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2009

# An Asian perspective on the influence of age, job characteristics and training opportunities on job satisfaction

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## Publication Details

Hosie, P., Jayashree, P., Tchantchane, A. & Lee, B. 2009, 'An Asian perspective on the influence of age, job characteristics and training opportunities on job satisfaction', International Conference on Management, Athens Institute for Education and Research, Athens, pp. 1-22.

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**An Asian perspective on the influence of Age,  
Job Characteristics and Training Opportunities on Job Satisfaction**

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**Abstract**

This study reports on the responses of 165 site staff of a reputed Singaporean retail petroleum company. Links are explored between a conceptual framework consisting of the impact of Job Characteristics on Job Satisfaction, Training Opportunities on Job Satisfaction, and the role of Age as a mediator between these variables. Multiple regression analysis was used to investigate which variables best predict Job Satisfaction as an outcome variable. A full regression multivariate model consisting of Job Characteristics variables (operationalized in terms of Skill Variety, Autonomy, Task Identity and Task Feedback), Training Opportunities, and Age groups explained 39.8% of the variability in the dependent variable Job Satisfaction. A restricted model consisting of Training Opportunities and Autonomy explained the bulk (35.4%) in the variability of the outcome variable Job Satisfaction. Both graphical analysis using a side-by-side box plots and ANOVA was used to test the way in which the mean of the investigated variables are affected by each of five age groups. The results revealed no evidence of significant difference in the variables' means among age groups with Age accounting for less than 1.5% of variance in the proposed model. While the findings provide strong empirical support for Autonomy and Training Opportunities as an important predictor of Job Satisfaction, Age itself was not found to moderate the relationships between the linkages. Future research could productively identify the relative contribution of specific formal and informal Training Opportunities, and the relative contribution of performance-based

incentive schemes and other motivational strategies for employee Job Satisfaction.

## **INTRODUCTION**

Labor turnover in the retail industry has been a matter of concern for academics and industry experts alike. Several attempts have been made to identify the root causes for turnover in the retail industry in order to take corrective measures to enhance Job Satisfaction and improve performance of the employees. These issues are particularly significant in the context of Singapore which has emerged as a strong player in the retailing sector, not only because of the growing affluence of Singaporeans but also because of targeted governmental policies and initiatives in the 1970s and 1980s to open up the market to foreign investment.

These changes provide opportunities for the expansion of multiple retailers from around the world but also pose a threat to the existing Singaporean retailers who were forced to cut costs to achieve sustainability, especially during periods of recession (Keri, 1993). A report by Cedar Consultants (2009) on the franchises of retail petroleum industry found that the four leading players—Exxon Mobil, Shell, Caltex and British Petroleum—account for over 95% of the retail fuel sales in Singapore. Because of limited opportunities to expand, the existing retailers are predicted to provide more value-added service in order to attract and retain customers (Cedar Consulting, 2009). In this context, the service staff at these retail franchises has become a focal area of interest as they are uniquely positioned to provide exceptional or awful service to customers. This study attempts to examine the factors that contribute to Job Satisfaction among retail staff, as this is believed to have an impact on the quality of service provided.

## **CONTEXT**

The retail petroleum industry continues to be a growing industry despite the ‘credit crunch’ of 2008/9. With the growing affluence in the Singapore society, more people own cars; 550,455 in 2008 up from 375,217 in 1998 (Land Transport Authority, 2006). As the Singapore Government continues to develop new housing estates, petrol stations keep springing up. With the emergence of new petrol stations comes the concomitant demand for more retail staff to manage these stations to ensure the smooth running of daily operation and business.

The retention of valued employees has been a pervasive goal of retail firms, yet industry figures for retail employee turnover remain among the highest of all job families, ranging from 20% (Huselid and Day, 1991) to 263% (Good, et al., 1996). Studies by Booth and

Hamer (2007) and Hendrie (2004) have reiterated the significance of understanding the various factors that lead to turnover in the retail industry, the corrective measures to take has important implications for the competitiveness of the industry. Findings from this study are especially important in the retail petroleum industry within the Asian context where consumers are not attuned to self-service. Asian consumers expect someone to serve them when they refuel. As a labor intensive industry, high turnover rate has a direct impact on the costs and thus the profitability of the business. Turnover is highly undesirable in view of the market pressure to reduce operating costs. This view is partly supported by the Singaporean Government's social policy, which led to the launch the Workforce Skills Qualifications (WSQ) System that aimed to provide opportunities to upgrade skills and qualifications of Singaporean workers so as to improve overall service standards.

Findings from this study are based on data collected from retail site staff in Singapore and will add additional insights to the limited evidence that now exists with regard to the validity of the relationship between Job Characteristics, Training Opportunities and Job Satisfaction in an Asia culture. The main question was would there be also be any significant difference when Age was being studied together with Training Opportunities and Job Satisfaction? These findings will be of interest to academics and organisations especially in light of the uncertainties that retailers face.

## **LITERATURE REVIEW**

Several Asian studies have documented the capacity of Job Satisfaction has on negative impact on turnover intentions (Khatri, Fern and Budhwar, 2001; Honda-Howard and Michiko Homma, 2002; Kyuhwan, 2006; Rahman, Naqvi and Ramay, 2008). Turnover rates in Singapore has been reported to be among the highest in Asia because of a 'job hopping' attitude coupled with perceptions of a lack of procedural justice (Khatri, Fern and Budhwar, 2001). In a review of labor turnover into major retail firms, Booth and Hammer (2007) and Hendrie (2004) found labor turnover decreases in the presence of a supportive work environment and a supportive work group, while it tended to increase proportional to a negative work environment characterized by lack of career development opportunities, training and poor staff recognition.

A growing body of literature has investigated the impact of possible variables on the determinants of Job Satisfaction. Groot and Maasen (1999) explored the extent to which individual characteristics, job characteristics, and the quality of the match between individual skills and skill requirements of the job, explain differences in overall Job Satisfaction between older workers. They found that satisfaction with

the content of a job was the main factor that explained overall Job Satisfaction. Much earlier, Hackman and Oldham (1980) found that routine of work leads to reduced Job Satisfaction. Muchinsky and Tuttle (1979) and Muchinsky and Morrow (1980) also supported the finding that task repetitiveness shows a consistent positive relationship with turnover.

Among the various content and process theories of motivation, it was Herzberg, et al. (1959) who postulated that extrinsic factors such as 'the context of the job' or 'hygiene factors', including 'money' and 'type of supervision' can best prevent dissatisfaction, but by themselves cannot 'motivate' employees. Intrinsic motivation, according to Herzberg, et al's. (1959) increases, 'The motivation to work' was related to the 'content of the job' and 'opportunities for advancement'. The staying power of this theory is vindicated by a growing body of researchers who have tested the applicability of Herzberg's two factor theory in contemporary organisations.

Bassett-Jones and Lloyd (2005) verified the validity of Herzberg's two factor theory using a unique approach wherein they examined a survey of over 3,200 responses to identify the underlying factors that motivate employees to contribute ideas within the context of work based suggestion schemes. As suggested by Herzberg, et al. (1959), 'empowered' employees were more prone to give suggestions, and as opposed to money and recognition. 'Intrinsic factors' such as 'a desire to overcome frustration at work and improve the success of the organisation', and 'personal satisfaction obtained from seeing their idea implemented' motivated employees to contribute ideas.

The most significant application of Herzberg et al. (1959) two factor theory has been in 'Job Enrichment': most notably Hackman and Oldham's Job Characteristics Model (Hackman and Oldham, 1975, 1980) postulates that the Motivating Potential Score of a job may be enhanced by increasing Skill Variety, Task Significance, Task Identity, Autonomy and Feedback; all are considered to lead to individuals experiencing four critical psychological states—experience, meaningfulness of work, experienced responsibility for outcomes of work, and knowledge of the actual results of work activities as illustrated in Figure 1.

#### **INSERT FIGURE 1 ABOUT HERE**

Various researchers have proposed different versions of the Job Characteristics to understand how influence on Job Satisfaction of workers, Rabinowitz and Hall (1977); Sims, et al. (1976). For example, Lee-Ross (2002) tested all the specified relationships in the Job Characteristics Model for its appropriateness in a health care setting in Australia. Overall, as predicted the core job dimensions strongly correlated with affective outcomes and critical

psychological states, with the strongest correlation reported between Feedback and Growth Satisfaction and the weakest between Task Significance and Growth Satisfaction. The Job Characteristics–Job Satisfaction Relationship was further confirmed by Thomas, et al. (2004) who reported that of the four Job Characteristics– Skill Variety, Autonomy, Task Identity and Task Feedback were the most significant predictors of Job Satisfaction, and these factors were important irrespective of differences in age, gender, occupation, organization or job type.

The need for more research in this stream was supported by another study by Huang and Van De Vliert (2003) whose survey of 49 countries revealed that there may be ‘national moderators’ of intrinsic motivation. Specifically, the results revealed that the links between intrinsic Job Characteristics and Job Satisfaction are moderated by national characteristics that were stronger in richer, more individualistic and smaller power-distance countries, and countries with better governmental social welfare programs (Huang and Van De Vliert, 2003). A study by Friday and Friday (2005) of racio-ethnically diverse individuals, primarily Hispanic, Latino and Black, found all the five core job dimensions–Autonomy, Feedback, Skill Variety, Task Identity and Task Significance, Feedback and Task Identity–to be important factors in increasing the motivating potential of minorities. In turn, this enhanced perceptions of promotional opportunities and satisfaction with the work itself, leading to Job Satisfaction.

### *Job satisfaction*

Several decades of research have informed the conceptualization of Job Satisfaction as a person’s cognitive appraisal of the working environment (Organ and Near, 1985). Organisational Behaviour theorists have extensively researched motivational aspects of intrinsic work attitudes such as Job Satisfaction, a multidimensional construct that was strongly influenced by disposition and mood. Hoppock (1935) initially conceived of Job Satisfaction as the aggregate of dispositional and situational influences.

Others have suggested that Job Satisfaction is the positive emotional and cognition reactions a person has towards a job (Oshagbemi, 1991). Consistent with this view is Locke’s (1976: 1299) definition of Job Satisfaction as ‘a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experience’. A more balanced treatment of the self-report of Job Satisfaction was made by Motowidlo, Packard and Manning (1986: 176), who defined it as ‘judgments about the favorability of the work environment’. Job satisfaction may be divided into two elements: intrinsic and extrinsic. Intrinsic Job Satisfaction refers to the internal state associated with characteristics inherent in a job, such as utilization of skills, amount

of job complexity and opportunities for control, amount of responsibility, and challenges (Brayfield and Rothe, 1951; Clark, et al., 1996; Clegg, et al., 1987; Koestner, et al., 1987; Warr, et al., 1979).

Extrinsic Job Satisfaction refers to an external state contingent upon aspects of a job, such as pay, working conditions, industrial relations, conditions of employment, hours of work, and job security (Brayfield and Crockett, 1955; Brayfield and Rothe, 1951; Warr, et al., 1979). Intrinsic and extrinsic Job Satisfaction are invariably positively intercorrelated, but they do not indicate a conceptual duality (Herzberg, 1959). Moreover, measures of Job Satisfaction are highly correlated in the range of .50 to .60 with measures of life satisfaction (Judge and Watanabe, 1993).

The conceptual model in Figure 2 outlines the relationship of the five different predictor variables of Job Satisfaction that were explored in this study.

### **INSERT FIGURE 2 ABOUT HERE**

The model examines three main perspectives; the first explores how the Job Characteristics Skill Variety, Task Identity, Task Feedback and Autonomy influence Job Satisfaction; the second examines the relationship between Training Opportunities and Job Satisfaction, and the third examines how the Age moderates these specified linkages.

Task characteristics such as decision-making authority, interesting and challenging work, and feedback and task variety were found by Udo, Guinaraes and Igarria (1997) to increase Job Satisfaction and reduce turnover intentions for manufacturing plant managers. Lambert (1991) found that jobs that provide workers with the opportunity to do a variety of tasks and to do work which is personally meaningful, was found to promote Job Satisfaction and motivation. Based on all these findings, it was postulated that jobs characterized by Skill Variety, where workers have Autonomy in choosing procedures and where Task Feedback was received, and workers can see that their jobs include an identifiable portion of the total product or service will be positively related to Job Satisfaction (Taber and Alliger, 1995), leading to hypotheses 1(H1):

***H1: Jobs characterized by high level of Skill Variety, Task Identity, Task Feedback and Autonomy, will increase the level of Job Satisfaction.***

*Skill Variety*

From H1, it was also postulated that jobs characterized by each of the task attributes, will have a positive linear influence on the level of Job Satisfaction. A challenging job characterized by Skill Variety and opportunities for using a variety of skills and abilities, was expected to contribute to Job Satisfaction (Schwab and Cummings, 1976; Taber and Alliger, 1995), providing hypothesis H1a, H1b, H1c, H1d:

***H1a: Jobs with a high level of Skill Variety will increase the level of Job Satisfaction.***

#### *Task Identity*

Tasks with an identifiable beginning and an identifiable end, and the opportunity to be involved with complete modules of work, are also expected to correlate positively with Job Satisfaction (Hackman and Oldham, 1975, 1980; Taber and Alliger, 1995), leading to the next hypothesis:

***H1b: Jobs with a high level of Task Identity will increase the level of Job Satisfaction.***

#### *Task Feedback*

Srivastava and Rangarajan (2008) examined salespeople's feedback-satisfaction linkage and found that those who received positive feedback from their supervisor perceived their jobs as challenging and exhibited higher levels of involvement with their job which in turn lead to heightened feelings of Job Satisfaction. This finding was supported by Thomas, et al. (2004), Lee-Ross (2002), and Good and Fairhurst (1999) who found feedback to be among the strongest predictors of Job Satisfaction as it reduced the ambiguity surrounding tasks by serving as a motivating mechanism leading to performance improvement and Job Satisfaction. Thus, it was postulated that jobs characterized by Task Feedback will increase the level of Job Satisfaction, such that:

***H1c: Jobs with a high level of Task Feedback will increase the level of Job Satisfaction.***

#### *Autonomy*

When a job is not closely supervised, it is likely to give the worker a sense of Autonomy and personal accomplishment in undertaking tasks. Therefore, a job characterized by high level of Autonomy should be positively correlated with Job Satisfaction (Turner and Lawrence, 1965; Taber and Alliger, 1995). Work by Origo and Pagani (2008) and Buboltz and Winkelspoecht (2004) supported the finding that worker Autonomy and the freedom to control their own



behavior increases intrinsic Job Satisfaction. Udo, Guinaraes and Igbaria (1997) suggested that encouraging freedom to experiment with new methods and tools in organisations could not only enhance Job Satisfaction, but reduce voluntary turnover, so that:

***H1d: Jobs with a high level of Autonomy will increase the level of Job Satisfaction.***

Though documented literature is relatively scarce to indicate how Age differences affect Job Satisfaction, some influential studies show that older workers tend to be more satisfied than younger workers (Cumming and Henry, 1961; Kalleburg, 1977; Janson and Martin, 1982). Kalleburg and Loscocco (1983) introduced the concept of 'developmental aging' that examines Job Satisfaction through the aging process, whereby satisfaction tends to increase through the 30s, level off in the 40s, and increase again during the late 50s. Furthermore, it has been argued that younger workers are socialized to expect more from a job. Frustration occurs when there are not enough challenging tasks to fulfill expectations. (Abramowitz, 1973). This argument is consistent with Herzberg, et al. (1959) study which suggests that to yield satisfaction, work must not only be challenging, but also be meaningful and personally interesting.

A study of Thai hotel employees, Sarker, et al. (2003) examined whether Age and tenure are individual determinants of satisfaction or whether there is an interaction between them. Job Satisfaction was found to be constant over the first decade of the tenure. After the first decade, Job Satisfaction starts rising with tenure (a finding supported by Oshagbemi, 2000), although tenure was found to be a better predictor of extrinsic Job Satisfaction, implying that workers dissatisfied with the intrinsic aspects of the job will leave for better financial and career opportunities.

A longitudinal study of young retail executive trainees by Good and Fairhurst (1999) reported that expectations about all Job Characteristic variables were unrealistically high when the employees start a job, but both extrinsic and intrinsic Job Satisfaction one year later was predicted by Autonomy, Skill Variety and feedback. In addition, Origo and Pagani (2008) reported that the positive effects of functional flexibility (operationalised in terms of pay, hours of work, amount of work, job security, promotion prospect and training received) on intrinsic Job Satisfaction tends to decrease with worker's Age and the effect is greatest for younger workers. Based on these findings, it is hypothesized that, young workers (as opposed to older workers) enjoy jobs that are characterized as more complex and provide achievable challenges. According to the Job Characteristics Model, Skill Variety, Task Identity, Task Feedback and Autonomy, have a linear function with

Job Satisfaction. Thus, it was hypothesized that younger workers derive greater satisfaction from each of these Job Characteristics compared to older workers.

***H2: Young workers derive greater satisfaction with jobs characterized by higher level of Skill Variety, Task Identity, Task Feedback and Autonomy, than older workers.***

Though training has been an integral part of employer–employee relationship, not many studies have tried to decipher the complexity of the relationship between Job Characteristics, Training Opportunities and Job Satisfaction, when moderated by Age. Some studies have reported that employees who have participated in training are less likely to leave an organisation compared to those who have had no Training Opportunities (Krueger and Rouse, 1998, Royalty, 1996; Bartel, 1995). Strong correlations are reported by Rowold (2008) who explored the impact of developmental interventions including technical training, non-technical training and formal one-on-one coaching sessions, on subsequent job performance, job involvement and Job Satisfaction.

In a study of 135 frontline staff at one of Australia’s largest bakery retail franchises, Choo and Bowley (2007) reported that the quality of the training experience, especially the extent to which the content was job specific and the degree to which the training modules were achievable and applicable were rated as most significant by the employees, and this in turn contributed to Job Satisfaction. A study by Rowden and Conine (2005) emphasizes the significance of ‘informal’ in addition to formal human resource development interventions, such as more on-the-job training, and opportunities for critical reflection, mentoring, coaching and collaborative for enhancing Job Satisfaction. Replication of such studies in other cultures is required to examine whether the relationship between Training Opportunities and Job Satisfaction holds, leading to hypotheses H3.

***H3: When workers are exposed to Training Opportunities, they derive higher level of Job Satisfaction.***

Young workers will remain longer in the organisation as it is prudent for them to stay on and accumulate the skills learnt to benefit from the training (Breen, 1992). Origo and Pagani (2008) reported the positive impact of training more for younger skilled employees. Thus, it would be of theoretical and practical interest to find out whether the availability of Training Opportunities for the workers will skew the overall Job Satisfaction of different age groups of workers. For example, a study by Groot and Maasen (1999) examining Job Satisfaction among employees aged 43 and older did

not find significant impact of on-the-job training with Job Satisfaction for older workers, providing the final hypothesis:

***H4: With the availability of Training Opportunities, younger workers are expected to derive higher levels of Job Satisfaction than older workers.***

## **METHODS**

### *Sample and Procedures*

All petrol franchisees supported this study which took place in retail petroleum stations of a particular petroleum brand in 2006 with the target group of respondents consisting of the retail staff. Out of the 650 available retail staff in 65 retail petroleum stations of the particular petroleum brand in Singapore, 165 site staff participated in this research study through completing the questionnaire. Among the 165 site staff who participated, there were 51 Customer Service Assistants, 66 Sales Assistants and 48 Shift Managers. The participants were informed of the objectives of the survey and a sealable envelope was provided to the participants to insert their completed questionnaire for the purpose of confidentiality.

## **MEASURES**

Data on the demographics of Age, Education level, Job level and Salary were obtained from the questionnaires. Measures used in this study will consistent with the established theory base in this stream of research, and were closely aligned to the constructs being investigated; Job Characteristics (Sims, et al., 1976; Pierce and Dunham, 1978), Training Opportunities (Frazis, et al., 2000; Stafford and Duncan, 1980; Van De Vliert, 2003); and Job Satisfaction (Huang and Van De Vliert (2003).

## **DEPENDENT VARIABLE**

Job Satisfaction was the dependent variable comprising the general satisfaction and satisfaction with compensation. Seven questions were used to measure Job Satisfaction derived from work by Huang and Van De Vliert (2003).

## **INDEPENDENT VARIABLES**

### *Job Characteristics*

Job Characteristics included the dimensions of Skill Variety, Task Identity, Task Feedback and Autonomy was measured by 17 items in the Job Characteristics Inventory developed by Sims, et al. (1976). The Job Characteristics Inventory was chosen over Job Diagnostic Survey because its internal consistency was on the whole stronger than JDS (Pierce and Dunham, 1978). All 17 items are measured based on a 7-point likert scale ranging either from very little to very much or minimum amount to maximum amount.

### *Training Opportunities*

Training Opportunities relates to how often new learning takes place to help individuals do a job better that could lead to improved job or promotion. Two questions were adapted from the study used for measuring training incidences (Frazis, et al., 2000); 'You are taught a skill or provided with new information to help you in doing your job better' and 'Have learning opportunity that may lead to a better job or promotion' (Stafford and Duncan, 1980). A 7-points scale ranging from very little to very much was used to measure the items.

## **MODERATING VARIABLE**

### *Age*

A meta-analyses by Schmidt and Hunter (1998: 15) unambiguously asserted that the 'age of job applicants shows no validity for predicting job performance'. However, specific empirical evidence is still needed to substantiate the relationship between individual Age and Job Satisfaction. In the context of ageing populations there are important policy issues and concerns about encouraging older workers to continue to participate in the workforce. A strong and significant U shaped relationship has been found between intrinsic and extrinsic Job Satisfaction and Age by Clark, et al. (1996) with Job Satisfaction typically rising from the early thirties and reaching its peak at 36 years of age. Attracting and retaining older managers and employees is likely to depend upon more intrinsic motivators rather than extrinsic motivators, such as wages and hours of work. Age was measured in five age categories (<21, 21–30, 30–40, 40-50 and >50 years of age).

## **ANALYSES**

### *Internal reliability*

Cronbach's alpha coefficient is the most common way of calculating internal scale reliability (Cronbach, 1984; Price and Mueller, 1986). Alpha coefficients were calculated for each scale (Table 1) and

subscale in the questionnaire, to check for congruence with the underlying dimensions.

### **INSERT TABLE 1 ABOUT HERE**

An internal reliability  $\geq .7$  is acceptable but  $< .5$  is usually considered unacceptable for most psychological scales, which may be reduced to  $.6$  in factor analysis (Hair, et al., 1995). (Cronbach, 1984). All composite items loaded  $.7$  except Skill Variety which was just below the acceptable threshold ( $.688$ ).

#### *Hypothesis Testing*

The correlation matrix in Table 2 reveals that Job Satisfaction was significantly correlated with Training Opportunities, Autonomy, Skill Variety and Task Identity at  $\alpha=0.01$ . Task Feedback was correlated at a confidence level of  $\alpha=0.05$ . Hence Hypotheses H3, H1a, H1b and H1d cannot be rejected at  $\alpha=0.01$  and H1c cannot be rejected only at  $\alpha=0.05$ .

### **INSERT TABLE 2 ABOUT HERE**

#### *Analysis of the Age factor*

Graphical analysis, using side-by-side box plots, and one way analysis of variance were undertaken to check the way the mean of the various investigated variables were affected by each of the five age groups ( $<21$ ,  $21-30$ ,  $30-40$ ,  $40-50$  and  $>50$  years of age). As shown in Table 3, except for Skill Variety, the results reveal no evidence of significant difference in the variables' means among age groups at 5% level. Hence, both Hypothesis H2 and H4 are rejected at 5% level as the difference in Job Satisfaction among age groups was not deemed significant or due to chance.

### **INSERT TABLE 3 ABOUT HERE**

Both the equality of variance and normality assumptions of the ANOVA were tested. The equal variance assumption holds for all variables across all age groups and the normality assumption was not seriously violated.

#### **Modeling Job Satisfaction**

Multiple Linear Regression using SPSS 15.0 was performed to model Job Satisfaction as an outcome variable for Job Characteristics, Training Opportunities and four dummy variables accounting for the five age groups. Dependent variables and the residual variable histograms were checked and were close to normal and therefore did not indicate potential problems with this dataset.

The full model explained 39.8% of the variance in Job Satisfaction. The regression results revealed that Age contributed less than 2% to the variance in the dependent variable Job Satisfaction. Both the Task Feedback and Skill Variety regression coefficients were insignificant, due to the multi-collinearity among the variables. Task Identity was also excluded from the full model because its regression coefficient was negative which contradicted the significant positive correlation test with the outcome variable. A more parsimonious model was obtained by excluding all variables t-statistics significance value greater than 0.05. The restricted model shown in Table 4 explained 35.4% of the variance in the dependent variable by incorporating only Training Opportunities and Autonomy as predictors for Job Satisfaction.

#### **INSERT TABLE 4 ABOUT HERE**

The significance value of the F-statistic was less than 0.001 indicating that the variation explained by the restricted model was not due to chance.

#### **DISCUSSION**

This study investigated the extent that jobs characterized by high levels of Skill Variety, Task Identity, Task Feedback and Autonomy, Training Opportunities and Age of workers influenced the level of Job Satisfaction of staff working in a Singaporean retail petroleum industry. Age did not impact on the independent variable, or act as a mediating variable on Job Satisfaction, it accounted for less than 1.5% of variance to the overall model. Training Opportunities and Autonomy were the most significant predictors, contributing 32% and 21.7% respectively to the variability in Job Satisfaction. A restricted model found that together–Skill Variety, Task Identity and Task Feedback–accounted for 15% of the variability in Job Satisfaction. However, these variables contributed only 2.7% to the overall model, compared to Training Opportunities and Autonomy which explained 35.4% of the variance in Job Satisfaction.

The finding that Age accounted for less than 1.5% of the variance in the overall model was consistent with earlier findings by Sarker, Crossman and Chinmetepituck (2003) who found Age to have an impact on Job Satisfaction only when combined with tenure, implying that people who are satisfied with their job tend to stay longer with the organisation, a position supported by Udo, Guinaraes and Igbaria (1997) and Oshagbemi (2000). Also, this study supported work by Groot and Maasen (1999) that satisfaction with job content was more important than Age and tenure on Job Satisfaction. One important implication of this finding is related to the design of jobs and the opportunities for growth that is provided to the organisational members. As such, there is also provide a strong case for studying

the impact of age in combination with tenure to get a better understanding of its impact on Job Satisfaction, rather than studying Age by itself.

Of all the Job Characteristics studied, Skill Variety, Task Identity and Task Feedback combined accounted for 15% of the variability in Job Satisfaction, a finding supported by earlier studies by Lee-Ross (2002), and Udo, Guinaraes and Igbaria (1997). However, in this study, these variables only contributed 2.7% to the overall model. Autonomy was found to be the most significant predictor accounting for 21.7% of the variability in Job Satisfaction. This finding was supported by Thomas, Buboltz and Winkelspoecht (2004) and Origo and Pagani (2008) and Udo, Guimaraes and Igbaria (1997) who found that the opportunities and freedom to take decisions and experiment in jobs provided intrinsic satisfaction to employees, irrespective of such factors as tenure or personality dimensions leading to Job Satisfaction. This outcome was also consistent with the studies in the Western nursing context that Autonomy was a vital enhancer of Job Satisfaction (Butler and Parsons, 1989; Molleman and Van Knippenberg, 1995; Williams, 1990). This study did not find any difference between age groups with respect to the need for Autonomy, indicating that employers may need to stop micro-managing employees and instead provide opportunities for making independent decisions in areas related to their work sphere.

Findings in this study reiterates the significance of providing Training Opportunities to employees, as this factor emerging as the single most important predictor of Job Satisfaction across all Age groups accounting for 32% of the variability in Job Satisfaction when taken alone and explaining 35.4% of the variability in Job Satisfaction when combined with Autonomy. These findings are supported by Origo and Pagani (2008) and Rowold (2008) who found formal and informal opportunities for training to have a significant impact on both extrinsic and intrinsic satisfaction and job involvement of employees. These results are particularly significant as they provide support from the limited literature currently available on the significance of training and development in Job Satisfaction among retail employees (Choo and Bowley, 2007).

An important implication of this research was that it supports the relevance of the established relationships in the Job Characteristics Model and the significance of developmental opportunities in an Asian context. Since Training Opportunities have been found to be a significant predictor of Job Satisfaction across all Age groups in this study, it makes a strong case for organisations to invest in training and development opportunities across all Age groups to provide intrinsic satisfaction to employees leading to enhanced retention. This finding was especially important for the retail industry wherein turnover rate continues to remain substantially high. Furthermore, the

labor intensive operating model in the Singaporean retail petroleum industry does not recognize that frequent turnover as loss of staff can add considerably to business costs and organisational effectiveness.

In response to the growing challenges to the retail sector and to the overall economy, the Singaporean government has also introduced the Workforce Skills Qualification (WSQ) system in October 2005, to help the workforce develop job-based skills competencies in order to facilitate their entry and subsequent integration into the workforce. Findings from this study suggest that organisations need to continue to provide training and developmental opportunities to the workforce once they enter an organisation so as to enhance and update their skill base on a continuous basis thereby enhancing their Job Satisfaction and thus reducing turnover.

### **FUTURE RESEARCH**

Future research may also identify the relative contribution of specific formal and informal Training Opportunities, and the relative contribution of performance-based incentive schemes and other motivational strategies for employee Job Satisfaction. This would enable the retail industry to develop structured plans to attract and retain employees in an industry where turnover rates have remained substantially high (Abelson and Baysinger, 1984). Lashley and Rowson (2000) estimated that the costs of turnover for some licensed retailers run into millions of dollars.

Lack of training and development opportunities, development, and recognition of staff has been found to contribute significantly to turnover in the retail industry (Hendrie, 2004; Honda-Howard and Michiko Homma, 2002; Kyuhwan, 2006), a finding also supported by this study. Investing in training for all staff across all Age groups would therefore be an important policy objective. Future research would do well to assess the interactive effects of Age and tenure to examine its significance as a predictor of Job Satisfaction. This could be done in conjunction with identifying the relative role of specific training interventions in enhancing Job Satisfaction when combined with certain Job Characteristics. Future investigations may also productively explore whether an individual's need for growth mediates the relationship between Job Characteristics, Training and Job Satisfaction in the retail industry.

### **CONCLUSION**

This study proposes a conceptual framework that investigated the impact of Job Characteristics and Training Opportunities on Job Satisfaction with Age as a mediator affecting these variables. While the findings provide strong empirical support for Autonomy and Training Opportunities as an important predictor of Job Satisfaction,



Age itself was not found to moderate the relationships between the linkages.

## REFERENCES

- Bartel, A.P. (1995). 'Training, Wage Growth, and Job Performance: Evidence from a Company Database', *Journal of Labor Economics*, 13(3): 401-425.
- Basset-Jones, N., and Lloyd, J.C. (2005). 'Does Herzberg's Motivation Theory have staying power?' *Journal of Management Development*, 24 (10): 929-943.
- Booth, S., and Hamer, K. (2007). 'Labor turnover in the retail industry' *International Journal of Retail and Distribution Management*, 35(4): 289-307.
- Brayfield, A.H. and Crockett, W.H. (1955). 'Employee attitudes and employee performance', *Psychological Bulletin*, 52(5): 396-424
- Brayfield, A.H. and Rothe, H.F. (1951). 'An index of job satisfaction', *Journal of Applied Psychology*, 35(5): 307-311.
- Breen, R. (1992), 'Job changing and job loss in the Irish youth labor-market: A test of a general model', *European Sociological Review*, 8(2):113-125.
- Cedar Consulting: Petroleum Retailing: *The future is now*, Cedar View. Available at [www.cedar-consulting.com/pdf/Petroleum20Article20cedar20view.pdf](http://www.cedar-consulting.com/pdf/Petroleum20Article20cedar20view.pdf) [5Accessed 10 October 2009].
- Choo, S., and Bowley, C. (2007). 'Using Training and Development to affect job satisfaction within Franchising', *Journal of Small Business and Enterprise Development*, 14 (2): 339-352.
- Clark, A., Oswald, A. and Warr, P.B. (1996). 'Is job satisfaction U-shaped in age?'. *Journal of Occupational and Organizational Psychology*, 69 (1): 57-81.
- Clegg, C., Wall, T. and Kemp, N. (1987). 'Women on the assembly line: A comparison of the main interactive and explanations of job satisfaction, absence and mental health'. *Journal of Occupational Psychology*, 60 (4): 273-287
- Cronbach, L.J. (1984). *Essentials of Psychological Testing*. New York: Harper and Row.
- Cumming, E., and Henry, W.E. (1961). *Growing Old: The Process of Disengagement*, Basic Books, New York.
- Frazis, H., Gittleman, M., and Joyce, M. (2000). 'Correlates of Training: An Analysis Using Both Employer and Employee Characteristics', *Industrial and Labor Relations Review*, 53(3): 443-462.
- Friday, S. S., and Friday, E. (2005). 'Racioethnic perceptions of Job Characteristics and job satisfaction', *Journal of Management Development*, 22(5): 426-442.
- Good, L.K., and Fairhurst, A.E. (1999). 'Met expectations during role transitions of retail executive trainees,' *International*

- Journal of Retail and Distribution Management*, 27(9): 350-361.
- Good, L.K., Page, T. J. Jr., and Young, C.E. (1996). 'Assessing hierarchical differences in job-related attitudes and turnover among retail managers', *Journal of the Academy of Marketing Science*, 24(2): 148 -156.
- Groot, W., and Maasen van den Brink, H. (1999). 'Job satisfaction of Older Workers', *International Journal of Manpower*, 20(6): 343-360
- Hackman, J.R. and Oldham, G.R., (1980). *Work Redesign*, Addison-Wesley, Reading, MA.
- Hackman, J.R., and Oldham, G.R. (1975). 'Development of the job diagnostic survey', *Journal of Applied Psychology*, 60(2): 159-70.
- Hendrie, J. (2004). 'A review of multiple retailers' labor turnover', *International Journal of Retail and Distribution Management*, 32(9): 434-441.
- Herzberg, F., Mausner, B. and Snyderman, B. (1959). *The Motivation to Work*, Wiley, New York, NY.
- Honda-Howard, M. and Michiko Homma, M. (2002). Job satisfaction of Japanese career women and its influence on turnover intention, *Asian Journal of Social Psychology*, 4(1): 23-38.
- Huang, X., and Van De Vliert, E. (2003). 'Where intrinsic job satisfaction fails to work: National Moderators of intrinsic motivation', *Journal of Organizational Behavior*, 24(2): 159-171.
- Huselid, M.A. and Day, N.E. (1991). 'Organizational commitment, job involvement, and turnover: a substantive and methodological analysis', *Journal of Applied Psychology*, 76(3): 380-391
- Janson, P., and Martin, J.K. (1982). 'Job satisfaction and age: A test of two views', *Social Forces*, 60: 1089-1102.
- Kalleburg, A.L. (1977). 'Work values and job rewards: A theory of job satisfaction', *American Sociological Review*, 42: 124-143.
- Kalleburg, A.L., and Loscocco, K.A. (1983). 'Aging, values and rewards: Explaining age differences in job satisfaction', *American Sociological Review*, 48: 78-90.
- Keri, D. (1993). 'Retailing in Singapore: Coping with change?', *International Journal of Retail and Distribution Management*, 21(9): 10-11.
- Khatri, N., Fern, C.T., and Budhwar, P. (2001). 'Explaining Employee Turnover in an Asian Context', *Human Resource Management Journal*, 11(1): 54-74.
- Koestner, R., Zuckerman, M. and Koestner, J. (1987). 'Praise, involvement, and intrinsic motivation'. *Journal of Personality and Social Psychology*, 53(2): 383-390

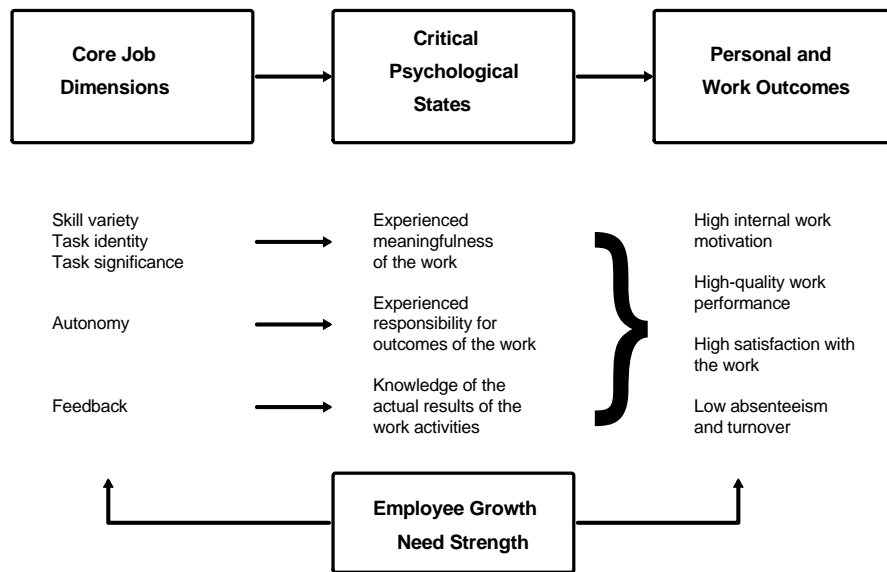
- Krueger, A., and Rouse, C. (1998). 'The effect of workplace education on earnings, turnover, and job performance', *Journal of Labor Economics*, 16(1): 61-94.
- Kyuhwan, C. (2006). A Structural relationship analysis of hotel employees' turnover intention, *Asia Pacific Journal of Tourism Research*, 11(4):321 – 337
- Lambert, S.J. (1991). 'The combined effects of job and family characteristics on the Job Satisfaction, Job Involvement, and intrinsic motivation of men and women workers', *Journal of Organisational Behaviour*, 12(4): 341-363.
- Lee-Ross, D. (2002). 'An exploratory study of work motivation among private and public sector hospital chefs in Australia', *Journal of Management Development*, 21(8): 576-588.
- Locke, E.A. (1976). 'The nature and causes of job satisfaction'. In Dunnette, M.D. (ed). *Handbook of Industrial and Organizational Psychology*. Chicago, Illinois: Rand McNally, 1297-1349.
- Motowidlo, S.J., Packard, J.S. and Manning, M.R. (1986). 'Occupational Stress: Its causes and consequences for Job Performance', *Journal of Applied Psychology*, 17(4): 618-629.
- Muchinsky, P.M., and Morrow, P.C. (1980). 'A multidisciplinary model of voluntary employee turnover', *Journal of Vocational Behavior*, 17: 263-290.
- Muchinsky, P.M., and Tuttle, M.L. (1979). 'Employee Turnover: An empirical and methodological assessment', *Journal of Vocational Behaviour*, 14: 43-77.
- Land Transport Authority (2009). Accessed from [http://www.lta.gov.sg/corp\\_info/doc/MVP01-5%20\(Cars%20by%20cc\).pdf](http://www.lta.gov.sg/corp_info/doc/MVP01-5%20(Cars%20by%20cc).pdf)
- Organ, D.W. and Near, J.P. (1985). 'Cognitions vs affect in measures of job satisfaction'. *International Journal of Psychology*, 20: 241-253.
- Origo, F., and Pagani, L. (2008). 'Workforce flexibility and job satisfaction: Some evidence from Europe', *International Journal of Manpower*, 29(6): 539-566.
- Oshagbemi, T. (1991). 'Overall job satisfaction: How good are single vs. multiple item measures?'. *Journal of Managerial Psychology*, 14: 388-403
- Oshagbemi, T. (2000). 'Is length of service related to the level of job satisfaction?' *International Journal of Social Economics*, 27(3): 213-226.
- Pierce, J.L., and Dunham, R.B. (1978). 'The measurement of Perceived Job Characteristics: The Job Diagnostic Survey versus Job Characteristics Inventory', *The Academy of Management Journal*, 21(1): 123-128.
- Price, J.L. and Mueller, C.W. (1986). *Handbook of organizational measurement*. Marshfield, Massachusetts: Pitman

- Rabinowitz, S., and Hall, D.T. (1977). 'Organizational research on job involvement', *Psychological Bulletin*, 84(2): 265-288.
- Rahman, A., Naqvi, S.M.M.Reza., and Ramay, M.I.
- Abdul Rahman., Raza Naqvi, S.M.M and M. Ismail Ramay (2008). Measuring turnover Intention: A study of IT Professionals in Pakistan, *International Review of Business Research Paper*. 4(3): 45-55.
- Rowden, R.W. (2005). 'The impact of workplace leaning on Job Satisfaction in small US commercial banks', *Journal of Workplace Learning*, 17(4): 215-230.
- Rowold, J. (2008). 'Multiple effects of human resource development interventions', *Journal of European Industrial Training*. 32(1): 32-44.
- Royalty, A.B. (1996). 'The effects of job turnover on the training of men and women', *Industrial and Labor Relations Review*, 49(3): 506-521.
- Sarker, S.J.; Crossman, A., and Chinmeteepituck, P. (2003). 'The relationship of Age and length of service with Job Satisfaction: an examination of hotel employees in Thailand', *Journal of Managerial Psychology*, 18 (7): 745-758.
- Schmidt, F.L. and Hunter, J.E. (1998). 'The validity and utility of selection methods in personnel psychology: Practical and theoretical implications of 85 years of research findings'. *Psychological Bulletin*, 262-274
- Schwab, D.P., and Cummings, L.L. (1976). 'A theoretical analysis of the impact of task scope on employee performance', *Academy of Management Review*, 1: 23-35.
- Sims, H.P.Jr., Sziagyi, A.D., and Keller, R.T. (1976). 'The measurement of Job Characteristics', *The Academy of Management Journal*, 19(2): 195-212.
- Srivastava, R., and Rangarajan, D. (2008), 'Understanding the salespeople's 'feedback-satisfaction' linkage: What role does job perceptions play? *Journal of Business and Industrial Marketing*, 23(3): 151-160
- Stafford, F., and Duncan, G.J. (1980). 'The use of time and technology by households in the United States', *Research in Labor Economics*, 3: 335-375.
- Taber, T.D., and Alliger, G.M. (1995). 'A task-level Assessment of job satisfaction', *Journal of Organizational Behavior*, 16(2): 101-121.
- Thomas, A., Buboltz, W.C., and Winkelspoecht, C.S. (2004), 'Job Characteristics and personality as predictors of job satisfaction', *Organizational Analyses*, 12(2): 205-219.
- Turner, A. N., and Lawrence, P.R. (1965). *Industrial Jobs and the Worker*, Harvard University Press, Boston, M.A.
- Udo. G.J., Guimaraes, T., and Igbaria, M. (1997). 'An investigation of the antecedents of turnover intention for manufacturing

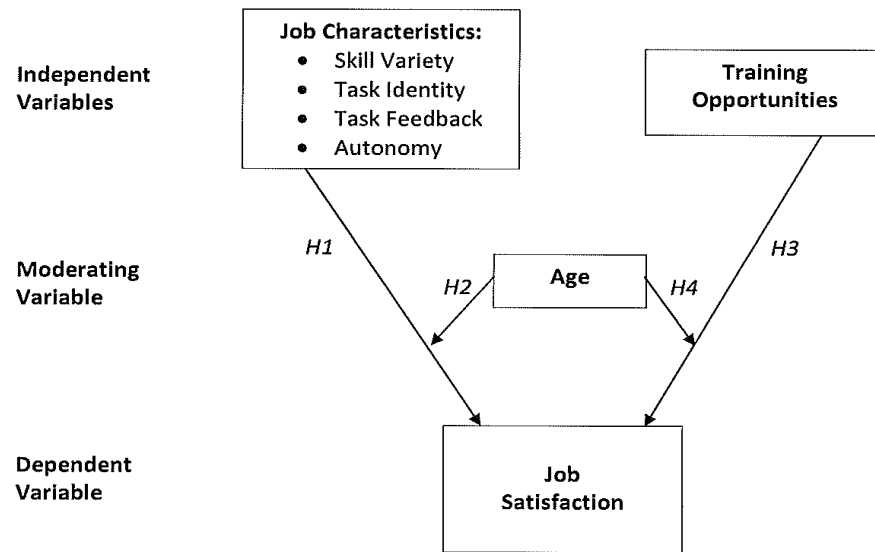
- plant managers', *International Journal of Operations and Production Management*, 17: 912-93.
- Warr, P.B., Cook, J. and Wall, T.D. (1979). 'Scales for the measurement of some work attitudes and aspects of psychological well-being'. *Journal of Occupational Psychology*, 52: 129-148.
- Brayfield, A.H. and Crockett, W.H., (1955). 'Employee attitudes and employee performance'. *Psychological Bulletin*, 52 (5):396-424.
- Brayfield, A.H. and Rothe, H.F., (1951). 'An index of job satisfaction'. *Journal of Applied Psychology*, 35 (5):307-311.
- Clark, A., Oswald, A. and Warr, P.B., (1996). 'Is job satisfaction U-shaped in age?'. *Journal of Occupational and Organizational Psychology*, 69 (1):57-81.
- Clegg, C., Wall, T. and Kemp, N., (1987). 'Women on the assembly line: A comparison of the main interactive and explanations of job satisfaction, absence and mental health'. *Journal of Occupational Psychology*, 60 (4):273-287.
- Cronbach, L.J., (1984). *Essentials of psychological testing*. New York: Harper & Row.
- Hair, J.F., Anderson, R.E., Tatham, R.L. and Black, W.C., (1995). *Multivariate data analysis with readings*. New York: Maxwell Macmillan International.
- Herzberg, F., Mausner, B., & Snyderman, B., (1959). *The motivation to work*. New York: Wiley.
- Hoppock, R., (1935). *Job satisfaction*. New York: Harper.
- Judge, T.A. and Watanabe, S., (1993). 'Another look at the job satisfaction-life satisfaction relationship'. *Journal of Applied Psychology*, 78 (6):939-948.
- Koestner, R., Zuckerman, M. and Koestner, J., (1987). 'Praise, involvement, and intrinsic motivation'. *Journal of Personality and Social Psychology*, 53 (2):383-390.
- Locke, E.A., (1976). 'The nature and causes of job satisfaction'. In: Dunnette, M.D. (ed). *Handbook of Industrial and Organizational Psychology*. Chicago, Illinois: Rand McNally, 1297-1349.
- Motowidlo, S.J., Packard, J.S. and Manning, M.R., (1986). 'Occupational stress: It's causes and consequences for job performance'. *Journal of Applied Psychology*, 17 (4):618-629.
- Organ, D.W. and Near, J.P., (1985). 'Cognitions vs affect in measures of job satisfaction'. *International Journal of Psychology*, 20:241-253.
- Oshagbemi, T., (1991). 'Overall job satisfaction: How good are single vs. multiple item measures?'. *Journal of Managerial Psychology*, 14:388-403.
- Price, J.L. and Mueller, C.W., (1986). *Handbook of organizational measurement*. Marshfield, Massachusetts: Pitman.
- Schmidt, F.L. and Hunter, J.E., (1998). 'The validity and utility of selection methods in personnel psychology: Practical and theoretical

implications of 85 years of research findings'. *Psychological Bulletin*, 262-274.

Warr, P.B., Cook, J. and Wall, T.D., (1979). 'Scales for the measurement of some work attitudes and aspects of psychological well-being'. *Journal of Occupational Psychology*, 52:129-148.

**Figure 1** *Job Characteristics Model (Hackman and Oldham, 1980)*

**Figure 2** *Model of the Relationships between Job Characteristic, Training Opportunities, Age and Job Satisfaction*





**Table 1** *Alpha coefficients for independent and dependent variables*  
(n = 165)

<b>Construct</b>	<b>Subscales</b>	$\lambda$	$\alpha$
<b>Job Characteristics Inventory</b>	1-17		
Skill Variety	1-5	5	.688
Autonomy	5-10	5	.726
Task Feedback	11-13	3	.840
Task Identity	14-17	3	.748
<b>Training Opportunities</b>	18-19	2	.759
<b>Job Satisfaction</b>	20-26	7	.908

**Table 2** *Correlation Matrix for Job Satisfaction, Training Opportunities and Job Characteristics variables (n = 165)*

		Correlations					
		Job Satisfaction	Training Opportunities	Skill Variety	Task Identity	Task Feedback	Autonomy
Job_Satisfaction	Pearson Correlation	1	.566**	.388**	.234**	.153*	.466**
	Sig. (2-tailed)		.000	.000	.002	.049	.000
	N	165	165	165	165	165	165
Training_Opportunities	Pearson Correlation	.566**	1	.529**	.516**	.290**	.551**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	165	165	165	165	165	165
Skill_Variety	Pearson Correlation	.388**	.529**	1	.434**	.306**	.497**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	165	165	165	165	165	165
Task_Identity	Pearson Correlation	.234**	.516**	.434**	1	.490**	.526**
	Sig. (2-tailed)	.002	.000	.000		.000	.000
	N	165	165	165	165	165	165
Task_Feedback	Pearson Correlation	.153*	.290**	.306**	.490**	1	.457**
	Sig. (2-tailed)	.049	.000	.000	.000		.000
	N	165	165	165	165	165	165
Autonomy	Pearson Correlation	.466**	.551**	.497**	.526**	.457**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	165	165	165	165	165	165

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

**Table 3** *Independent ANOVA with Age factor*

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Job_Satisfaction	Between Groups	2.254	4	.563	.440	.779
	Within Groups	204.775	160	1.280		
	Total	207.029	164			
Skill_Variety	Between Groups	11.153	4	2.788	3.065	.018
	Within Groups	145.568	160	.910		
	Total	156.721	164			
Autonomy	Between Groups	4.509	4	1.127	1.016	.401
	Within Groups	177.499	160	1.109		
	Total	182.007	164			
Task_Feedback	Between Groups	3.893	4	.973	.828	.509
	Within Groups	188.039	160	1.175		
	Total	191.933	164			
Task_Identity	Between Groups	2.084	4	.521	.412	.800
	Within Groups	202.389	160	1.265		
	Total	204.473	164			
Training_Opportunities	Between Groups	11.658	4	2.915	1.479	.211
	Within Groups	315.351	160	1.971		
	Total	327.009	164			

**Table 4** *Restricted Model of Job Satisfaction*

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.498	.333		4.494	.000
	Training_Opportunities	.354	.060	.444	5.873	.000
	Autonomy	.235	.081	.221	2.917	.004

a. Dependent Variable: Job\_Satisfaction