

A STUDY OF RELATIONSHIPS BETWEEN JOB SATISFACTION
AND ORGANIZATIONAL COMMITMENT AMONG
RESTAURANT EMPLOYEES

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ABSTRACT

The purpose of this study is to gain a better understanding of the relationships between job satisfaction and organizational commitment of employees at two locations of a national restaurant chain in Southern Nevada. This study also focuses on revealing homogeneous demographic characteristics these employees exhibit that affect their satisfaction level. Research was conducted through a survey instrument consisting of demographic, job-satisfaction, and organizational commitment questions adopted from the validated Minnesota Job Satisfaction and Organizational Commitment Questionnaires. The study generated a 74.5 percent response rate from 137 employees who had worked at these two foodservice operations for more than one week. Responses from the survey were statistically analyzed with several unbalanced factorial ANOVAs, one-way ANOVAs, and stepwise multiple regression analyses. Results of the study indicate that tenure had a significant ($\alpha=.05$) effect on several of the component scores for satisfaction; store location had a significant effect on the level of satisfaction with policies; and the level of education significantly affected satisfaction with recognition. Further, satisfaction with policies, compensation, work conditions, and advancement were found to have a significant relationship to organizational commitment. This research should help foodservice managers understand the relationship job satisfaction has with commitment.

Key Words: *job satisfaction, organizational commitment, turnover*

INTRODUCTION

It is in the interest of an organization to retain employees and minimize turnover. However, many foodservice managers have little understanding of how to satisfy their employees and how these employees' satisfaction levels influence their intent to leave their positions. In fact, because of this limited understanding, managers' efforts towards employee satisfaction can sometimes create more dissonance than cohesion between employees and management, leading to excessive employee turnover.

One significant reason that the cost of turnover in the food and beverage industry remains high is due to the high cost of training new employees. This problem is compounded with the fact that food and beverage outlets are labor-intensive (National Restaurant Association, 2000) and many services that customers expect cannot be automated to decrease costs.

One way to address the issue of turnover is to understand the commitment employees have to their operation and to determine what affects these levels of commitment. To do this, we must have a clear definition of organizational commitment and identify variables that might influence it.

Organizational commitment has been described as consisting of two constructs – affective and continuance (Allen & Meyer, 1990). As defined by Mowday, Porter, and Steers (1982, p.27), affective organizational commitment is “a strong belief in and acceptance of the organization's goals and values; a willingness to exert considerable effort on behalf of the organization; and a strong desire to maintain membership in the organization.” The counterpart to affective organizational commitment is continuance organizational commitment, which considers the idea that individuals do not leave a company for fear of losing their benefits, taking

a pay cut, and not being able to find another job (Murray, Gregoire, & Downey, 1991).

Job satisfaction has been recognized as a component of organizational commitment (Kovach, 1977). It is suggested that job satisfaction is a state of pleasure gained from applying one's values to a job (Locke, 1969). Spector (1997, p.2) believes that job satisfaction "can be considered as a global feeling about the job or as a related constellation of attitudes about various aspects or facets of the job." Researchers have found that job satisfaction is correlated with turnover but not to the extent that a predictive model can be created. (Kraut, 1975; Mobley, 1982; Mobley Griffeth, Hand, & Meglino, 1979).

Wasmuth and Davis (1983) and Rose (1991) estimated the average cost of an hourly hotel employee leaving was \$1,500 per incident. They estimated that this cost rose to \$3,000 for salaried employees. Their analyses did not distinguish between various hotel departments such as food and beverage, room attendants, or front desk. A more recent study by Hinkin and Tracey (2000) estimate turnover costs exceeding \$12,000 per hospitality employee.

Other negative consequences of turnover include: an increase in recruiting, hiring, assimilation, training, and closing paperwork; and the disruption of communication, productivity, and satisfaction among employees who stay (Dalton & Todor, 1982; Mobley, 1982).

In an effort to evaluate the relationship between job satisfaction and organizational commitment within foodservice operations, two widely-used and validated instruments that assess these phenomena were identified – the Minnesota Satisfaction Questionnaire (MSQ) short form (Weiss, Dawis, England, & Lofquist, 1967; Dawis & Lofquist, 1984) and the Organizational Commitment Questionnaire (OCQ) (Mowday, Steers, & Porter, 1979; Mowday, Porter, & Steers, 1982; Rose, 1991) – and implemented at two locations of a national restaurant chain in Southern Nevada.

Further, since restaurant employees deal with very specific tasks on a daily basis, there may be a link between individuals' demographic characteristics and their job satisfaction or commitment to a particular type of work. Therefore, demographic data on employees at these locations were also gathered. Perhaps a better understanding of these issues and their relationships can aid further research, pinpoint better strategies for recruiting, promotion, and training of future store employees, and for reducing amount of turnover.

The scope of this article focuses upon job satisfaction and its relationship with organizational commitment. Similar studies were sought in reviewing the literature with few found by the researchers. However, one significant article was identified. LaLopa (1997) effectively used the Organizational Commitment Questionnaire to evaluate 300 non-supervisory resort employees' levels of commitment. Further, LaLopa developed a "Resort Job Satisfaction" scale by adopting items from previous studies. Findings provide further evidence that job satisfaction is a significant predictor of organizational commitment.

JOB SATISFACTION AS A PREDICTOR OF ORGANIZATIONAL COMMITMENT

Although there is certainly a chicken-and-egg debate over issues regarding the relationship between job satisfaction and organizational commitment, several researchers have made the case that job satisfaction is a predictor of organizational commitment (Porter, Steers, Mowday, & Boulian, 1974; Price, 1977; Rose, 1991). For the purposes of this research, we further justify our predictive model below.

Many studies use different facets of satisfaction to predict employee attributes such as performance, organizational commitment, and service quality (Dienhart & Gregoire, 1993; Oshagbemi, 2000a, 2000b; Yousef, 1998). In a study of job security as a predictor of

commitment, a significant positive correlation was found to exist (Yousef, 1998). Also, in a later study by Yousef (2000), leadership behavior was affected by commitment, which was affected by job satisfaction and job performance.

As an attitude, differences between commitment and job satisfaction are seen in several ways (Mowday, et al., 1982). Commitment is a more global response to an organization and job satisfaction is more of a response to a specific job or various facets of the job. Wiener (1982) states that job satisfaction is an attitude toward work-related conditions, facets, or aspects of the job. Therefore, commitment suggests more of an attachment to the employing organization as opposed to specific tasks, environmental factors, and the location where the duties are performed (Mowday, et al., 1982). When discussed on these terms, commitment should be more consistent than job satisfaction over time. “Although day-to-day events in the work place may affect an employee’s level of job satisfaction, such transitory events should not cause an employee to reevaluate seriously his or her attachment to the overall organization” (Mowday et al., 1982, p.28).

RESEARCH QUESTIONS AND ASSESSMENT INSTRUMENT

Two research questions were created to analyze job satisfaction’s relationship with organizational commitment and determine if any homogeneous traits of participants affect satisfaction. These questions were:

1. Are there particular demographic traits (age, education level, tenure, position, marital status, years in foodservice, and hours worked per week) of restaurant employees that significantly affect their job satisfaction?

2. Do restaurant employees' levels of job satisfaction significantly affect their organizational commitment?

A survey instrument was designed to measure and identify demographic characteristics, levels of job satisfaction, and organizational commitment among employees of two locations of a national restaurant chain in Southern Nevada. Demographic variables that are characteristically assessed in conjunction with the Minnesota Satisfaction Questionnaire and exploratory variables were also included in the study. Survey questions included store location, age, education level, tenure, position, marital status, years in foodservice, hours per week, the Minnesota Satisfaction Questionnaire short form, and the Organizational Commitment Questionnaire (Mowday, et al., 1979).

The MSQ short form consists of 20 questions focusing on intrinsic and extrinsic reinforcement factors of employee attitude (Table 1). This form "can be scored on three scales: intrinsic satisfaction, extrinsic satisfaction and general satisfaction" (Weiss, et al., 1967). The MSQ short form utilizes a Likert-type scale with five response alternatives ranging from "Very Dissatisfied" (weighted 1) to "Very Satisfied" (weighted 5) for each of the 20 factors.

Table 1

Facets of the Minnesota Satisfaction Questionnaire in their Respective Categories

Intrinsic Job Satisfaction	Ability Utilization
	Activity
	Achievement
	Authority
	Independence
	Moral Values
	Responsibility
	Security
	Creativity
	Social Service
	Social Status
	Variety
Extrinsic Job Satisfaction	Advancement
	Company Policy
	Compensation
	Recognition
	Supervision – human relations
	Supervision – technical
General Satisfaction	Working Conditions
	Co-workers
	(+ Intrinsic Job Satisfaction)
	(+ Extrinsic Job Satisfaction)

Porter and Smith (1970) created the OCQ by identifying 15 factors that could be correlated with their definition of organizational commitment: (1) an acceptance of an organization's goals and values, (2) a willingness to put forth effort on behalf of an organization, and (3) a fervent desire to maintain membership in the organization. These factors are rated by participants on a 7-point Likert-type scale ranging from "Strongly Disagree" (weighted 1) to "Strongly Agree" (weighted 7). A general score is then determined by acquiring the mean score from the 15 responses after reverse scoring several negatively phrased questions.

ANALYSIS AND INTERPRETATION OF THE DATA

Participation

Between the two restaurants, there were 144 employees as of April 1, 2000. Out of the 144 employees, seven were in their first week of employment and were excluded from the study. The study generated a 74.5 percent response rate providing a pool of 102 responses.

Data Analysis

The data were analyzed in two phases corresponding to the two questions. Figure 1 provides a conceptual model graphically depicting the relationship between job satisfaction and organizational commitment that was assessed as well as the identification of demographic variables. The analysis was done using the Minitab computer software package, release 12.2 (Minitab, 1998). Phase One analyzed the data using unbalanced factorial ANOVAs and one-way ANOVAs. Phase Two analyzed the data using a series of stepwise multiple regressions with dummy variables model. Appendix A and Appendix B describes the statistical models used in detail.

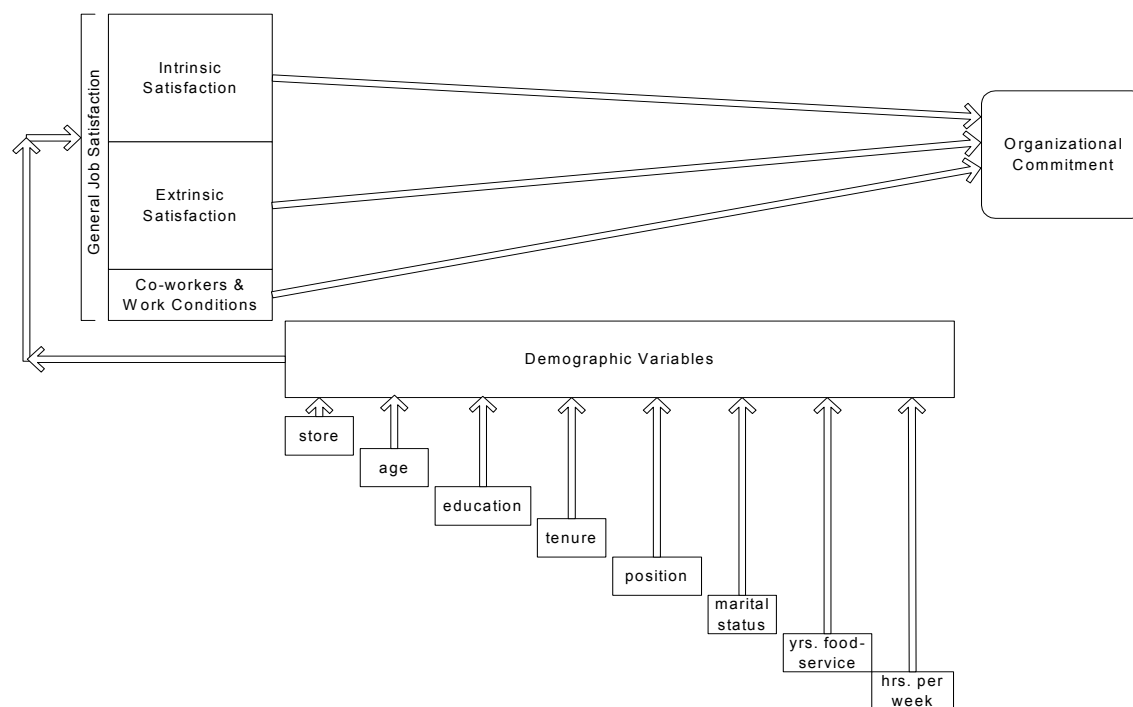


Figure 1. Conceptual model of job satisfaction and its effects on organizational commitment

Summary of the Findings

Phases One and Two tested the questions at an $\alpha = 0.05$ significance level. Phase One was accomplished through the analysis of several collapsed unbalanced factorial ANOVAs whereby insignificant variables were removed and a reduced model was re-run. This method identified “Degree of Tenure” (Table 2) as having a significant effect on the level of “General Satisfaction” ($F = 3.15$, $p = 0.018$). Figure 2 graphically depicts these data. Further analysis found that tenure has a significant effect on several of the facet scores for satisfaction. These facets include satisfaction with social status ($F = 3.84$, $p = 0.006$; Table 2), supervisor’s human relations ($F = 3.13$, $p = 0.19$; Table 2), moral values ($F = 3.63$, $p = 0.009$; Table 2), co-workers ($F = 2.72$, $p = 0.034$; Table 2), and recognition ($F = 3.22$, $p = 0.016$; Table 2). All of these variables had a similar relationship with tenure as depicted in Figure 2.

Table 2**Analysis of Variance Table**

Source	<u>Df</u>	<u>SS</u>	<u>MS</u>	<u>F</u>	<u>p</u>
General Satisfaction by Tenure	4	4.76	1.19	3.15	0.018
Error	89	33.62	0.38		
Total	93	38.38			
Social Status Satisfaction by Tenure	4	16.71	4.18	3.84	0.006
Error	89	96.79	1.09		
Total	93	113.00			
Satisfaction with Supervisor's Human Relations by Tenure	4	15.47	3.87	3.13	0.019
Error	89	109.94	1.24		
Total	93	125.40			
Satisfaction with Moral Values by Tenure	4	9.02	2.26	3.63	0.009
Error	89	55.29	0.62		
Total	93	64.31			
Satisfaction with Co-workers by Tenure	4	14.99	3.75	2.72	0.034
Error	89	122.46	1.38		
Total	93	137.46			
Satisfaction with Recognition by Tenure	4	18.82	4.71	3.22	0.016
Error	89	130.16	1.46		
Total	93	148.99			
Satisfaction with Recognition by Degree of Education	6	25.13	4.19	2.94	0.012
Error	87	123.86	1.42		
Total	93	148.90			

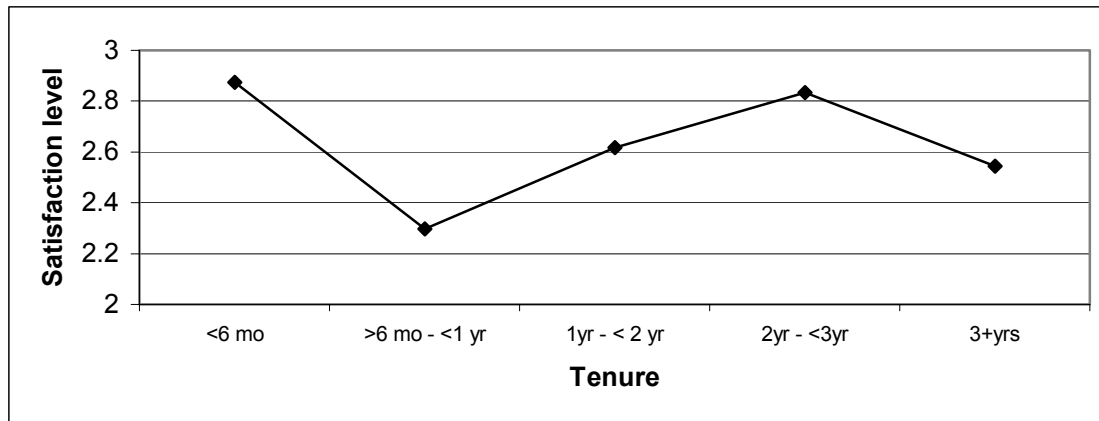


Figure 2. Level of General Job Satisfaction by Degree of Tenure

Figure 3 reveals that as the level of education increases, the level of satisfaction with recognition decreases, until the four-year degree point. Satisfaction begins to rise at this point. However, there may be an interaction with the status of those employees with four-year degrees. The researchers have noted that out of the 11 participants with a four-year degree, 10 have a managerial position.

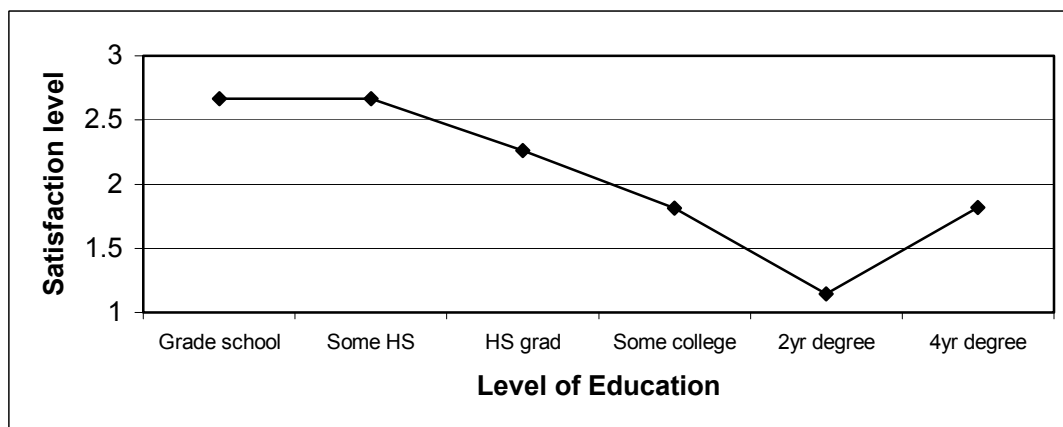


Figure 3. Level of Satisfaction with Recognition by Degree of Education

Analysis also revealed that participants' years of foodservice experience significantly affected their level of extrinsic satisfaction. Further, the interaction between years in foodservice and store location was also significant. This interaction is detailed in Table 3 and graphically depicted in Figure 4.

Table 3

Collapsed Hierarchical Factorial Analysis of Variance for Extrinsic Satisfaction by Years in Foodservice, Store Location, and Interaction

Source	<u>Df</u>	<u>Seq SS</u>	<u>Adj SS</u>	<u>Adj MS</u>	<u>F</u>	<u>p</u>
Years in foodservice	4	10.0854	13.7066	3.4266	4.86	0.001
Store	1	0.3809	0.0864	0.0864	0.12	0.727
Interaction	4	7.6355	7.6355	1.9089	2.71	0.036
Error	84	59.1928	59.1928	0.7047		
Total	93	77.2946				

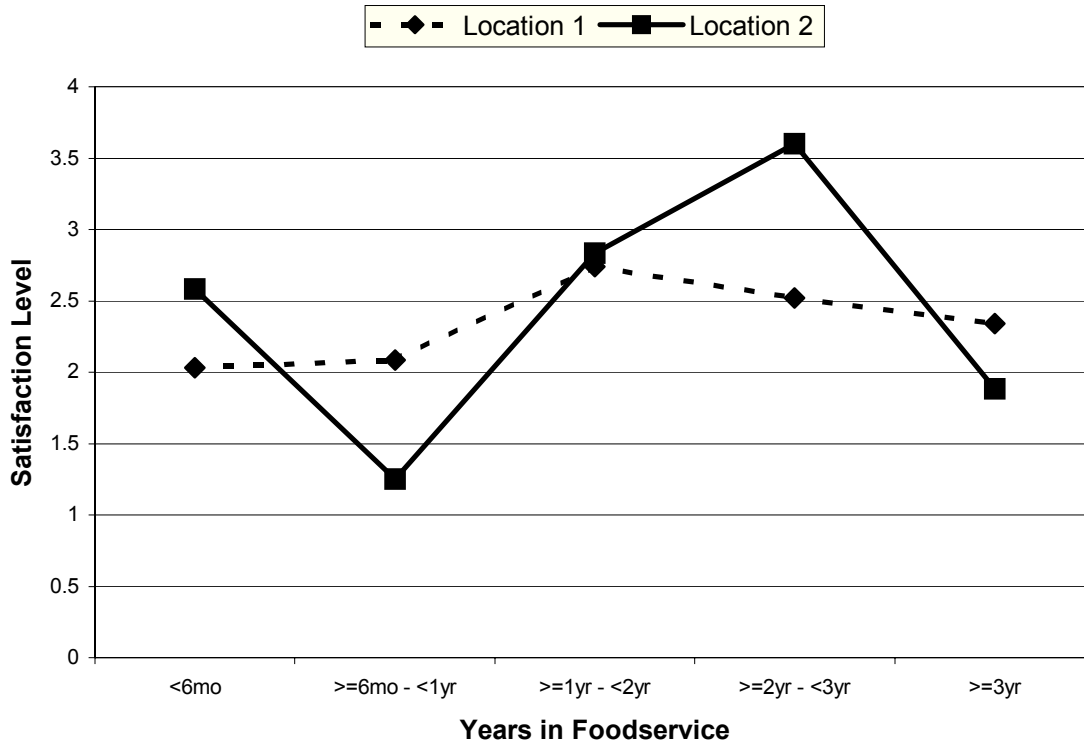


Figure 4. Disordinal Interaction of Extrinsic Satisfaction by Location and Years in Foodservice

In Phase Two, three components of job satisfaction were found to significantly predict organizational commitment (Table 4). These components were satisfaction with policies ($T = 2.58, p = 0.011$), compensation ($T = 4.74, p = 0.000$), and work conditions ($T = 4.96, p = 0.000$).

Table 4

Summary of Simultaneous First Order Multiple Regression Analysis for Policies, Compensation, and Work Conditions Variables Predicting Organizational Commitment

Predictor	β	StDev	<u>T</u>	<u>p</u>
Constant	1.6189	0.2081	7.78	0.000
Policies	0.17719	0.06869	2.58	0.011
Compensation	0.30034	0.06342	4.74	0.000
Work Conditions	0.42459	0.08564	4.96	0.000

Note. $R^2 = 59.9\%$; adj. $R^2 = 58.6\%$.

Compensation and policies are part of the measure for extrinsic satisfaction. Work conditions are part of the general satisfaction measure. It should be noted that none of the components of intrinsic satisfaction were found to significantly affect commitment. One important finding is that these three components of job satisfaction predict 60% (R^2) of the variance in commitment, thereby providing managers specific areas upon which to focus. Figures 5, 6 and 7 describe and graphically depict these variables' positive relationship with organizational commitment.

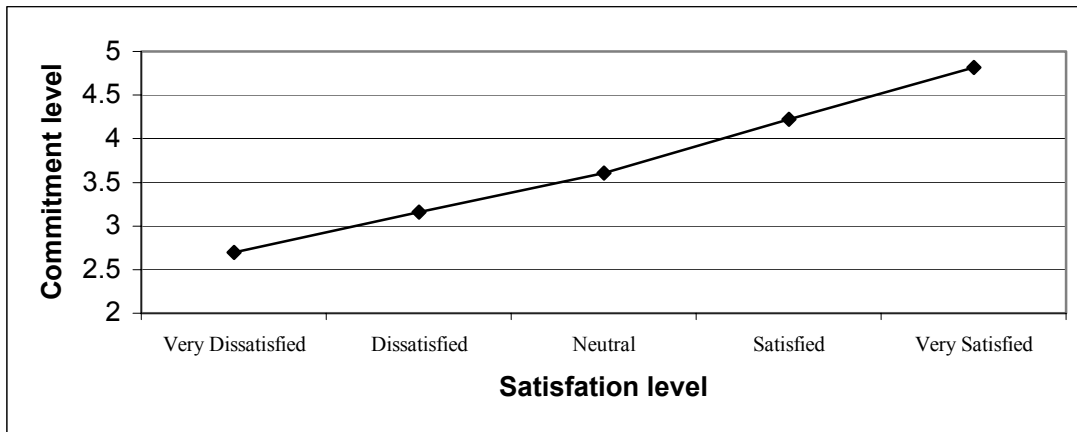


Figure 5. Level of Organizational Commitment by Satisfaction with Compensation

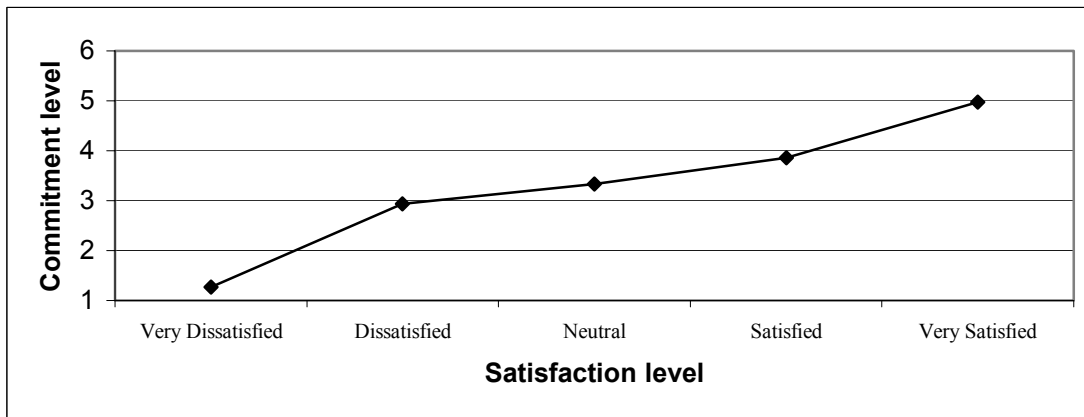


Figure 6. Level of Organizational Commitment by Degree of Satisfaction with Work Conditions

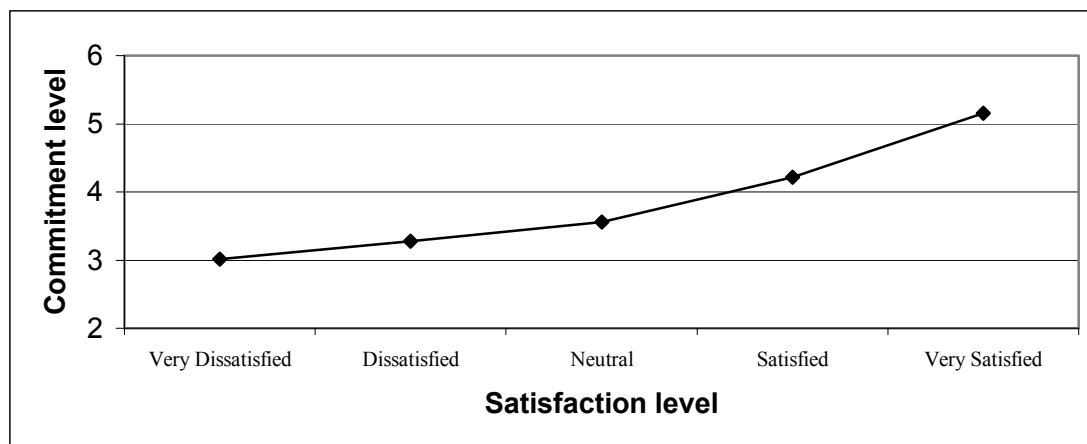


Figure 7. Level of Organizational Commitment by Degree of Satisfaction with Policy

CONCLUSIONS

This study was undertaken because of the researchers' interest in determining the aspects of a foodservice employee's job satisfaction that affect commitment to that organization. It was also believed that foodservice managers need a more in-depth understanding of the relationships these variables have with one another.

Although this article is limited in its generalizability, it suggests that particular demographic characteristics can affect a person's level of satisfaction with a foodservice operation. Further, particular dimensions of a foodservice employee's job satisfaction can predict his or her commitment to that organization. It is suggested that more homogenous demographic traits in participants should be identified that moderate this relationship and that a larger sample of foodservice operations be used.

The components of job satisfaction should also be reevaluated. It might be time to accommodate for changes in society since the MSQ was created in 1967 by reevaluating the instrument itself. Further, perhaps a better questionnaire could be developed for the purposes of

determining commitment – one that might provide dimensions of this construct as the MSQ did with job satisfaction.

This study may also suffer from reverse causality and common method variance problems that sometimes present themselves in satisfaction/commitment studies. Both independent and dependent variables were obtained from respondents and measured with self-report surveys.

From the findings, tenure was shown to have a significant relationship with general satisfaction and several of the category variables. In most cases, employees with less than 6 months of tenure were neither satisfied nor dissatisfied. This level of satisfaction significantly dropped off as employees stayed with the company for up to a year. Satisfaction levels then began to increase and level off in the third year of employment (a Tukey's Comparisons of Means test determined that there were significant mean differences between < 6 mo. and ≥ 6 mo. - < 1 yr.; and ≥ 6 mo. - < 1 yr. and 2yr. - < 3 yr. at the $\alpha = 0.05$ level).

These results might indicate that new employees are unable to determine their level of satisfaction because of their relative inexperience with their new employer. They then settle into a transitional period where their satisfaction levels significantly drop and then increase as they become more experienced. At the 3-year point, the majority of employees might have mastered their position and satisfaction levels begin to stabilize due to lack of learning or challenges. In this instance, foodservice operators could try to compensate for this dilemma by cross-training their employees in other positions or by providing a structure for advancement. These findings might also suggest that dissatisfied individuals leave and therefore falsely inflate satisfaction levels of individuals who stay.

These findings are especially intriguing since the least square means of general

satisfaction levels in this operation do not reach the “satisfied” level; they fall below the item pool heading of 3 (satisfied) on the MSQ scale. Thus, a large number of employees at these foodservice operations cannot decide whether they are satisfied or not with their job.

This study has also shown that there is a significant negative relationship between the education level of employees and their satisfaction with recognition. These findings suggest that as employees acquire more education, management’s regard to the value of their educational accomplishments decreases. This should not come as a surprise to many individuals who have been employed in foodservice. High levels of educational attainment are sometimes viewed as unnecessary for many positions in a foodservice operation.

These findings are also consistent with several studies in which education was found to have an inverse relationship with organizational commitment (Angle & Perry, 1981; Morris & Sherman, 1981; Mathieu & Zajac, 1990; Morris & Steers, 1980; Steers, 1977). However, the results of these research findings were not completely consistent (Lee, 1971; Steers & Spencer, 1977).

In an effort to increase satisfaction levels as individuals acquire higher levels of educational attainment, management might try to reward individuals by providing a structure for advancement consistent with the researchers’ previous recommendations. Management might also become more flexible in schedules that work around academic classes or even provide some level of monetary compensation for courses that enhance their employees’ job skills. Courses in sales and marketing, wine service, management, and culinary arts might assist both the employee and the establishment.

Research findings also identified that employees with less experience in foodservice were less extrinsically satisfied in location 1 during the initial stage of employment than those at

location 2. However, as foodservice experience increases, the differences become difficult to explain because of the interaction of these two variables.

This phenomenon could be the result of the employee's perception of managerial treatment. Perhaps management in one location favors those with greater experience. This could also be interpreted from an employee's perspective: those with greater experience may have different perceptions of how the restaurant should run than those with less experience. As with all disordinal interactions, more variables should be studied that might explain the variability in satisfaction between these two store locations.

The findings also suggested that management might be able to increase the level of commitment in the organization by increasing satisfaction with compensation, policies, and work conditions. One way of addressing this could be by increasing the interactions with employees in staff meetings and increasing guided discussions of topics related to these issues. Employees could be interviewed to determine their perceptions of management's ability to address these issues. Changes in organizational variables, such as pay scales, employee input in policy development, and work environment could then be made in an effort to increase organizational commitment and decrease subsequent turnover.

To increase satisfaction with compensation, management can teach staff how to increase the check average through suggestive selling of wine and desserts. Many restaurants use incentive programs to motivate employees to up-sell.

Managers can also help employees learn why policies are important and identify employees' perceptions of current policies through discussion, meetings, and interviews. Some restaurants give employees an opportunity to become involved in the policy development process, thereby creating a feeling of ownership.

The researchers found no significant components of intrinsic satisfaction that affected commitment. Perhaps the scale measuring intrinsic satisfaction could be considered as a tool to measure motivational levels in future studies.

This study contributes a conceptual model graphically depicting the relationship between job satisfaction and organizational commitment. It also identifies several variables that significantly affect job satisfaction in a small sample of participants and suggested others that might be found to be significant in other studies. Future studies by the researchers or others interested in the relationship of these two constructs can use this model to formulate new research or increase the generalizability of this study in the foodservice industry.

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APPENDIX A

Unbalanced Factorial ANOVA used for Research Question 1

$Y_{ijklmnopq}$	= $\mu + \text{Age}_i + \text{Education}_j + \text{Tenure}_k + \text{Position}_l + \text{Marital}_m + \text{Yrs}_n + \text{Hrs}_o + \text{Store}_p + \varepsilon$
Where:	
$Y_{ijklmnop}$	= Response for ijklmnop – th individual
μ	= overall mean
Age_i	= fixed effect, $i = 0, 1, 2, 3, 4$ (<20, ≥ 20 -<25, ≥ 25 - <30, ≥ 30 - <35, ≥ 35)
Education_j	= fixed effect, $j = 0, 1, 2, 3, 4, 5$ (>grade school, some HS, HS grad., college, 2yr college, 4yr college, Master's degree)
Tenure_k	= fixed effect, $k = 0, 1, 2, 3, 4$ (<6mo., ≥ 6 mo. - < 1yr., ≥ 1 yr. - < 2yr., ≥ 2 yr. - <3yr., ≥ 3 yr.)
Position_l	= fixed effect, $l = 0, 1, 2, 3, 4, 5, 6$ (hostess, cook, busser, dishwasher, server, bartender, management)
Marital_m	= fixed effect, $m = 0, 1, 2, 3$ (single, divorced, married, widowed)
Yrs_n	= fixed effect, $n = 0, 1, 2, 3, 4$ (<6mo., ≥ 6 mo. - < 1yr., ≥ 1 yr. - <2yr., ≥ 2 yr. - <3yr., ≥ 3 yr.)
Hrs_o	= fixed effect, $o = 0, 1, 2, 3, 4$ (<15, ≥ 15 - < 20, ≥ 20 - < 25, ≥ 25 - <30, ≥ 30)
Store_p	= fixed effect, $p = 0, 1$ (store ₀ , store ₁)
ε	= Error Term = All two-way and higher interactions

APPENDIX B

First Order Multiple Regression Model for Research Question 2.

Y_1	= $\beta_0 + \beta_1 \text{Intrinsic}_{i1} + \beta_2 \text{Extrinsic}_{i2} + \beta_3 \text{AgeA}_{i3} + \beta_4 \text{AgeB}_{i4} + \beta_5 \text{AgeC}_{i5} + \beta_6 \text{AgeD}_{i6} + \beta_7 \text{EducationA}_{i7} + \beta_8 \text{TenureA}_{i8} + \beta_9 \text{TenureB}_{i9} + \beta_{10} \text{TenureC}_{i10} + \beta_{11} \text{TenureD}_{i11} + \beta_{12} \text{PositionA}_{i12} + \beta_{13} \text{MaritalA}_{i13} + \beta_{14} \text{YrsA}_{i14} + \beta_{15} \text{YrsB}_{i15} + \beta_{16} \text{YrsC}_{i16} + \beta_{17} \text{YrsD}_{i17} + \beta_{18} \text{HrsA}_{i18} + \text{StoreA}_{i19} + \varepsilon$
Where:	
Y_1	= response in the i-th trial
β_0	= Constant
Intrinsic_{i1}	= satisfaction response value in the i-th trial
Extrinsic_{i2}	= satisfaction response value in the i-th trial
AgeA_{i3}	= dummy variable response in the i-th trial for age <20
AgeB_{i4}	= dummy variable response in the i-th trial for age ≥ 20 - <25
AgeC_{i5}	= dummy variable response in the i-th trial for age ≥ 25 - <30
AgeD_{i6}	= dummy variable response in the i-th trial for age ≥ 30 - <35
EducationA_{i7}	= dummy variable response in the i-th trial for no college degree
TenureA_{i8}	= dummy variable response in the i-th trial for tenure <6mo
TenureB_{i9}	= dummy variable response in the i-th trial for tenure $\geq 6\text{mo}$ - <1yr
TenureC_{i10}	= dummy variable response in the i-th trial for tenure $\geq 1\text{yr}$ - <2yrs
TenureD_{i11}	= dummy variable response in the i-th trial for tenure $\geq 2\text{yrs}$ - <3yrs
PositionA_{i12}	= dummy variable response in the i-th trial for back of house
MaritalA_{i13}	= dummy variable response in the i-th trial for not married
YrsA_{i14}	= dummy variable response in the i-th trial for years <6mo
YrsB_{i15}	= dummy variable response in the i-th trial for years $\geq 6\text{mo}$ - <1yr
YrsC_{i16}	= dummy variable response in the i-th trial for years $\geq 1\text{yr}$ - <2yrs
YrsD_{i17}	= dummy variable response in the i-th trial for years $\geq 2\text{yrs}$ - <3yrs
HrsA_{i18}	= dummy variable response in the i-th trial for hours <30
StoreA_{i19}	= dummy variable response in the i-th trial for Store 0
ε	= Error Term = All two-way and higher interactions