=0.75$ shows that the items defined in this questioner are not measuring the same construct.

For another purpose of this study which is to determine whether the intrinsic factors are significantly affecting the level of job satisfaction or the extrinsic factors are affecting the level of job satisfaction the reliability test for this two domains has been applied the result of Alfa shows that the data are somehow reliable: $\alpha=0.667$

Findings and results

For the best prediction of job satisfaction from several independent factors multiple regressions has been used. This is to support the hypothesis 1 until 20 which all examine the effect of different facets on the level of job satisfaction.

The results from multiple regression analysis (Table 2) show that many of the hypotheses 1 to 20 are supported in this research while some others have been rejected.

For another purpose of this study which is to examine the results from previous researches that the intrinsic factors are the most significant determiners of job satisfaction followed by extrinsic factors the regression has been used.

From the results it can be concluded that the external factors are contributing 65 percent of the variance in level of job satisfaction which is a significant predictor. The result (Table 3) show that both external and internal factors are significantly contributing to the level of job satisfaction

Table 2: Final Results of 20 Hypotheses

Hypothesis No.	Factor	Sig	Result
H1	Activity	.000	Supported
H2	Independence	.003	Supported
H3	Variety	.000	Supported
H4	Social status	.000	Supported
H5	Supervision-human relations	.002	Supported
H6	Supervision-technical	.313	Rejected
H7	Moral values	.163	Rejected
H8	Security	.038	Rejected
H9	Social service	.105	Rejected
H10	Authority	.001	Supported
H11	Ability utilization	.000	Supported
H12	Company policies and practices	.134	Rejected
H13	Compensation	.008	Supported
H14	Advancement	.027	Supported
H15	Responsibility	.445	Rejected
H16	Creativity	.000	Supported
H17	Working conditions	.636	Rejected
H18	Co-workers	.651	Rejected
H19	Achievement	.022	Supported
H20	Recognition	.009	Supported

Table 3

Hypothesis No.	Factor	Sig	Result
H21	Intrinsic	.000	Supported
H22	Extrinsic	.000	Supported

From the change of R square and F value (Table 4), it can be concluded that that internal factors make a major contribution to the level of job satisfaction.

Table 4

Model	R Square Change	F Change	Result
Extrinsic	.651	290.951	Supported
Extrinsic & Intrinsic	.349	3.046E16	Supported

From the examination of variables in equation table it can be found that internal factors play a more important role in the level of job satisfaction in our studied company that is matching with the results from previous studies (Zarafshani & Alibaygi, 2008).

It can be concluded that both extrinsic and intrinsic factors are predictors of job satisfaction however the intrinsic factors are more significant.

T-test has been used to check the difference in the level of job satisfaction among male and female employees in different ages, qualifications and positions. The test practices if there are any meaningful difference between the levels of job satisfaction according to the employees' sex to examine the hypothesis 23. The results (Table 5) show there is no meaningful difference in the level of job satisfaction between male and female employees.

Table 5

Hypothesis No.	Factor	T value	Confidence	Result
H23	Age	4.395	95%	Rejected
H24	Gender	0.978	95%	Supported
H25	Position	0.747	95%	Supported
H26	Qualification	0.26	95%	Supported

For the age (hypothesis 24) the test practices if there are any meaningful difference between the levels of job satisfaction in younger employees (less than 30 years old) and older employees (above 30 years old). The result of $t=0.97$ with degree of freedom 156 while $\alpha=0.05$ shows that there is a statistically meaningful difference between the level of job satisfaction of younger (less than 30 years old) and older employees (above 30 years old). The mean value of 2.79 comparing to 2.74, shows that the younger employees have less satisfaction level.

For the position (hypothesis 25) the test practices if there are any meaningful difference between the levels of job satisfaction among employees with different positions. Three groups (admin staff, supervisors and workers) have been separately compared. Testing the level of job satisfaction in admin staff and comparing to supervisors the result of $t=0.747$ with degree of freedom 48 while $\alpha=0.05$ shows that there is a statistically meaningful difference between the level of job satisfaction between admin staff and supervisors. The mean value of 2.55 versus 2.51 shows the lower level of supervisors' satisfaction compared to admin staffs. On the other side there is no meaningful difference between the levels of job satisfaction among employees in supervision positions and operational position. However the meaningful difference from the first test can prove the hypothesis that there is a meaningful relation between job satisfaction and employees position.

For the qualification (hypothesis 26) the test practices if there are any meaningful difference in the levels of job satisfaction between university certification holder employees and others with no certification. The result of $t=2.6$ with degree of freedom 156 while $\alpha=0.05$ shows that there is a statistically meaningful difference between the level of job satisfaction between university certification holders and others with no certifications from university. The mean of 2.68 versus 2.81 shows that employee with at least a bachelor degree are less satisfied with their jobs.

Discussion:

"The opportunity of serving to other people" appeared as the most significant factor in employees' overall job satisfaction. In fact, this case revealed the critical role of intrinsic motivators compared with extrinsic ones.

In the second place, "having the chance to be constantly active", became apparent as the next important job satisfaction's predictor. Whilst, "having the opportunity to do works which enable me to exhibit my competencies," was the third factor impacting on the overall job satisfaction as another intrinsic motivator.

As another research's result, "work stabilizing efforts by employers" was the least significant factor in

determining the overall job satisfaction. After this one, the two following factors: "The company's plans and policies" and "the payment compared to the work's volume" were identified respectively as the least influencing predictors for the overall job satisfaction.

In a general sense, the outcomes of this study revealed that the intrinsic facets of a job such as: ability utilization, be in active sense and socially involvement are considerably more effective on job satisfaction, whilst the extrinsic facets of the job such as: payroll, company's practices and work environment roles indicated less Impact on job satisfaction.

Obviously, these findings are in accordance with the results of the past researches in which the researchers have examined the distinctive impacts of intrinsic and extrinsic facets of the job on overall job satisfaction.

T-test has been used to check the difference in the level of job satisfaction among male and female employees in different ages, qualifications and positions. The results show that there is no difference in the level of job satisfaction between male and female employees. On the other hand the age is an important factor while younger employees are less satisfied comparing to the older employees. The administration staffs are more satisfied comparing to supervisors and operational workforces. This issue perhaps refers to this fact that the high-tenure personnel feel more freedom in their performance and also they experience such a more steady work environment. The study shows that holders of university certification are less satisfied comparing to others without university certifications.

Conclusion

In brief, the job satisfaction as a critical issue in enhancing the productivity of the employees should be taken into account more than ever specifically in risky work environments such as petrochemical industry.

Moreover, an efficient evaluating tool such as MSQ questionnaire can be broadly customized and used in other petrochemical Iranian firms and even in other industries to attain an overall perspective of the personnel's job satisfaction and also to more validate this evaluating tool.

Sure enough, the more researches like the current research in job satisfaction issue in association with petrochemical environments, aid the managers to perceive the efficiency of their taken actions in increasing the overall job satisfaction.

On the other hand, future researches will further reveal the existing gaps between the related organization's policies and the employees' perception of their job satisfaction. Regarding these matters, a macro plan is being developed to examine the level of overall job satisfaction among the company's personnel annually.

References

- Abdel-Halim, A. A. (1983). Effects of Task and Personality Characteristics on Subordinate Responses to Participative Decision Making. *Academy of Management Journal*, 477-484.
- Agho, A., Mueller, C., & Price, J. (1993). Determinants of employee job satisfaction: An empirical test of a causal model. *Human Relations*, 1007-1021.
- Arvey, R., Bouchard, T., Segal, N., & Abraham, L. (1989). Job satisfaction: Environmental and genetic components. *Journal of Applied Psychology*, 187-192.
- Arvey, R., Dewhirst, H., & Boiling, J. (1976). Relationships between goal clarity, participation in goal setting, and personality characteristics on job satisfaction in a scientific organization. *Journal of Applied Psychology*, 103-105.
- Candell, G., & Hulin, C. (1987). Cross-Language Translations and Cross-Cultural Comparisons in Scale Translations. *Journal of Cross-Cultural Psychology*, 417-440.
- Carr, K., & Kazanowski, M. (1994). Factors affecting job satisfaction of nurses who work in long-term care. *Journal of Advanced Nursing*, 878-883.
- Chen, L. (2008). Job satisfaction among information system (IS) personnel. *Computers in Human Behavior*, 24, 105-118.
- Cherrington, D. (1994). *Organizational behavior*. Boston: Allyn and Bacon, Inc.
- Chu, C., Hsu, H., Price, J., & Lee, J. (2003). Job satisfaction of hospital nurses: An empirical test of a causal model in Taiwan. *International Nursing Review*, 176-182.
- Cook, J., Hepworth, S., Wall, T., & Warr, P. (1981). *The Experience of Work*. London: Academic Press.
- Dogan, H. (2009). A comparative study for employee job satisfaction in Aydin Municipality and Nazilli Municipality. *Ege Akademik Bakış / Ege Academic Review*, 423-433.
- Glisson, C., & Durick, M. (1988). Predictors of job satisfaction and organizational commitment in human service organization. *Administrative Science Quarterly*, 33, 61-81.
- Hackman, J., & Oldman, G. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 250-279.
- Hinshaw, A., & Atwood, J. (1984). Nursing staff turnover, stress and satisfaction: models, measures, and management. *In Annual Review of Nursing Research*, 133-155.
- Hoppock, R. (1935). *Job Satisfaction*. New York: Harper and Brothers.
- Hosnavi, R., & Ramezan, M. (n.d.). Measuring the effectiveness of a human resource information system in National Iranian Oil Company: An empirical assessment. *Energy Conversion and Management*, 3, 55-61.
- House, R., Shane, S., & Herold, D. (1996). Rumors of the death of dispositional research are vastly exaggerated. *Academy of Management Review*, 21, 203-224.
- Jago, A., & Vroom, V. (1982). Sex Differences in the Incidence and Evaluation of Participative Leader Behavior. *Journal of Applied Psychology*, 776-783.
- Kafetsios, K., & Zampetakis, L. (2008). Emotional intelligence and job satisfaction: Testing the mediatory role of positive and negative affect at work. *Personality and Individual Differences*, 44, 712-722.
- Kam, L. (1998). Job satisfaction and autonomy of Hong Kong registered nurses. *Journal of Advanced Nursing*, 27, 355-363.
- Knoop, R. (1991). Achievement of work values and participative decision-making. *Psychological Reports*, 68, 775-781.
- Locke, E. (1976). *The nature and causes of job satisfaction*. In M. D. Dunnette (Ed.), *Handbook of Industrial and Organizational Psychology*. Chicago: Rand McNally.
- Maslow, A. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-96.
- Mrayyan, M. (2005). Nurse job satisfaction and retention: comparing public to private hospitals in Jordan. *Journal of Nursing Management*, 40-50.
- Porter, H., Wrench, J., & Hoskinson, C. (2007). The Influence of Supervisor Temperament on Subordinate Job Satisfaction and Perceptions of Supervisor Sociocommunicative Orientation and Approachability. *Communication Quarterly*, 129-153.
- Porter, L., & Lawler, E. (1968). *Managerial Attitudes and Performance*. Homewood: Richard D. Irwin, Inc.
- Price, J. (2001). Reflections on the Determinants of Voluntary Turnover. *International Journal of Manpower*, 22 (7), 600-624.
- Reskin, B., & Ross, C. (1992). Jobs, authority, and earnings among managers: The continuing significance of sex. *Work and Occupations*, 19(4), 342-365.
- Sengin, K. (2003). AONE Leadership Perspectives: Work-related attributes of RN job satisfaction in acute care hospitals. *Journal of Nursing Administration*, 33(6).
- Smith, P., Kendall, L., & Hulin, C. (1969). *The measurement of satisfaction in work and retirement*. Chicago: Rand McNally.
- Sperber, D. (1994). Understanding verbal understanding. In Jean Khalfa (ed.) *What is Intelligence?* Cambridge University Press, 179-198.
- Staw, B., & Ross, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. *Journal of Applied Psychology*, 469-480.
- Staw, B., Bell, N., & Clausen, J. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, 31, 56-77.
- Stordeur, S., D'Hoore, W., & Vandenberghe, C. (2001). Leadership, organizational stress, and emotional exhaustion between hospital nursing staff. *J of Advanced Nursing*, 533-542.
- Sutherland, V. J., & Cooper, C. L. (1991). Personality, stress and accident involvement in the offshore oil and gas industry. *Personality and Individual Differences*, 12(2), 195-204.
- Vroom, V. (1964). *Work and Motivation*. New York: McGraw Hill.
- Vroom, V. (1982). *Work and motivation (Rev. ed.)*. Malabar: FL: Robert E. Krieger Publishing Company.
- Weiss, H. (2002). Deconstructing job satisfaction: separating evaluations, beliefs and affective experiences. *Human Resource Management Review*, 12, 173-194.
- Zarafshani, K., & Alibaygi, A. (2008). Predictors of Job Satisfaction among Academician Iranian University. *NACTA Journal*.

1/20/201