

An Investigation of Age, Job Tenure, Job  
Function, Location, on Job Satisfaction of  
Air Traffic Controllers in Kuala Lumpur  
International Airport and Air Traffic Control  
Centre

By

Nagayaindran a/l S. Narayanan

A thesis

Presented to the Faculty of Business Management

Universiti Utara Malaysia

In fulfillment of the

thesis requirement for the degree of

Master of Science (Management)

Universiti Utara Malaysia, 2004

©Nagayaindran S. Narayanan, 2004



Fakulti Pengurusan Perniagaan  
(Faculty of Business Management)  
Universiti Utara Malaysia

**PERAKUAN KERJA KERTAS PROJEK**  
(*Certification of Project Paper*)

Saya, yang bertandatangan, memperakukan bahawa  
(*I, the undersigned, certify that*)

**NAGAYAINDRAN S. NARAYANAN**

calon untuk Ijazah **MASTER OF SCIENCE (MANAGEMENT)**  
(*candidate for the degree of*)

telah mengemukakan kertas projek yang bertajuk  
(*has presented his/her project paper of the following title*)

**AN INVESTIGATION OF AGE, JOB TENURE, JOB FUNCTION, LOCATION ON JOB**  
**SATISFACTION OF AIR TRAFFIC CONTROLLERS IN KUALA LUMPUR**  
**INTERNATIONAL AIRPORT AND SUBANG AIR TRAFFIC CONTROL CENTRE**

Seperti yang tercatat di muka surat tajuk dan kulit kertas projek  
(*as it appears on the title page and front cover of project paper*)

bahawa kertas projek tersebut boleh diterima dari segi bentuk serta kandungan  
dan meliputi bidang ilmu dengan memuaskan.  
(*that the project paper acceptable in form and content and that a satisfactory  
knowledge of the field is covered by the project paper*).

Nama Penyelia  
(*Name of Supervisor*)

**PUAN HANISSAH A. RAZAK**

Tandatangan  
(*Signature*)

Tarikh  
(*Date*)

19/11/04

## PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a postgraduate degree from Universiti Utara Malaysia, I agree that the University Library may make it freely available for inspection. I further agree that permission for copying of this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or, in his absence, by the Dean of Business Administration Faculty. It is understood that any copying or publication or use of this thesis or parts thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to Universiti Utara Malaysia for any scholarly use which may be made of any material from my thesis.

Requests for permission to copy or to make other use of materials in this thesis, in whole or in part should be addressed to:

Dean, Faculty of Business Management

University Utara Malaysia

06010 UUM Sintok

Kedah Darul Aman

## ABSTRAK

Ini ialah suatu kajian asas untuk mengenalpasti kesan faktor umur, tempoh masa bekerja, jenis tugas dan penempatan ke atas kepuasan kerja pegawai kawalan trafik udara. Umur, tempoh masa bekerja, jenis tugas dan penempatan merupakan pembolehubah bebas dan kepuasan kerja merupakan pembolehubah bersandar. Jenis tugas merujuk kepada tugas 'aerodrome control', 'approach control' dan 'area control'. Penempatan merujuk kepada Kuala Lumpur International Airport (KLIA) serta Subang dan kajian dibuat terhadap kemungkinan kesan perbezaan beban tugas terhadap kepuasan kerja secara keseluruhan di kedua-dua tempat ini.

Kajian ini hanya merangkumi jumlah pegawai kawalan trafik udara operasi di Menara Kawalan KLIA dan Pusat Kawalan Trafik Udara Subang. Ini bermakna pegawai kawalan trafik udara pengurusan diabaikan. Pegawai kawalan trafik udara yang sedang menjalani latihan atau digantung tugas operasi atas pelbagai sebab tertentu operasi juga diabaikan. Soal selidik Spector 'Job Satisfaction Survey (JSS)' digunakan untuk kajian ini.

Statistik deskriptif yang berkenaan telah dikira dan 'Cronbach's alpha' telah digunakan untuk menguji kebolehpercayaan ketekalan dalaman. Analisis Varians Sehala dan Ujian t-sampel bebas telah digunakan untuk menguji hipotesis. Penemuan menunjukkan bahawa tahap kepuasan kerja keseluruhan meningkat bersama dengan umur dan tempoh masa bekerja. Pegawai kawalan trafik udara yang paling berpuas secara keseluruhan ialah mereka yang bertugas dalam bidang 'aerodrome control' diikuti oleh mereka yang bertugas dalam bidang 'approach control'. Mereka yang bertugas dalam bidang 'area control' paling kurang berpuas. Pegawai kawalan trafik

udara KLIA yang kurang mengalami beban dalam tugas lebih berpuas secara keseluruhan berbanding dengan pegawai kawalan trafik udara Subang yang mengalami lebih banyak beban dalam tugas.

## ABSTRACT

This is a basic research to examine if age, tenure, job function and location affect the job satisfaction of air traffic controllers. Age, tenure, job function and location are the independent variables and job satisfaction is the dependent variable. The three job function refers to aerodrome control, approach control and area control. Location refers to Kuala Lumpur International Airport (KLIA) and Subang and examines if the inherent workload difference in these two places might affect job satisfaction.

The subject of this study includes only the population of operational air traffic controllers in KLIA Control Tower and Subang Air Traffic Control Centre which means air traffic controllers who are in management functions have to be excluded. Air traffic controllers away on extended training and suspended duty due to various operational reasons are also excluded. Spector's Job Satisfaction Survey (JSS) questionnaire was used to conduct the survey.

Appropriate descriptive statistics were computed and Cronbach's alpha was used to test for internal consistency. One-way-Anova and Independent Sampel T-Test was used to test the hypothesis. The findings of the study indicated that overall job satisfaction improved with age and tenure. Air traffic controllers performing aerodrome control job function were most satisfied followed by those performing approach control duties. Air traffic controllers performing area control job function were least satisfied. For overall job satisfaction, air traffic controllers from KLIA who

experience lower workload are more satisfied than air traffic controllers from Subang who experience higher workload.

## ACKNOWLEDGEMENT

To persevere and complete any post-graduate program I presume would require an immense reservoir of mental, emotional energy to weather the demanding circumstances peculiar to one own life circumstances. Crucial during these times are the support and encouragement from people around us. I was fortunate enough to have good people who persevered with me, guided and facilitated me in this endeavor of mine. They are my family, friends, course-mates and most crucial in this instance my Supervisor and the members of the research committee, Faculty of Business Management, Univeriti Utara Malaysia.

My deepest appreciation and reverence goes to all who impart knowledge. To the Dean of the Faculty of Business Administration, Associate Professor Dr. Abdul Jumaat Hj Mahajar, thank you for the firm but compassionate moments you spent with our group of 2004. Your reassurances kept me going. To Associate Professor Dr. Hassan Ali, thank you for redirecting my path onto the right track during the research proposal. To Associate Professor Dr. Hj. Abu Bakar Hj. Hamed and Dr. Hj. Abdullah Haji Abdul Ghani, thank you for your extraordinary willingness and patience to make sure we understood our tasks and your expectations. To En. Mohd Hanizan Zalazilah, thank you for the knowledge you afforded us during the coursework and the constructive feedback during the presentation.

To my supervisor, Puan Hanissah A. Razak, thank you for willingness to supervise my research despite difficulties imposed by the physical distance that makes personal interaction difficult. Your support and guidance has been extremely helpful, appreciated and has put me at great ease.

A special thanks to the Director General of DCA, the Director of Air Traffic Services and especially En. Ahmad Nizar who made possible for me to attend the whole program. My appreciation also goes to Mr. Ooi Seong Kang of INTAN for his tireless effort, counsel and advice throughout the program.

To my wife, thank you for tirelessly taking on so many of the family responsibilities to afford me the time I needed. To my three wonderful children who understood my commitment never complained about my absence in their daily life, you are always a source of inspiration.



Table 4.1 : Frequency and Percentages for Gender .....	64
Table 4.2 : Frequency and Percentages for Grade .....	64
Table 4.3 : Frequency and Percentages Statistics for Chronological Age .....	65
Table 4.4 : Frequency and Percentages Statistics for Job Tenure.....	66
Table 4.5 : Respondent Distribution According to Job Function .....	67
Table 4.6 : Frequency and Percentages - Location .....	67
Table 4.7 : Facet Level and Overall Job Satisfaction Score .....	68
Table 4.8 : ANOVA - Age .....	70
Table 4.9 : Multiple Comparisons .....	70
Table 4.10 : ANOVA - Job Tenure.....	71
Table 4.11 : Multiple Comparisons - Job Tenure .....	72
Table 4.12 : ANOVA - Job Function.....	74
Table 4.13 : Multiple Comparisons - Job Function .....	74
Table 4.14 : ANOVA- Facets Associated with Job Characteristics .....	75
Table 4.15 : Tukey HSD – Contingent Rewards .....	76
Table 4.16 : Independent Samples Test - Workload Based on Location.....	77

## CHAPTER 1 - INTRODUCTION

1.1 The Interest in Job Satisfaction.....	1
1.2 Significance of Study .....	2
1.3 Problem Statement .....	7
1.4 Research Objectives .....	8
1.5 Research Questions .....	9

## TABLE OF CONTENTS

Permission to Use .....	ii
Abstrak .....	iii
Abstract .....	v
Acknowledgement .....	vi

### LIST OF FIGURE

Figure 2.1 : Equity Comparison as an Intervening Variable in the Rewards, Satisfaction and Performance Relationship. ....	23
Figure 2.2 : Hackman, J.R., & Oldham, G.R. (1976). Job Characteristics Model.....	32
Figure 3.1 : Theoretical Framework .....	48

### LIST OF TABLES

Table 2.1 : Dissatisfiers or Hygiene Factors and Satisfiers or Motivator Factors .....	21
Table 2.2 : Ratio and Percentage of Hygiene Factors or Motivator Factors.....	22
Table 2.3 : Summary of Job Characteristics Difference .....	41
Table 3.1 : Subscale Items .....	55
Table 3.2 : Negatively and Positively Worded Items .....	55
Table 3.3 : Reverse Scoring .....	56
Table 3.4 : Internal Consistency Reliability (Spector, 1987).....	57
Table 3.5 : Total Norms - Job Satisfaction Survey (Spector, 1977) .....	58
Table 3.6 : Coefficient Alpha.....	60
Table 3.7 : Statistical Tools Employed for Inferential Statistics .....	62

1.6	Assumptions.....	10
1.7	Delimitations - Study Population.....	10
1.8	Limitations .....	11
1.9	Definitions.....	11
1.10	Organization of Study .....	14

## CHAPTER 2 - LITERATURE REVIEW

2.1	Introduction.....	15
2.2	Job Satisfaction .....	15
2.3	Importance of Job Satisfaction.....	17
2.4	Theories of Job Satisfaction.....	18
2.4.1	Theories of Content.....	18
	a. Marslow's Hierarchy of Needs Theory .....	18
	b. Alderfer's ERG Theory.....	19
	c. Herzberg's Two Factor Theory.....	20
2.4.2	Theories of Process .....	22
	a. Adam's Equity Theory.....	22
	b. Vroom's Expectancy Theory .....	24
2.5	Job Satisfaction Measures.....	25
2.5.1	Single Item and Multiple Item (Scale) Measures.....	25
2.5.2	General Measures - Global Scales and Composite Measurers .....	26
2.6	Demographic Difference and Job Satisfaction.....	27
2.6.1	Age and Job Tenure .....	27

2.6.2	Job Function.....	30
	a. Skill Variety .....	32
	b. Task Identity .....	33
	c. Task Significance .....	33
	d. Autonomy .....	33
	e. Feedback .....	33
2.6.3	Air Traffic Control Job Functions and Their Characteristics .....	34
	a. Aerodrome Control .....	35
	b. Approach Control.....	36
	c. Area Control.....	38
2.6.4	Workload Differences Because of Location .....	42
2.6.5	Airspace Activity and Workload .....	43
2.7	Conclusion .....	44

## CHAPTER 3 - RESEARCH DESIGN & METHODOLOGY

3.1	Introduction.....	45
3.2	Type and Nature of Study .....	45
3.3.	Place of Study .....	46
3.4	Defining the Population .....	46
3.5	Theoretical Framework .....	47
3.6	Hypothesis.....	49
3.7	Instrumentation .....	51
3.8	Internal Consistency Reliability.....	56

3.9	Validity .....	57
3.10	Norms.....	58
3.11	Pretest.....	58
3.12	Reliability of The Job Satisfaction Survey .....	59
3.13	Data Collection .....	60
	a. Distribution .....	60
	b. Collection.....	61
3.14	Data Analysis .....	61
	a. Descriptive Statistics .....	61
	b. Inferential Statistics .....	62

#### CHAPTER 4 - DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1	Introduction.....	63
4.2	Description of the Respondents .....	63
4.3	Personal Characteristics .....	64
4.3.1	Non - Variables .....	64
	a. Gender .....	64
	b. Grade .....	64
4.3.2	Independent Variables.....	65
	a. Age .....	65
	b. Job Tenure.....	65
	c. Job Function .....	66
	d. Location .....	67

4.3.3	Dependant Variable - Job Satisfaction.....	67
4.4	Inferential Statistics .....	69
	Hypothesis Testing.....	69
4.5	Summary of Findings.....	77
4.6	Conclusion .....	80

## CHAPTER 5 - SUMMARIES, CONCLUSIONS AND RECOMMENDATIONS

5.1	Introduction.....	81
5.2	Age and Job Satisfaction.....	81
5.3	Tenure and Job Satisfaction .....	83
5.4	Job Function and Job Satisfaction.....	84
5.5	Workload and Job Satisfaction .....	85
5.6	Conclusion .....	87
5.7	Recommendations.....	87
5.8	Recommendations for Future Study .....	89
	References.....	90

### Appendices

Appendix A: Letter from INTAN to DCA seeking approval to conduct research .....	96
Appendix B: Letter from DCA granting approval to conduct research.....	98
Appendix C: Questionnaire Cover Letter .....	100
Appendix D: Modified JSS Questionnaire .....	102

Appendix E: Airspace Division – Kuala Lumpur Terminal Control Area and Airports	
Within.....	110
Appendix F: Airspace Division – Plan View of Kuala Lumpur Flight Information Region	
(Extracted from MATS Part II and Modified) .....	112
Appendix G: ANOVA / Descriptives – Age .....	114
Appendix H: ANOVA / Descriptives – Tenure .....	116
Appendix I: ANOVA / Descriptives – Job Function .....	118
Appendix J: Group Statistics / Independent Samples Test - Workload .....	120

## CHAPTER 1

### INTRODUCTION

#### 1.1 The Interest in Job Satisfaction

Job satisfaction has been a widely researched topic since the beginning of the twentieth century. Many different researchers have variously defined the factors used to determine job satisfaction. Larke (1998) found most studies tend to look at psychological and environmental attributes of job satisfaction. Past studies also attempted to show common attributes of satisfaction and dissatisfaction within various industries. Many articles credit Hoppock's (1935) job satisfaction as the pioneering work (Green, 2000) and according to Spector (1996) as reported by Brief and Wise(2002), studies on job satisfaction had yielded more than 10,000 literatures as of then. Wide spectrums of jobs have participated in job satisfaction survey. The Civil Aeromedical Institute belonging to Federal Aviation Administration (FAA) of the United States of America conducts studies relating to job satisfaction of air traffic controllers (Witt and Alan,1994; Thompson, Richard and Lawrence, 2000; Broach and Dollar, 2002; Hackworth, King , Janine, Detwiler & Cristy, 2003). It actively carries out surveys to ascertain the perception of employees towards their jobs.

Spector (1997) has cited two reasons on why there should be concern for job satisfaction. The first is cited based on the need to be humanitarian and thus people deserve respect and fair treatment. The view is that, to a certain extent job satisfaction is



The contents of  
the thesis is for  
internal user  
only

## References

- Ang, K.B., Goh, C.T. & Koh, H.C. (1993). The impact of age on the job satisfaction of accountants. *Personnel review*; 1993; 22, 1,31.
- Bedian, A. G., Ferris, G. R.& Kacmar, K. M. (1992). Age, tenure, and job satisfaction: a tale of two perspectives. *Journal of Vocational Behaviour*. 40, 1, 33- 48. February, 1992.
- Bisignani, G. (2004),. *State of the air transport industry report by the director general*. IATA Conference Singapore. Retrieved July 3, 2004 from <http://www.iata.org/pressroom/speeches/2004-06-07-01.htm>
- Bogg, J. & Cooper, C. Job satisfaction, mental health, and occupational stress among senior civil servants. *Human Relation*, 48,3, 327 – 341, 1995.
- Brief, A. P., & Weiss, H. M. (2002). Organizational behaviour: Affect in the workplace. *Annual Review of Psychology*, 282-284, 279 – 307.
- Brush, H. D., Moch, M. K. & Pooyan, A.(1987) Individual demographic differences and job satisfaction. *Journal of Occupational Behaviour*, 8, 2, 139, April 1987.
- Broach, D. M. & Dollar C. S. (2002). *Relationship of employee attitudes and supervisor – controller ratio to en route operational error rates*. Federal Aviation Administration Office of Aerospace Medicine. Washington, DC. (DOT/FAA/AM-02/9) Retrieved July 5, 2004 from <http://www.amelia.db.erau.edu/db/am.htm#00>
- Clark, A.E., Georgellis Y. & Sanfey P. (1998): ‘Job satisfaction, wage changes, and quits’ *Research in Labour Economics*, 17, 95-121.

Clark, A., Oswald, A. & Warr, P. (1996) Is job satisfaction U-shaped in age? *Journal of Occupational and Organizational Psychology*. Leicester. 69, 1, 57, Mar, 1996.

Department of Civil Aviation, Malaysia(DCA)(1998). *Procedures on Air Traffic control Training, Rating, Validation and Licensing of Air Traffic Controllers*.

Department of Civil Aviation, Malaysia(DCA). *Aeronautical information publication of Malaysia*.

Department of Civil Aviation, Malaysia(DCA). *Manual of air traffic services. part 1 and part II*.

Dwyer, Deborah J. Ganster & Daniel C. The effects job demands and control on employee attendance and satisfaction. *Journal of Organizational Behavior*. 12, 595 – 608. Dec, 1991.

Eurocontrol(2001) *Safety Models Applied to Air Traffic Control – Understanding The Work of The Air Traffic Controller*. Retrieved June 25, 2004 from <http://www.eurocontrol.fr/public/reports/eecnotes/1999/13.pdf>

Ferguson, E. & Chyene, A.(1995) Organizational Change: Main and iterative effects. *Journal of Occupational and Organizational Psychology*. 88, 2,101-108. June, 1995.

Wickens, Christopher D., Mavor, Anne S., Parasuraman, Raja, & McGee, James P. (1997). *Flight to the Future: Human Factors in Air Traffic Control*. The National Academy of Sciences. Washington DC.

Freeman, R. (1978) 'Job Satisfaction as an Economic Variable' *American Economic Review*, 68:135-141.

- Gazioglu, S. & Tansel, A. (2002) *Job Satisfaction in Britain: Individual and Job Related Factors*. Economic research Center (ERC) Working papers in Economics (2002) 03/03
- Green, J. (2000). *Job Satisfaction of Community College Chairpersons*. Unpublished doctoral dissertation, Virginia Polytechnic Institute & State University, Blacksburg, Virginia.  
Retrieved July 3, 2004, from  
<http://www.scholar.lib.vt.edu/theses/available/etd-12072000-130914> -
- Hankin & Baclay, D.(1982) *Managing job satisfaction: A practical guide*. Hillbex Press.  
London.
- Hackworth, C. A., King S., Janine, Detwiler & Cristy A.(2003). *Employee Attitude Survey 2000: Perspective on Its Process and Utility*: Federal Aviation Administration Office of Aerospace Medicine. Washington DC (DOT/FAA/AM-03/11) Retrieved July 5, 2004 from, <http://amelia.db.erau.edu/db/am.htm#00>
- Hackman, J. R. & Oldham, G. R.(1976) Motivation through the design of work: Test of a theory. *Organizational Behaviour and Human Performance*. 16. 250 – 279.
- Jex, S. M. & Beehr, T.A. (1991) Emerging theoretical and methodological issues in the study of work related stress, *Research in Personnel and Human Resource Management*, 9, 311 – 365.
- Karasek, R. Gardell, B. & Lindell, J. (1987) Work and non-work correlates and behaviour in male and female Swedish white collar workers. *Journal of Occupational Behaviour*, 8, 187 -207.

- Kuo, Y. & Chen, L. (2004). Individual demographic differences and job satisfaction among information technology personnel: an empirical study in taiwan. *International Journal of Management*. 21. 2. 221 – 230. June 2004.
- Larke, A. "*Job satisfaction in the advertising industry*" Department of Advertising and Public Relations. Retrieved on May 9<sup>th</sup> 2004, from [http://www.eop.mu.edu/mcnair/1998/AllysonLarke/Research\\_Abstract.htm](http://www.eop.mu.edu/mcnair/1998/AllysonLarke/Research_Abstract.htm)
- Lee, Raymond. Wilbur & Elizabeth, R. Age, education, job tenure, salary, job characteristics, and job satisfaction: a multivariate analysis. *Human Relations*. New York. 38, 8, 781 - 792. Aug 1985.
- Maher, E. (2002) *Overcoming controllable and uncontrollable Work Difficulties: Change Environment or Self?* Deakin University . Retrieved on May 9<sup>th</sup> 2004, from [http://www.acqol.deakin.edu.au/theses/Complete\\_thesis\\_Elise\\_Maher.doc](http://www.acqol.deakin.edu.au/theses/Complete_thesis_Elise_Maher.doc)
- Meriam – Websters Online Dictionary. Retrieved on October 2<sup>nd</sup> 2004 from <http://www.m-w.com/cgi-bin/dictionary?book=Dictionary&va=workload&x=15&y=17>
- Mills, Scot H. (1998). *The combination of flight count and control time as a new metric of air traffic control activity*. Federal Aviation Administration Office of Aerospace Medicine. Washington DC. (DOT/FAA/AM-98/15). Retrieved Sept 15, 2004, from <http://www.amelia.db.erau.edu/db/am.htm#00>
- Mumford, E.(1972) '*Job satisfaction – a study of computer specialist*'. Longman Group Limited. London.
- Nagy, Mark S. (2002). Using Single-Item Approach to Measure Facet Job Satisfaction. *Journal of occupational and Organizational Psychology* .75, 77-86. 2002,

- Jabatan Perkhidmatan Awam. *Pelaksanaan sistem saraan Malaysia bagi anggota perkhidmatan awam persekutuan*. Pekeliling Perkhidmatan Bilangan 4/ 2002.
- Sarker, J. S. Crossman, A. & Chinmeteepituck. *The relationship of age and length of service with job satisfaction: an examination of hotel employees in Thailand*. Journal of Managerial Psychology. Bradford. 2003. Vol. 18, Is. 7/8 pg 745.
- Schermerhorn, J R. Jr., Hunt, J. G. Hunt. & Osborn, R. N.. *Managing organizational behaviour*. Fifth Edition.(1994). John Wiley and Sons, Inc. New York. The National Academy of Sciences, Washington DC.
- Sekaran, U. *Research methods for business*. Fourth Edition. John Wiley & Sons, Inc. New York.
- Snow, C. C., & Snyder, R. G.(1965). *Anthropometry of air traffic control trainees* Washington DC: Federal Aviation Administration Office of Aerospace Medicine. (DOT/FAA/AM-65/26) Retrieved Sept 15, 2004, from <http://www.amelia.db.erau.edu/db/am.htm#00>
- Sperandio, J.C. 1971. Variation of operator's strategies and regulating effects on workload. *Ergonomics* 14:571–577.
- Spector, P.E.(1985). Measurement of human service staff satisfaction:development of the job satisfaction survey. *American Journal of Community Phsychology*.13, No 6, 1985.
- Spector P.E. (1987). Interactive effects of perceived control and job stressors on affective reactions and health outcomes for clerical workers. *Work & Stress*.1. Pg155 – 162.
- Spector, P.E.(1997). *Job satisaction: Application, assessement, causes and consequences*. Thousand Oaks, CA: Sage Publications Inc.

- Thompson, Richard C. B & Lawrence L.(2000). *Age and attitudes in the air traffic control specialist workforce: An initial assessment*. Washington DC: Federal Aviation Administration Office of Aerospace Medicine. (DOT/FAA/AM-00/17) Retrieved Sept 15, 2004, from <http://www.amelia.db.erau.edu/db/am.htm#00>
- U.S. Department of Labor (2004). *Occupational outlook handbook*, 2004-05 Edition. Retrieved May 8, 2004, from (<http://www.stats.bls.gov/oco/print/ocos108.htm>)
- Wagner, J. A. & Hollenbeck (1995), R. J. *Management of organizational behavior*. 2<sup>nd</sup> Edition Prentice Hall. New Jersey.
- Wanous, John P.R., Arnon E. H & Michael J.(1997). Overall job satisfaction: how good are single-item measures? *Journal of Applied Psychology*, 82, 2, 247 – 252. 1997
- White, Thomas, A. & Spector, P.E.(1987). An investigation of age-related factors in the age-job-satisfaction relationship. *Journal of American Psychological Association*, 2, 3. 261-265. 1987.
- Witt, L. A.(1994). *Perceptions of organizational support and affectivity as predictors of job satisfaction*. Federal Aviation Administration Office of Aerospace Medicine. Washington DC. (DOT/FAA/AM-94/2) Retrieved Sept 15, 2004, from <http://www.amelia.db.erau.edu/db/am.htm#00>
- Ypren, N W. V. & Janssen, O.(2002) Fatigued and dissatisfied or fatigued but satisfied? Goal orientations and responses to high job demands. *Academy of Management Journal*.45, 6. 1161. Dec 2002