The relationship between life satisfaction and job satisfaction

Andrew L. Kresha
University of Nebraska at Omaha
THE RELATIONSHIP BETWEEN
LIFE SATISFACTION AND JOB SATISFACTION

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Andrew L. Kresha

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THESIS ACCEPTANCE

Accepted for the faculty of the Graduate College,
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Nebraska at Omaha.

Committee

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
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<tbody>
<tr>
<td>James M. Thomas</td>
<td>Psychology</td>
</tr>
<tr>
<td>Wayne Harris</td>
<td>Psychology</td>
</tr>
<tr>
<td>David Hunter</td>
<td>Public Administration</td>
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</tbody>
</table>

Dennis L. Dossert
Chairman

June 28, 1982

Date
Abstract

This study reviewed the compensatory, spillover, and segmentation models for explaining the relationship between life, or non-job, satisfaction and job satisfaction. A fourth model, the factor spillover model was proposed and tested with the other three using a sample of 130 workers from a variety of white and blue collar jobs. The results suggested that non-job satisfaction, like job satisfaction, is factorally complex. Some non-job satisfaction factors were moderately correlated with job satisfaction while others were not correlated at all, providing support for the factor spillover model. Seven moderating variables, including gender, were tested; none produced differential effects on the job and non-job satisfaction relationship. Implications of the factor spillover model were discussed and suggestions made for further research.
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The Relationship Between Life Satisfaction and Job Satisfaction

Job satisfaction among workers has been an important area of research since the 1930's, but not until the late 1950's did research on the relationship between job satisfaction and life satisfaction emerge (Brayfield & Wells, 1957; Hulin, 1969; Iris & Barrett, 1972).

In the last twenty years research has focused primarily on general theory concerning the job-life satisfaction relationship. Moderating factors that may affect the basic theoretical foundations have only recently been treated with some regularity and depth, and no integrated models which include moderating factors have been advanced. The theoretical considerations have primarily focused on three models: the compensatory model, segmentation model, and the spillover model of the job-life satisfaction relationship.

Theoretical Models

The compensatory model suggests that a person, dissatisfied with the job, will compensate by seeking ways of achieving fulfillment and success off the job. If the job leaves the person unsatisfied, whether that be from the type of supervision, pay, the job itself, co-workers, or promotion potential, the person would predictably look for off-the-job relationships and personal pursuits to fill that void. The compensatory model also suggests that a person dissatisfied with life off the job would seek greater fulfillment in the work setting (Kornhauser, 1965). Thus, the compensatory model predicts a negative correlation between measures of life and job satisfaction.
The spillover model suggests that there is a carryover effect from the job setting to non-job settings and vice versa. In being more satisfied with home, family, and social contacts, people tend to be more satisfied with their jobs. Likewise when satisfied with aspects of the job such as pay, supervision, and co-workers, a person tends to be more satisfied with family and other non-job aspects of life (Kornhauser, 1965). Job and life satisfaction measures should be positively correlated according to the spillover model.

One other way of looking at the spillover model is to consider general personality theory as a means of explaining the overlap between job and non-job satisfaction. Personality trait theory assumes that individuals have certain traits that determine behavior. These traits tend to be consistent within individuals over time and situations. As such these traits influence attitudes and behavior with consistency across situations (Cattell, 1979). If a trait such as being hard to please exists, then this trait should influence a worker's perceived level of satisfaction both on and off the job with some consistency. Thus, personality trait theory could be another way of explaining the spillover model.

The segmentation model suggests that there is no relationship between the job and non-job settings. People tend to segment or compartmentalize their lives so that work has little influence on the personal, non-work settings. Likewise, what happens at home is segmented from work, thus creating no significant influence on the time spent at work (Meissner, 1971; Chisholm, 1978). The segmentation model predicts the null hypothesis: there is no relationship between job and non-job satisfaction.
Job Satisfaction and Life Satisfaction Definitions

A clarification of terms is important at this point because of the confounding of job and life satisfaction found in many of the research articles reviewed. For example, Warr, Cook and Wall (1979) defined job satisfaction as the degree to which a person reports satisfaction with both intrinsic and extrinsic features of the job. Total job satisfaction is the sum of all the separate items measuring job satisfaction. Warr et al. defined life satisfaction as the degree to which a person reports satisfaction with salient features of his life and life space, a construct which may have included work.

In this study, life satisfaction is not a concept that encompasses the job and job satisfaction; rather, it involves only the life space outside of the job and work environment. Thus, total life satisfaction is the sum of all the separate items measuring life satisfaction. Conceptually separating life and job satisfaction, one allows for an independent test of the two concepts and a more appropriate test of the presence or absence of a relationship between job and non-job satisfaction.

Throughout the remainder of this study, the term non-job satisfaction will be used in place of life satisfaction, except when describing other studies.

Because of the vagueness of terminology, several studies reviewed were difficult to interpret. In this regard confounding may have occurred in some of the research. A brief review and critique of the research follows.

Literature Review of Theoretical Model Support

Warr et al. (1979) used separate measures to index job and life satisfaction. As noted above, total job satisfaction was the sum of
all items representing both intrinsic and extrinsic job satisfaction. Overall job satisfaction was measured by a single item reporting satisfaction with the job as a whole. Similarly, total life satisfaction was the sum of the separate items while a single item, overall life satisfaction, reported satisfaction with life as a whole. Warr et al. found a correlation of .49 between total life satisfaction and total job satisfaction using the new scales with groups of 200 and 390 blue collar workers employed at a number of manufacturing companies in the United Kingdom. The present study found that two of the fifteen items on the Warr et al. life satisfaction scale were sufficiently general to possibly encompass feelings about the job, thus slightly blurring the notion of life and job as independent concepts.

Kornhauser (1965) studied 407 Detroit automotive factory workers at various job levels. He developed his own index of job satisfaction and of life satisfaction for the study. He reported a correlation of .58 which is supportive of the spillover hypothesis. However, there appears to be some confounding in his measures of life satisfaction, since some of the questions in the life satisfaction scale are related to feelings about life in general and what the person was or would like to accomplish in life. With some other scales Kornhauser found a more modest correlation between job satisfaction and other non-work constructs: .34 with family-home satisfaction, .26 with leisure satisfaction, and .32 with community satisfaction. Here there was no conceptual overlap of constructs but lower correlations. Kornhauser noted in his study that he did not find any inverse relationships between life satisfaction and job satisfaction scales.
Iris and Barrett (1972), using a sample of first-level supervisors from a chemical plant, examined the relationship between job and life satisfaction and also the effect of job importance. They used the Job Descriptive Index (JDI), developed by Smith, Kendall and Hulin (1969), as a measure of job satisfaction. It was administered to 34 men considered to have high morale and 35 men with low morale. Four questions constituted the general life satisfaction measure. Beyond the brevity of the life satisfaction scale, it is important to note that confounding occurred because the life satisfaction scale measured overall satisfaction with life in general, family, leisure, and job. Using life satisfaction questions that include satisfaction with the job creates an overlap of concepts. Conceptually then, job satisfaction would be a part of life satisfaction rather than a completely independent variable. Nowhere in the study is there a definition of job or life satisfaction. The results were not all in a positive direction, but they generally supported the spillover model: correlations ranged from -.21 to .60. Job importance results showed that for those who had high level job satisfaction, a positive relationship was found between importance of the work and life satisfaction.

Studies by Bamundo (1977) and Bamundo and Kopelman (1980) both produced results consistent with the spillover model. In the Bamundo and Kopelman study, two measures of job satisfaction were used, the JDI and one question on global satisfaction with the job. Life satisfaction was measured only by one question: "In general, how satisfying do you find the way you're spending your life these days?" The deficiency here, again, is in the generality with which life satisfaction is considered. It appears that job satisfaction may be considered only a part of general life satisfaction, and a different statistical measure would be more
appropriate. The result for the nationwide sample of 2,200 households was a correlation of .35 between life and job satisfaction.

The only research article found that examined the causality issue was reported by Orphen (1978) who studied 76 white first-line managers employed by five different South African industrial firms. Using the cross-lagged correlational technique in testing work and non-work satisfaction twice, Orphen found that the direction of causality was stronger from work to non-work satisfaction than vice versa. Orphen concluded that the positive relationship he found (.27) was consistent with the spillover hypothesis, but that "although the dynamic correlation was significant (p < .001), it is of insufficient magnitude to rule out the possibility that other variables had strong effects on the work-nonwork satisfaction relationship."

Near, Rice, and Hunt (1978) interviewed 1,041 people, in a random sampling of an eastern city, with a survey containing four global questions. In the study, Near et al. appeared to consider job satisfaction to be a part of general life satisfaction. A Pearson correlation co-efficient of .30 was found (p < .001). Because the common variance was quite small (9%), Near et al. proposed a conceptual model of life and job satisfaction with first and second level determinants. Their model has yet to be tested. In the conclusions of the study, job satisfaction was not considered a particularly important component of life satisfaction, but job satisfaction could be influenced by factors outside of the workplace.

A study by London, Crandall, and Seals (1977) provided some basic support for the segmentation model. Their study examined the relationships between job and "leisure" satisfaction and their contributions to the perception of quality of life. Using a national probability sample
of 1,297 people, London et al. found very low intercorrelations between job and leisure satisfaction items (median $r = .14, p < .05$) but they found through regression analysis that together these items accounted for 25% of the variance in perceived quality of life ($R = .50$). Though leisure was not defined, a review of the questions used shows a clear separation of work and nonwork related questions. Quality of life was measured by a single question that is similar to the Warr et al. (1979) measure of overall life satisfaction. This single item did not allow for a test of the reliability of the measure.

Several other studies reviewed did not contain the problem of serious confounding. Rousseau (1978) found a correlation of .36 ($p < .05$) when testing 139 electronics and broadcasting company employees using the Job Diagnostic Survey for a job satisfaction measure and the General Motor Faces Scale for life satisfaction. Rousseau had used the term nonwork when measuring life satisfaction. This helped to clarify the terminology and avoid an overlap of concepts while providing some support for the spillover model. Chisholm (1978) also found support for the spillover model when he studied 100 technical employees of a diversified manufacturing plant. Chisholm studied the relationship between alienation (helplessness and powerlessness) and satisfying aspects of on-the-job and off-the-job spheres of life such as variety, control, social interaction, and purpose. Those who expressed that their jobs had less meaning in their lives away from the job ($r = .50, p < .001$), and those who felt more powerless on the job also felt less powerful off the job ($r = .46, p < .001$). In summary, these two articles provided somewhat stronger support for the spillover model of life and job satisfaction when measured as independent concepts.
Summary and Evaluation

In summarizing all of the articles reviewed, many of the studies contained flaws. Definitions of job satisfaction and life, or non-job, satisfaction varied. Some considered job satisfaction to be a part of life satisfaction, yet they measured them as conceptually independent constructs. Some studies used single item measures that prohibited estimating reliability. Also, unvalidated instruments were used in much of the research with no attempt to cross validate, leaving the results in question. Finally, no attempts were made to factor the life, or non-job, satisfaction questions.

The possibility that life, or non-job, satisfaction is a unitary concept is quite slim. Most job satisfaction measures such as the Job Descriptive Index (JDI) developed by Smith, Kendall, and Hulin (1969) have identified five or more factors. Though not discussed in detail, implicit in some prior studies is the notion that several factors exist for life satisfaction. For example, in the Iris and Barrett (1972) study critiqued earlier, life satisfaction was composed of life in general, family, leisure, and job. Most likely, non-job satisfaction is a multifaceted concept, composed of more than one factor as well. It is hypothesized that at least several clearly identifiable factors compose the concept of non-job satisfaction (Hypothesis I). Based on the measure to be used in this study, a non-job satisfaction developed by Warr et al. (1977) and modified for this study, factor analysis should result in factors such as satisfaction with family, standard of living, and social pursuits off the job. These factors are predicted based on the types of items found in the Warr et al. non-job satisfaction scale.
A Factor Spillover Model

If the concept of non-job satisfaction is multidimensional, then the spillover, segmentation, and compensatory models may not be sufficiently complex to accurately define the job and non-job satisfaction relationship. If the concept is multidimensional, a more complex model is needed to adequately interpret the data since some of the previous research has found strong positive correlations, modest positive correlations, no correlations, and even negative correlations. The factor spillover model proposed here asserts that both job satisfaction and non-job satisfaction are multidimensional. The model also asserts that not all job satisfaction factors are related to all non-job satisfaction factors. It then follows that all aspects of the job are not related to all aspects of life. For example, satisfaction with supervision should not be very closely related to a person's satisfaction with the type of government. However, other facets of job satisfaction, such as pay satisfaction, should be closely related to satisfaction with standard of living. Thus, there should be differential relationships when pairing certain job and non-job factors. Some job and non-job factors will have significant positive correlations, and others will not be correlated at all (Hypothesis II). Since a factor structure has not yet been determined, no specific predictions are made as to which job and non-job factors are related and which are not.

In the factor spillover model, job factors are correlated with non-job factors. If the spillover model as described by Kornhauser (1965) is correct every job satisfaction factor should be significantly and positively correlated with every non-job satisfaction factor.
If the segmentation model were to receive some support, then none of the job factors would be related to non-job factors. A test of the segmentation hypothesis is not proposed in this study. Adequately testing the segmentation hypothesis (the null hypothesis) would require a method designed to rule out all alternative reasons for obtaining 'no correlation' between factors. Such a study is logically and technically infeasible.

If the compensatory model is correct, then job satisfaction factors would all be significantly and negatively correlated with all non-job satisfaction factors.

In order to expand and clarify extant job-life satisfaction research, the present study clearly defined job and life satisfaction as job and non-job satisfaction, respectively. Multiple-item measures were used for each construct with at least two instruments used to test job satisfaction and two to test non-job satisfaction. Furthermore, the construct validity of a frequently used unvalidated job satisfaction measure was examined.

Literature Review of Moderating Effects

Another area in the job and non-job satisfaction research that has received some consideration is the search for moderating effects. In a study of 84 professional male engineers, Bedeian and Marbert (1979) studied the moderating effect of favorable self-perception using the Thompson Biographical Information Blank (Thompson, 1971). They split the group into those with high and low self-perception based on self-perceived background experiences and expectations by using the Biographical Information Blank (BIB). The BIB as a measure of self-perception covered
antecedent life experiences using an individual's assessment of his background of experience and his appraisal of abilities. Examples of scale items were the self-assessment of respondent potential, perceived values gained from education attained, and self-judged personal preferences. This in turn would provide an indication of the types of treatment the individual would expect in response to various stimuli. The description of self-perception in the Bedeian and Marbert study was not sufficiently clear and thus, leaves the interpretability of self-perception quite open. They used the JDI to measure components of job satisfaction. A four-item scale developed by Iris and Barrett (1972) that was critiqued earlier in this study, was used as the measure of life satisfaction.

Bedeian and Marbert found significant differences between the high and low self-perception groups on the JDI satisfaction with supervision measure and the general life satisfaction measure. The correlations for high and low self-perception groups were .47 and -.16 ($p < .01$), respectively. Bedeian and Marbert also found significant differences between the JDI measure of satisfaction with co-workers and general life satisfaction for high and low self-perception groups (.57 and .20, respectively; $p < .05$). These significant differences in correlation pairs were evaluated with Fischer's $Z$ transformation and $t$-test between independent correlations.

Role stress (Chassie and Bhagat, 1980) was studied with 115 working women representing a diverse group of occupations. They found role stress on and off the job to be significantly and negatively related to overall job satisfaction ($r = -.24$, $p < .01$) and to
personal-life satisfaction ($r = -0.20, p < 0.05$). Differential effects of role stress were not found for personal life satisfaction ($t(66) = 1.63, p < 0.05$) but effects were found for total job satisfaction. Women with higher role stress were less satisfied with their jobs overall ($t(66) = 2.77, p < 0.01$), less satisfied with supervision ($t(66) = 2.89, p < 0.01$).

A comprehensive exploration of moderating effects was done recently in a study by Bamundo and Kopelman (1980). Using a sample of 911 randomly chosen heads of households, they found substantially different correlations across education levels. The correlation between life and job satisfaction for people with only a grammar school level education was $r = 0.07$; for people who had a graduate school degree, $r = 0.58$ ($t(675) = 3.57, p < 0.001$). They also found income to be a moderator. The job-life satisfaction relationship increased in strength as individual income increased, with correlations ranging from 0.09 to 0.55 for the seven subgroups.

Self employment had a significant impact on the job-life satisfaction relationship according to Bamundo and Kopelman; however, further analysis of the data by the present author using a $t$-test of the differences between independent correlation coefficients showed that the reported correlations of 0.46 and 0.34 for self-employed and non-self-employed workers respectively had a reasonable probability of being drawn from a common population ($p > 0.10$ by a two-tailed test). Occupational level as a variable did not produce significant differences across all subgroups. However, in two cases, higher level occupational groups had differences that were significant: clerical versus professional/technical ($r = 0.20$ and $r = 0.39$, respectively, $p < 0.05$) and clerical versus managerial/administrative ($r = 0.20$ and $r = 0.40$, respectively, $p < 0.05$).
Bamundo and Kopelman found a significant occupational level by job satisfaction interaction by using moderated multiple regression analysis. However, the effect was not sizable (the proportion of explained variance increased from .12 to .13 by the introduction of the interaction term). Job longevity showed a curvilinear moderating effect. The job satisfaction-life satisfaction correlation increased with job longevity up through the 6-10 year period and then declined. Finally, urbanization did not moderate the job-life relationship in the Bamundo and Kopelman study.

A moderator to be considered in the present research is the effect of sex on the job and non-job satisfaction relationship. Wells (1957), in a study of civil service employees, found a significant positive correlation of .56 among men who held higher level office jobs entailing some independent judgment. However, the correlation of .14 was not significant between these same two variables among women who held routine clerical jobs at lower salaries. Further analysis of the data by the present author using a t-test of the differences between correlation coefficients for independent samples supported the probability that they were drawn from two separate populations. That is, real differences on the basis of sex had a statistically high probability of being present. Of course, it is quite possible that these results are not due to sex differences alone; job level and pay differences might also explain these results.

Twelve years later, Hulin (1969) found that job satisfaction did contribute to life satisfaction for women in different proportions based on intrinsic and extrinsic job satisfaction measures. Hulin reported
standardized partial regression weights for the relationship between intrinsic job satisfaction and satisfaction with life in general as .17 for men and .20 for women with samples of 387 and 81 subjects, respectively. For extrinsic job satisfaction, and satisfaction with life in general, the results were .13 for men and .07 for women. None of the differences between groups was significant.

Kavanagh and Halpern (1977), using scales identical to those used by Brayfield and Wells (1957), found an even greater shift in results than Hulin (1969). The Kavanagh and Halpern study included three groups of females, one of which was at a job level similar to that in the Brayfield and Wells study. Kavanagh and Halpern reported strong positive correlations between job and life satisfaction for both their female and male samples, indicating strong differences between the female sample of their study and that of the Brayfield study. The average interscale correlations were .35 for men and .39 for women in the Kavanagh and Halpern study. Again, using the *t*-test of the difference between correlations for independent samples, it was found that the female samples from the Brayfield and Wells study and from the Kavanagh and Halpern study, separated by twenty years in time, were drawn from the same population (*p < .05*). The analysis also showed the male sample to be drawn from the same population. That is, over time no significant shift was found in the job-life satisfaction relationship for men or women. This suggests that sex may not be a moderator of the relationship.

This analysis, though a fair statistical assessment, does temper Kavanagh and Halpern's (1977) results and their conclusions suggesting
a shift in societal norms and expectations for women. Less pressure from male co-workers or more supportive work and organizational climates were presented as specific changes that have occurred since the late 1950's and were considered by Kavanagh and Halpern to be reasons that might account for the increase in the relationship they observed, though the increase was not significant.

In the present research the moderating influence of sex was scrutinized using a different set of subjects, more clearly defined concepts of job and non-job satisfaction, and multiple-item measures. Thus, this study sought to confirm the Kavanagh and Halpern results showing this shift toward a stronger job/non-job satisfaction relationship for women and suggesting that significant differences for males and females may not exist for this relationship.

Moderating Effects Hypotheses

The relevant literature indicates that few moderating factors, other than gender, have been explored in more than one study. In the present study, several exploratory hypotheses investigated whether other specific factors moderated the job satisfaction/non-job satisfaction relationship. For example, the effects of being employed by someone else, being self-employed, or a combination of both were also explored. People who are both self-employed and employed by others may be maximizing their level of pay and the types of work that are most satisfying to them. Often, people who are self-employed have greater autonomy, greater control over their hours of work, see the results of their work, see rewards that are more commensurate with the amount of effort they set forth, and may be able to increase their level of pay easier
than those who work for others. Of the three categories, being self-employed allows the greatest autonomy and control over the job. The present study hypothesized that the increasing level of self-employment would moderate the job/non-job relationship (Hypothesis III).

Differences in the correlations between job and non-job satisfaction based on type of employer (government, private business, or non-profit agency) were also explored; the first two categories were hypothesized to produce significantly higher correlations than the latter (Hypothesis IV). The present author assumed that generally lower job security and pay would effect some differences in job satisfaction for the non-profit agency employees but not affect non-job satisfaction drastically.

Occupational level has been investigated previously with the general finding that this variable moderated the relationship between job and non-job satisfaction between some levels. Higher level workers, such as professional/technical or managerial/administrative, tended to have stronger positive correlations than lower level employees, such as clerical workers (Bamundo & Kopelman, 1980). In the same study, blue collar workers tended to also have lower correlations than higher level workers. The present study examined the difference between white collar workers and blue collar workers that included craftspersons, machine operators, service workers, and general laborers. White collar workers were hypothesized to have significantly higher job/non-job satisfaction correlations than were blue collar workers (Hypothesis V).
The present study also hypothesized that supervisory status would moderate the job/non-job satisfaction relationship. Supervisors tend to have greater responsibilities, greater control and more autonomy in the workplace than do non-supervisory personnel. They also tend to have higher salaries and have achieved higher status in the organization, possibly fulfilling their goals for promotion within the organization. Thus, significantly higher positive correlations should be found for supervisors than for non-supervisors (Hypothesis VI).

Shift, or hours of work, was also explored. The day shift, 7:00 a.m. to 3:00 p.m., and the general business shift, 8:00 a.m. to 5:00 p.m., were hypothesized to produce significantly higher positive correlations than the second shift, 3:00 p.m. to 11:00 p.m., or the third shift, 11:00 p.m. to 7:00 a.m. (Hypothesis VII). This hypothesis is based on the assumption that people who work during the early part of the day (day shift) and the middle part of the day (business shift) are able to find larger amounts of time in the later afternoon and evening for personal and family pursuits. Generally, they are off work when their spouses, friends, and children are available. This should increase the strength of the job/non-job satisfaction correlation.

The last hypothesis to be considered was length of employment, or job longevity. The present study hypothesized that the job/non-job satisfaction correlation would be significantly higher through the 5-7 year period and then significantly decrease after that (Hypothesis VIII). An explanation for this trend is that plateaus for pay and promotion which may have reasonably strong ties to non-job satisfaction, are reached
after 5-7 years on the job; employees then become more dissatisfied with their jobs and the standard of living achieved by staying with their employer.

**Summary of Hypotheses**

In summary, the first hypothesis predicts that a valid non-job satisfaction scale will have a number of factors, not just one. The second hypothesis predicts that the modified spillover model of the job/non-job satisfaction relationship would be supported, rather than the compensatory, segmentation, spillover, or negatively accelerated compensatory models. Certain job satisfaction factors should be positively and significantly related to non-job factors, whereas other job and non-job factors should not be related at all. Other hypothesized moderators of the job/non-job relationship were: self-employment (Hypothesis III), type of employer (Hypothesis V), supervisory status (Hypothesis VI), the shift worked (Hypothesis VII), and job longevity (Hypothesis VIII). The present study also sought to confirm the Kavanagh and Halpern study findings of no difference between males and females in the job/non-job satisfaction relationship.

**Method**

**Subjects**

The subjects were randomly chosen from the population of a midwestern city of 340,000 people. In order to insure random selection, several steps were followed. The local City Directory provided a reasonably comprehensive list of residents. Names were selected by using two random number tables. The first random number set was used to determine the page number within the 869-page book. The second random number set was used to select the subject based on the position numbers on that
There were approximately 245 names per page. A pilot mailing of 40 questionnaires was sent with a cover letter explaining the general nature of the project and insuring confidentiality to the subjects. Of those letters sent, 20 included stamped return envelopes and 20 included business reply envelopes. Approximately equal proportions of responses were returned in stamped and business reply envelopes. Eight questionnaires were returned for incorrect address; 12 of the potential 40 questionnaires were completed and returned for a 30% response rate. An additional 660 questionnaires were then mailed with a cover letter and business reply envelope. Of the total of 700 mailed, 72 were returned with incorrect addresses. A total of 130 questionnaires of the potential 700 were returned in usable form, a response rate of 18.6%. A copy of the questionnaire is included in Appendix A.

**Instruments**

Three measures of job satisfaction were used: the Job Descriptive Index (JDI) formulated and tested by Smith, Kendall and Hulin (1969), a job satisfaction scale developed by Warr, Cook and Wall (1979), and a single item global measure of overall job satisfaction, also from Warr et al.

**Job Satisfaction**

The JDI is a widely used measure of job satisfaction. Following Smith et al., the scale items were summed to form a measure of total job satisfaction. The JDI has been construct-validated with other measures of job satisfaction and reliabilities were reported by Smith et al. of .84 for satisfaction with the work itself, .80 for pay satisfaction, .86 for satisfaction with promotion opportunities, and .87 for
satisfaction with supervisors, and .88 for satisfaction with co-workers.

Non-job Satisfaction

The original Warr et al. (1977) non-job satisfaction scale had 15 items, five of which addressed government. Four of these items on government were dropped due to the fact that in the original study they were not correlated with the non-job satisfaction measure. With eleven remaining items, each item was paired with a new item of similar content to lengthen the scale for purposes of determining scale reliability and aiding in determining whether an underlying factor structure existed.

Several other modifications were made in the scales to better suit them to the purposes of this research. Since this study defines life satisfaction as non-job satisfaction, the words 'off the job' were added to two items and to the overall, or global, non-job satisfaction question. Also, the item on satisfactory profit sharing on the JDI was modified to read 'satisfactory fringe benefits' since profit sharing is not applicable to many employees.

The questionnaire was pilot tested for this research to determine ease of comprehension, ease of completion, and absence of awkward questions. A number of substantial modifications were made to make it more readable and easier to complete. Demographic questions were placed on the last page.

Results

Sample Versus Population Characteristics

To determine how representative the respondents to this research were, questions on age and occupation were asked using the same categories as those found in the 1980 Census preliminary results as reported in the
Omaha World Herald, 1982 Consumer Preference Study (1981). Table 1 compares the sample and population figures for age, occupation level, and gender of the respondents. The respondents were fairly representative of the population by age except for the 65 and older category which logically includes more people that are not working due to retirement. By occupational level more professional and managerial workers responded; fewer blue collar workers responded leaving the occupational sampling somewhat unrepresentative of the population. The respondents also were somewhat unrepresentative of the percentage of employed workers by gender; women were over-represented in the sample.

Job Satisfaction Measures

The employee responses to the job satisfaction items for the JDI and Warr et al. scales were separately summed to form separate total job satisfaction scores. The scores were divided by the total number of items within each scale to obtain mean scale responses. The Warr et al. non-job satisfaction items were treated similarly.

The Warr et al. job satisfaction scale was factor analyzed to determine the extent to which there was an underlying factor structure. Using a varimax rotation, four uninterpretable variables resulted. By forced solutions of two, three, and five factors, still no interpretable factor structure emerged. Thus it was not possible to determine just what the scale was measuring, leaving questions about the scale's utility in the present form.

The reliability of the Warr et al. job satisfaction scale was computed using coefficient alpha (α = .91). The five submeasures of the JDI and their respective alpha coefficients were: JDI work scale, .80;
<table>
<thead>
<tr>
<th>Occupations</th>
<th>1980 Preliminary Census Data</th>
<th>Survey Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional</td>
<td>17%</td>
<td>36.9%</td>
</tr>
<tr>
<td>Managerial</td>
<td>12%</td>
<td>20.8%</td>
</tr>
<tr>
<td>Clerical &amp; Sales</td>
<td>17%</td>
<td>21.5%</td>
</tr>
<tr>
<td>Craftsman</td>
<td>15%</td>
<td>10.0%</td>
</tr>
<tr>
<td>Operative</td>
<td>9%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Service Worker</td>
<td>6%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Laborer</td>
<td>2%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Military</td>
<td>5%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Farm Worker</td>
<td>1%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>1980 Preliminary Census Data</th>
<th>Survey Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>19%</td>
<td>10.8%</td>
</tr>
<tr>
<td>25-34</td>
<td>21%</td>
<td>26.9%</td>
</tr>
<tr>
<td>35-44</td>
<td>18%</td>
<td>22.3%</td>
</tr>
<tr>
<td>45-54</td>
<td>16%</td>
<td>20.0%</td>
</tr>
<tr>
<td>55-64</td>
<td>12%</td>
<td>18.5%</td>
</tr>
<tr>
<td>65 &amp; older</td>
<td>14%</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex - Employed Respondents</th>
<th>1980 Preliminary Census Data</th>
<th>Survey Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>59%</td>
<td>55%</td>
</tr>
<tr>
<td>Female</td>
<td>41%</td>
<td>44%</td>
</tr>
</tbody>
</table>
JDI co-workers scale, .88; JDI supervision scale, .90; JDI pay scale, .78; and JDI promotion scale, .89. Thus, both measures of job satisfaction were found to be quite reliable.

The convergent validity coefficient for the Warr et al. job satisfaction scale and the total JDI was .60; for the Warr et al. job satisfaction scale and the single-item global measure of job satisfaction, .60; and for the JDI and the global job satisfaction measure, .53.

Non-Job Satisfaction Measure (Hypothesis I)

The expanded Warr et al. non-job scale was factor analyzed to detect an underlying factor structure. The correlation matrix of items was factored via classical or common-factor solution (principle factoring with iteration) with varimax rotation to terminal factors.

This factoring method was used for extraction of initial factors for several reasons. This solution assumes inferred factors rather than a defined set of factors as in the principle components factor analysis. It also is a widely accepted factoring method and assumes that the observed variables are influenced by various determinants, some of which are shared by other variables in the set (common variance) while others are not shared by another variable (unique variance).

The varimax rotation was used because it simplifies the structure of the factor matrix, improving interpretability of the resulting factors. The seven resulting rotated factors yielded a clearly identifiable factor structure (see Table 2).

The seven factors accounted for 71% of the total variance. Of this variance, the individual factors and the amount of variance each accounted for by each were factor 1, social and leisure satisfaction (29.8%);
Table 2

Varimax Rotated Factor Matrix for Non-Job Satisfaction Scale

<table>
<thead>
<tr>
<th>Satisfaction with:</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
<th>Factor 6</th>
<th>Factor 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. national government</td>
<td>0.00</td>
<td>0.15</td>
<td>0.17</td>
<td>0.00</td>
<td>0.09</td>
<td>0.28</td>
<td>0.02</td>
</tr>
<tr>
<td>2. leisure time</td>
<td>0.42</td>
<td>-0.01</td>
<td>0.06</td>
<td>0.17</td>
<td>0.35</td>
<td>-0.02</td>
<td>-0.00</td>
</tr>
<tr>
<td>3. social friends</td>
<td>0.63</td>
<td>-0.03</td>
<td>0.13</td>
<td>-0.03</td>
<td>0.27</td>
<td>0.05</td>
<td>0.06</td>
</tr>
<tr>
<td>4. future &amp; prospects</td>
<td>0.47</td>
<td>0.22</td>
<td>0.31</td>
<td>-0.03</td>
<td>0.10</td>
<td>0.01</td>
<td>0.43</td>
</tr>
<tr>
<td>(off the job)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. ability to buy things</td>
<td>0.10</td>
<td>0.08</td>
<td>0.92</td>
<td>0.06</td>
<td>0.00</td>
<td>-0.00</td>
<td>0.16</td>
</tr>
<tr>
<td>6. present health</td>
<td>0.14</td>
<td>0.11</td>
<td>0.07</td>
<td>0.07</td>
<td>0.61</td>
<td>0.10</td>
<td>0.04</td>
</tr>
<tr>
<td>7. education received</td>
<td>0.07</td>
<td>0.10</td>
<td>0.07</td>
<td>0.85</td>
<td>0.15</td>
<td>-0.00</td>
<td>0.17</td>
</tr>
<tr>
<td>8. off the job accomplishments</td>
<td>0.63</td>
<td>0.21</td>
<td>0.06</td>
<td>0.24</td>
<td>0.21</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>9. people-social</td>
<td>0.73</td>
<td>-0.09</td>
<td>-0.03</td>
<td>-0.14</td>
<td>0.03</td>
<td>0.01</td>
<td>0.16</td>
</tr>
<tr>
<td>10. family life</td>
<td>0.52</td>
<td>0.17</td>
<td>0.08</td>
<td>0.10</td>
<td>0.07</td>
<td>0.66</td>
<td>-0.14</td>
</tr>
<tr>
<td>11. life with spouse</td>
<td>0.04</td>
<td>0.00</td>
<td>0.03</td>
<td>0.00</td>
<td>0.05</td>
<td>0.22</td>
<td>0.16</td>
</tr>
<tr>
<td>12. local government</td>
<td>0.00</td>
<td>0.03</td>
<td>-0.01</td>
<td>0.17</td>
<td>0.05</td>
<td>-0.00</td>
<td>0.06</td>
</tr>
<tr>
<td>13. formal training &amp; education</td>
<td>0.09</td>
<td>0.01</td>
<td>0.03</td>
<td>0.68</td>
<td>0.12</td>
<td>0.06</td>
<td>0.05</td>
</tr>
<tr>
<td>14. house or apartment</td>
<td>0.11</td>
<td>0.33</td>
<td>0.35</td>
<td>0.08</td>
<td>0.07</td>
<td>0.31</td>
<td>-0.02</td>
</tr>
<tr>
<td>15. standard of living</td>
<td>0.12</td>
<td>0.13</td>
<td>0.37</td>
<td>0.02</td>
<td>0.08</td>
<td>0.10</td>
<td>-0.00</td>
</tr>
<tr>
<td>16. community</td>
<td>0.13</td>
<td>0.86</td>
<td>0.13</td>
<td>-0.00</td>
<td>0.14</td>
<td>-0.03</td>
<td>0.19</td>
</tr>
<tr>
<td>17. off job goals &amp;</td>
<td>0.73</td>
<td>0.15</td>
<td>0.05</td>
<td>0.09</td>
<td>-0.04</td>
<td>-0.03</td>
<td>-0.01</td>
</tr>
<tr>
<td>accomplishments</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. quality of time off the job</td>
<td>0.61</td>
<td>0.29</td>
<td>0.06</td>
<td>0.05</td>
<td>0.10</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>19. neighborhood</td>
<td>0.09</td>
<td>0.05</td>
<td>0.01</td>
<td>0.03</td>
<td>0.07</td>
<td>0.02</td>
<td>0.00</td>
</tr>
<tr>
<td>20. physical &amp; mental</td>
<td>0.23</td>
<td>0.17</td>
<td>-0.02</td>
<td>0.19</td>
<td>0.74</td>
<td>-0.01</td>
<td>0.14</td>
</tr>
<tr>
<td>health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. future (other than work)</td>
<td>0.57</td>
<td>0.31</td>
<td>0.24</td>
<td>0.19</td>
<td>0.25</td>
<td>0.05</td>
<td>0.09</td>
</tr>
<tr>
<td>22. living conditions</td>
<td>0.29</td>
<td>0.50</td>
<td>0.24</td>
<td>0.19</td>
<td>0.13</td>
<td>0.23</td>
<td>0.20</td>
</tr>
</tbody>
</table>

*italics indicate items included in final life satisfaction subscales.*
factor 2, housing and neighborhood satisfaction (9.8%); factor 3, standard of living satisfaction (8.4%); factor 4, satisfaction with education (6.9%); factor 5, satisfaction with personal health (5.9%); factor 6, family and marital satisfaction (5.4%); and factor 7, satisfaction with government (5.0%). Thus, the hypothesis that non-job satisfaction is a multi-dimensional construct was supported.

The factors were further analyzed to determine the reliability of each factor. Coefficient alpha, a test of internal homogeneity was computed. The reliabilities were .86 for social and leisure satisfaction (9 items), .80 for housing and neighborhood satisfaction (4 items), .90 for satisfaction with standard of living (2 items), .89 for satisfaction with education (2 items), .72 for satisfaction with personal health (2 items), .41 for family and marital satisfaction (2 items) and .55 for satisfaction with government (3 items).

The alpha coefficient for the expanded (22-item) Warr et al. non-job satisfaction scale used in this research was .84. The shortened (11-item) version of the original Warr et al. life satisfaction scale had a reliability of .77, as analyzed using the current data. Thus, lengthening the scale had the effect of slightly improving the reliability of the measure. The alpha coefficient for the six-item job importance scale was .78. The convergent validity coefficient for the Warr et al. non-job satisfaction scale and single-item global measure of non-job satisfaction was .71.

Factor Spillover Model (Hypothesis II)

It was hypothesized that the factor spillover model of the job/non-job satisfaction relationship would best describe the data. In
general there was a significant positive correlation of \( r = .36 \) (\( p < .001 \)) between the Warr et al. job satisfaction and non-job satisfaction scales; \( r = .42, p < .001 \) between the JDI and the Warr et al. non-job satisfaction scale. The amount of variance accounted for in these job/non-job satisfaction relationships was 12% and 17% respectively. Table 3 presents the complete correlation matrix. It should be noted that all five of the JDI subscales were correlated significantly with the Warr et al. non-job satisfaction scale, but that the correlations ranged from .19 to .35.

In order to adequately test the factor spillover hypothesis, the seven non-job satisfaction factors and the five JDI factors of satisfaction with work, supervision, co-workers, pay, and promotion were correlated (see Table 4). Satisfaction with education was significantly related to the work itself \( (r = .33, p < .001) \), with supervision \( (r = .35, p < .001) \), and with promotions \( (r = .28, p < .001) \). However, education was not related at all to satisfaction with pay \( (.07) \). Satisfaction with the standard of living and pay were highly correlated \( (r = .43, p < .001) \) and was the strongest of all the correlations in the matrix. This is one of the logical relationships that might be expected to result from the modified spillover model of the job/non-job satisfaction relationship.

The other logical content area is that of satisfaction with co-workers and satisfaction with non-work social satisfaction, since some of the people with whom one works may also be social acquaintances \( (r = .22, p < .012) \). Satisfaction with supervision correlated .28 \( (p < .001) \) with non-work social satisfaction.
Table 3

Pearson Correlation Coefficients of Job and Non-Job Relationships\(^a\)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Warr et al. Job Satisfaction</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Global Job Satisfaction</td>
<td>.85***</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Warr et al. Non-Job Satisfaction</td>
<td>.36***</td>
<td>.35***</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Global Non-Job Satisfaction</td>
<td>.20*</td>
<td>.25**</td>
<td>.71***</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>5. JDI</td>
<td>.60***</td>
<td>.53***</td>
<td>.42***</td>
<td>.25**</td>
<td>--</td>
</tr>
</tbody>
</table>

\(aN = 130\)

* \(p < .05\)

** \(p < .01\)

*** \(p < .001\)
Table 4

Correlation Coefficients for Job and Non-Job Factors

<table>
<thead>
<tr>
<th></th>
<th>JDI Work</th>
<th>JDI Supervision</th>
<th>JDI Co-workers</th>
<th>JDI Pay</th>
<th>JDI Promotions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family</td>
<td>.06</td>
<td>.12</td>
<td>-.03</td>
<td>.19*</td>
<td>.20*</td>
</tr>
<tr>
<td>Social</td>
<td>.25**</td>
<td>.23***</td>
<td>.21*</td>
<td>.16</td>
<td>.27**</td>
</tr>
<tr>
<td>Education</td>
<td>.33***</td>
<td>.35***</td>
<td>.17*</td>
<td>.08</td>
<td>.28***</td>
</tr>
<tr>
<td>Housing</td>
<td>.25**</td>
<td>.10</td>
<td>.07</td>
<td>.14</td>
<td>.16</td>
</tr>
<tr>
<td>Health</td>
<td>.24**</td>
<td>.09</td>
<td>.11</td>
<td>-.02</td>
<td>-.01</td>
</tr>
<tr>
<td>Standard of Living</td>
<td>.23**</td>
<td>.14</td>
<td>.15</td>
<td>.43***</td>
<td>.18*</td>
</tr>
<tr>
<td>Government</td>
<td>.23**</td>
<td>.06</td>
<td>.06</td>
<td>.16</td>
<td>.18*</td>
</tr>
</tbody>
</table>

\[ N = 130 \] *p < .05  **p < .01  ***p < .001
In the analysis of moderating factors which follows, groups with less than 10 subjects were considered to produce unstable correlations and thus were not considered when testing the hypotheses for significant group differences.

**Self-employment Moderating Effects (Hypothesis III)**

It was hypothesized that the increasing level of self-employment would moderate the job/non-job satisfaction relationship. The self-employed group was too small to adequately test the hypothesis fully. The non-self-employed group and the group that was both self-employed and employed by someone else produced inconsistent results across the two job satisfaction scales. These results also did not show a moderating effect across groups (See Table 5).

**Employer Type Moderating Effects (Hypothesis IV)**

It was hypothesized that government employees and private industry employees would have significantly higher correlations between job and non-job satisfaction than would non-profit agency workers. No significant group differences were found though the results were generally in the expected direction (Table 6).

**Occupational Level Moderating Effects (Hypothesis V)**

It was hypothesized that significantly different correlations for the job/non-job satisfaction relationship would result for white collar workers and blue collar workers. Table 7 shows that the results were not consistent across the two job satisfaction scales. No significant differences between white collar and blue collar workers were found. Thus, the hypothesis was not supported.
Table 5
The Moderating Effect of Self-Employment

<table>
<thead>
<tr>
<th></th>
<th>Warr et al. job satisfaction</th>
<th>JDI-Warr et al. non-job satisfaction correlation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>not self-employed</td>
<td></td>
<td></td>
<td>111</td>
</tr>
<tr>
<td></td>
<td>.38***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>.37***</td>
</tr>
<tr>
<td>both self-employed and employed by another</td>
<td>.33</td>
<td>.67*</td>
<td>12</td>
</tr>
<tr>
<td>self-employed</td>
<td>.62</td>
<td>.78</td>
<td>5</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001
<table>
<thead>
<tr>
<th>Employer Type</th>
<th>N</th>
<th>Warr et al job satisfaction/non-job satisfaction correlation</th>
<th>JDI-Warr et al. non-job satisfaction correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>government</td>
<td>34</td>
<td>.48**</td>
<td>.51**</td>
</tr>
<tr>
<td>private sector</td>
<td>74</td>
<td>.41***</td>
<td>.40***</td>
</tr>
<tr>
<td>business/industry</td>
<td>18</td>
<td>.09</td>
<td>.39</td>
</tr>
<tr>
<td>non-profit agency</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05

** p < .01

*** p < .001
Table 7
The Moderating Effect of Occupational Level

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>Warr et al job satisfaction/non-job satisfaction correlation</th>
<th>JDI-Warr et al non-job satisfaction correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>White collar</td>
<td>103</td>
<td>.30**</td>
<td>.40***</td>
</tr>
<tr>
<td>Blue collar</td>
<td>26</td>
<td>.41*</td>
<td>.32</td>
</tr>
</tbody>
</table>

* $p < .05$

** $p < .01$

*** $p < .001$
Supervisory Status Moderating Effects (Hypothesis VI)

It was hypothesized that supervisory status would moderate the job/non-job satisfaction relationship. A significant difference between the two groups was not found (See Table 8).

Work Shift Moderating Effects (Hypothesis VII)

It was hypothesized that work shift would moderate the job/non-job satisfaction relationship. The results showed that people who worked the first shift (7:00 a.m. - 3:00 p.m.) had the highest positive correlations (.82 p<.001). That correlation was significantly different from the correlations of the "business shift", or 8:00 a.m. to 5:00 p.m. hours (r = .23, p <.05). Negative correlations were found for the second and third shifts (3:00 p.m. - 11:00 p.m. and 11:00 p.m. - 7:00 a.m.); however, the number of respondents was too small in these two groups, (5 and 3 respectively), to test the hypothesis.

Job Tenure Moderating Effects (Hypothesis VIII)

The last hypothesis predicted that the length of employment would moderate the job/non-job satisfaction relationship. The hypothesis was not supported; no significant differences were found between any of the eight groups (See Table 9).

Gender Moderating Effects

The analysis of the moderating effect of gender produced correlations of .38 and .37 for females and males respectively across the Warr et al. job satisfaction and non-job satisfaction scales (See Table 10). There were 57 females and 71 males in the sample. The test for two correlations with independent samples was not significant (z = .06). Females and males had correlations of .22 and .53 respectively, across the JDI and Warr,
Table 8
The Moderating Effect of Supervisory Status

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Warr et al. job satisfaction/non-job satisfaction correlation</th>
<th>JDI-Warr et al. non-job satisfaction correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>supervisory workers</td>
<td>52</td>
<td>.25</td>
<td>.40**</td>
</tr>
<tr>
<td>non-supervisory workers</td>
<td>77</td>
<td>.38***</td>
<td>.38***</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001
## Table 9

**The Moderating Effect of Job Longevity**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Warr et al. job satisfaction/non-job satisfaction correlation</th>
<th>JDI-Warr et al. non-job satisfaction correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 1 year</td>
<td>12</td>
<td>.58*</td>
<td>.19</td>
</tr>
<tr>
<td>1-2 years</td>
<td>15</td>
<td>.47</td>
<td>.64**</td>
</tr>
<tr>
<td>3-4 years</td>
<td>18</td>
<td>.58*</td>
<td>.36</td>
</tr>
<tr>
<td>5-7 years</td>
<td>16</td>
<td>.39</td>
<td>.42</td>
</tr>
<tr>
<td>7-9 years</td>
<td>12</td>
<td>.24</td>
<td>.24</td>
</tr>
<tr>
<td>9-11 years</td>
<td>8</td>
<td>.27</td>
<td>.53</td>
</tr>
<tr>
<td>12-20 years</td>
<td>30</td>
<td>.34</td>
<td>.49**</td>
</tr>
<tr>
<td>over 20 years</td>
<td>9</td>
<td>.61**</td>
<td>.65**</td>
</tr>
</tbody>
</table>

* p < .05
** p < .01
*** p < .001
et al. life satisfaction scale. The same statistic indicated that the
two groups were statistically different ($z = 1.963, p < .05$).

Due to the differences in results found between using the JDI
and the Warr et al. job satisfaction scales, a further analysis of the
data available was done. Correlations between the subscales of the JDI
and the Warr et al. non-job satisfaction scale showed stronger sub-
scales. However, only one difference was statistically significant for
the male and female groups: the JDI work scale and the Warr et al.
non-job scale correlated higher for men than for women ($r = .55$ for men,
$r = .11$ for women; $z = 2.12, p < .05$). Thus, the results of the Kavanagh
and Halpern 1977 study were generally confirmed. Gender does not appear
to moderate the job/non-job satisfaction relationship.

Discussion

The factor analysis of the Warr et al. job satisfaction scale
suggests that there are problems with the scale since there is no
interpretable factor structure. This raises the question as to what the
scale measures, yet it correlates with the JDI and the global life satis-
faction measure. Expanding the Warr et al. job satisfaction scale with
additional items may be necessary to find an interpretable factor struc-
ture. Using it along with other factorially complex measures of job
satisfaction in future research will be necessary to determine just
what factors the Warr et al. scale measures.

Another concern with the Warr et al. job satisfaction scale is
that the convergent validity coefficient was only .60 with the JDI.
Since the JDI has been more widely tested and validated, the Warr et al.
job satisfaction scale may be suspect. The Warr et al. scale may be
Table 10

The Moderating Effects of Gender

<table>
<thead>
<tr>
<th>Warr et al. non-job satisfaction and:</th>
<th>Pearson correlations for:</th>
<th>z-test for two independent correlation coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>women^a</td>
<td>men^b</td>
</tr>
<tr>
<td>JDI work scale</td>
<td>.111</td>
<td>.50***</td>
</tr>
<tr>
<td>JDI supervision scale</td>
<td>.095</td>
<td>.36**</td>
</tr>
<tr>
<td>JDI coworker scale</td>
<td>.016</td>
<td>.23*</td>
</tr>
<tr>
<td>JDI pay scale</td>
<td>.273*</td>
<td>.32**</td>
</tr>
<tr>
<td>JDI promotion scale</td>
<td>.145</td>
<td>.45***</td>
</tr>
<tr>
<td>JDI total job satisfaction scale</td>
<td>.22*</td>
<td>.53***</td>
</tr>
<tr>
<td>Warr et al. job satisfaction scale</td>
<td>.38</td>
<td>.37</td>
</tr>
</tbody>
</table>

^a
N=57

^b
N=71

*p > .05

**p > .01

***p > .001
measuring something somewhat different. The convergent validity coefficient was .85 with the global measure of job satisfaction. The JDI in turn, is primarily a measure of five job satisfaction factors and had a convergent validity with the global job satisfaction measure of .53. With this level of convergent validity, it is questionable if the global job satisfaction measure is measuring the same construct as the JDI.

Probably the most important result of the factor analysis of the non-job satisfaction scale is that non-job satisfaction was shown to be multi-dimensional. Thus the relationship between job and non-job satisfaction is much more complex than hypothesized by the spillover, segmentation, or compensatory models. These three models all tend to oversimplify job satisfaction and non-job satisfaction which are broad, general concepts. Also the segmentation hypothesis is un-testable as such since it predicts the null hypothesis. Thus, the results of this study provide strong support for the hypothesis that several distinct factors comprise non-job satisfaction. Life satisfaction, like job satisfaction, is more complex than previous research has indicated by simple job satisfaction/non-job satisfaction designs that have been used.

A logical extension of this research would be to add items to the Warr et al. non-job satisfaction scale and reanalyze the factors to determine if other factors appear. Also, factor analyzing other non-job satisfaction scales to find convergence among non-job satisfaction factors would add to the understanding of the concept of non-job satisfaction.
In this study support for the traditional spillover hypothesis would have required all of the job satisfaction factors to be significantly and positively correlated with all of the non-job satisfaction factors. The results did not confirm this. For the compensatory hypothesis to have been supported, significant negative correlations would have been required between all of the job and non-job satisfaction factors. The results did not confirm this either. The segmentation model is logically untestable.

However, the factor spillover model was supported; some job satisfaction factors and some non-job satisfaction factors had significant positive correlations, while others were not correlated at all. As described in the results section, some non-job satisfaction factors, such as standard of living, were significantly and positively correlated with job satisfaction factors such as pay. A non-job satisfaction factor such as education was significantly related to work itself on the JDI scale but unrelated to the job satisfaction factor of pay. The factor spillover model accounts for the job and non-job factors in a more complete manner than do the other models.

The most highly correlated job and non-job factors tended to have direct, logical relationships. Pay satisfaction was highly correlated with the satisfaction with standard of living. People earning salaries that they are satisfied with also tend to be satisfied with the standard of living that results from the things that they can buy and do with these financial resources.

Satisfaction with supervision on the job and satisfaction with non-job social satisfaction were correlated; often workers socialize with fellow workers off the job. The trait theory of personality described
earlier also may explain this socialization: people who are more social or extroverted on the job may also be so off the job, with the result of being satisfied in both situations. Their trait of extroversion or socialability may help them to be more satisfied with their relationships on and off the job.

Satisfaction with education received was highly correlated with job satisfaction with the work itself, supervision, and promotions. People with higher levels of education have greater access generally to the jobs that will satisfy them most and afford them better chances of promotion if promotion is a valued outcome. Education and type of supervision as correlated factors may be understood in that with higher education the amount of supervision generally is lower and the supervisory style allows greater flexibility to those in technical and professional jobs. For example a computer technician may be satisfied with his supervision because it allows him the freedom and responsibility to get the work done in the most efficient way and the amount of supervision is minimal due to the nature of the work; the supervisor respects the technician's ability to do the work properly and does not need to monitor the work process closely.

Further testing of the factor spillover model is suggested for future research. Clarifying factor structures of job and non-job satisfaction, finding consistently related and unrelated job and non-job factors, and explaining these relationships are important for a more complete understanding of these concepts.

One of the weaknesses of the research is the overall response rate which led to small numbers in some of the groups in the analysis of the effects of moderating factors of the job/non-job satisfaction relationship.
In fact, the only significant moderating factor, the shift worked, had only twelve in the group that was significantly different from the other groups. It was found that people who work the 7:00 a.m. to 3:00 p.m. shift had significantly higher positive correlations between life and job satisfaction than people who worked other shifts or set their own hours. One reasonable explanation for this is that people who work early in the day have a fairly large block of time in the late afternoon and evening for family, social, or educational pursuits, whereas people who work the "business shift" have a smaller time block in the evening for off-the-job activities.

Analysis of differences in the job/non-job satisfaction relationship for males and females generally replicated the results found by Kavanagh and Halpern (1977). That is, the job/non-job satisfaction relationship does not appear to be moderated by gender. The differences that occurred in correlations using the JDI and the Warr et al. job satisfaction scale may have been based partly on the fact that the Warr et al. scale did not have an interpretable factor structure. Just what aspects of the job the Warr et al. scale measures is uncertain. With the JDI, satisfaction with the work itself was the only subscale on which significant gender differences occurred. The overall JDI measure was significantly correlated with the Warr et al. non-job satisfaction scale among men, but not among women. On another JDI subscale, pay satisfaction, correlations for men and women were nearly identical (.27 and .32, respectively). A tentative explanation for the observed differences between men and women on the relationship of the JDI work scale to non-job satisfaction is that women may still be able to be relatively satisfied with most non-job factors
of their lives, even though they are not satisfied with the type of work that they do. Further analysis of the differences between job and non-job satisfaction factors for women and men may help to understand this relationship more fully.

Another area for research is suggested by the influence of job importance on the job/non-job satisfaction relationship. The Iris and Barrett (1972) study suggests that perceived importance of different job factors may be differentially related to life satisfaction for workers with different levels of job satisfaction. Further study of that concept may be interesting and valuable. Also looking at the effects of the importance of non-job factors and how they may be differentially related to job satisfaction for people with high and low levels of non-job satisfaction may prove to be beneficial.

In summary, substantive future research is suggested in the model building area. Further testing of the factor spillover model along with the development of validated factor structures for both non-job and job satisfaction scales, will help to clarify the relationship more fully. By further testing the relationships between the factors composing non-job satisfaction and job satisfaction, a more viable understanding of the complex relationship between the two will be achieved.
References


March, 1982

Dear Friend:

I would like to introduce you to a legitimate research study being conducted by Andrew Kresha, a graduate student at the University of Nebraska at Omaha. Mr. Kresha is conducting a research study of attitudes among a random sampling of residents in the Omaha area who are employed. The attitudes being surveyed relate to job and off-job aspects of people's lives.

This survey is designed to provide complete anonymity and confidentiality to everyone who responds by completing the attached questionnaire. Under no circumstances will names or addresses of people who respond or who do not respond be made public or used in any way. This research will only compile statistical averages from those completing the survey.

I encourage your cooperation with this research project by completing the questionnaire. It should take only about five minutes to complete. A postage paid envelope is enclosed for you to return the survey in. If you are not working at a paid job, please pass this on to another person in your household. If no one in your household works, then please pass this on to the person who lives next door. Mr. Kresha would like to have the questionnaire returned within ten days. Your responses to any or all the questions on this survey are voluntary. You may omit any question or questions you do not wish to answer.

Should you wish a summary of the results of this research, please send a self-addressed envelope to Mr. Kresha at 4835 Pine St., Omaha, NE 68106 now or within the next three months. A summary of the survey will be mailed to you by May, 1982 if you wish.

Should you have any questions about the survey or about completing the questionnaire, please contact Mr. Kresha at 553-7626 between 6 p.m. and 10 p.m. If you would like confirmation of the legitimacy of the research please call me at UNO at 554-2592.

Sincerely,

Dennis C. Dossett
Dr. Dennis Dossett, Director
Center for Applied Psychological Services
The following questions deal with various aspects of your job. I would like you to rate how satisfied or dissatisfied you feel with each of these aspects of your job at the present moment. Just indicate how satisfied or dissatisfied you are by using the following scale:

**DISSATISFIED**

- EXTREMELY
- VERY
- MODERATELY
- NOT SURE
- MODERATELY
- VERY
- EXTREMELY

1  2  3  4  5  6  7

Please use the number from the scale above that best suits your feelings.

Example: If I feel very satisfied with the profit-sharing program, I mark a '6' in the box.

✓___ the physical working conditions
✓___ the freedom to choose your own method of working
✓___ your fellow workers
✓___ the recognition you get for good work
✓___ your immediate boss
✓___ the amount of responsibility you are given
✓___ your rate of pay
✓___ your opportunity to use your abilities
✓___ industrial relations between management and workers in the firm
✓___ your chance for promotion
✓___ the way your firm is managed
✓___ the attention paid to suggestions you make
✓___ your hours of work
✓___ the variety in your job
✓___ your job security
✓___ your sense of accomplishment from your work
✓___ now taking everything into consideration, how do you feel about your job as a whole.

The following questions use the same scale but consider aspects of life off the job. Please consider these aspects of your life at the present moment. Indicate how satisfied you are feeling about each one in turn. Use the same 7-number scale:

**DISSATISFIED**

- EXTREMELY
- VERY
- MODERATELY
- NOT SURE
- MODERATELY
- VERY
- EXTREMELY

1  2  3  4  5  6  7

✓___ the present administration of government nationally
✓___ the way you spend your leisure time
✓___ your social life: friends and neighbors
✓___ the future and its prospects in all areas other than your job.
✓___ your ability to buy things and do things with your income
✓___ your present state of health
✓___ the education you have received
✓___ what you are accomplishing in life (off the job)
✓___ the people that you do things with socially
✓___ your family life
✓___ your life with your spouse (if applicable)
✓___ the local administration of government at this time
✓___ the formal training and education you have received
✓___ the house or apartment that you live in
✓___ your standard of living: the things that you can buy & do
✓___ your surrounding community where you live
✓___ your off-the-job goals and accomplishments
✓___ the quality of your time away from your work setting
✓___ the neighborhood that you live in
✓___ how you are feeling these days both physically and mentally
✓___ what your future seems to hold for you (other than work)
✓___ your current living conditions
✓___ taking everything into consideration, your life as a whole off the job
Here are several lists that describe particular aspects of your job. Evaluate these by putting a check in the column that best describes whether or not that aspect is part of your job. Put a check in the "Y" column if the item does describe a particular aspect of your job, a check in the "N" column if the item does not describe that aspect, or a check in the "?" column if you cannot decide.

<table>
<thead>
<tr>
<th>(yes)</th>
<th>(no)</th>
<th>(yes)</th>
<th>(no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

**WORK:**
- Example: exhausting
- (work is not exhausting)
- fascinating
- routine
- satisfying
- boring
- good
- creative
- respected
- hot
- pleasant
- useful
- tiresome
- healthful
- challenging
- on your feet
- frustrating
- simple
- endless
- gives sense of accomplishment

**SUPERVISION**
- asks my advice
- hard to please
- impolite
- praises good work
- tactful
- influential
- up-to-date
- doesn't supervise enough
- quick-tempered
- tells me where I stand
- annoying
- stubborn
- knows job well
- bad
- intelligent
- leaves me on my own around when needed
- lazy

**PEOPLE**
- stimulating
- boring
- slow
- ambitious
- stupid
- responsible
- fast
- intelligent
- easy to make enemies
- talk to much
- smart
- lazy
- unpleasant
- no privacy
- active
- narrow interests
- loyal
- hard to meet

**PAY**
- income adequate for normal expenses
- satisfactory fringe benefits
- barely live on income
- bad
- income provides luxuries
- insecure
- less than I deserve
- highly paid
- underpaid

**PROMOTIONS:**
- good opportunity for advancement
- opportunity somewhat limited
- promotion on ability
- dead-end job
- good chance for promotion
- unfair promotion policy
- infrequent promotions
- regular promotions
- fairly good chance for promotion

PLEASE TURN TO THE LAST PAGE
For a moment, would you consider the importance of several aspects of your work. Some people find parts of their job quite important and other parts not very important at all to them. Please place a check in the box next to the answer that most closely represents your attitude toward that aspect of your job.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: How important is the size of your supervisor's nose to your job?</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How important to you is your chance for promotion?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How important to you is your pay?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How important to you is the type of work you do?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How important to you are the people you work with, your co-workers?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>How important to you is the type of supervision that you receive?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall, how important is your job to your life as a whole?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Finally, for the purposes of classification, please answer the following questions. The sample shows how you should record your answer.

SAMPLE: / 1 / My dog is _______ in size:
1. small  2. medium  3. large

/___/  I have worked for my present employer:
1. less than 1 year  5. 7-9 years
2. 1-2 years  6. 9-11 years
3. 3-4 years  7. 12-20 years
4. 5-7 years  8. over 20 years

/___/  AGE:
1. 18-24 years  4. 45-54 years
2. 25-34 years  5. 55-64 years
3. 35-44 years  6. 65 and over

/___/  HOURS WORKED:
1. 8am-5pm  4. 11pm-7am
2. 7am-3pm  5. other (please specify):
3. 3pm-11pm

/___/  SEX:
1. female
2. male

/___/  My OCCUPATION is:
1. professional  6. service occupation
2. managerial  7. general laborer
3. clerical or sales  8. military
4. craftsman/craftsperson  9. farmer/farm worker
5. machine operator

/___/  My job is _________ in nature.
1. NON-SUPERVISORY
2. SUPERVISORY

/___/  MY EMPLOYER IS CONSIDERED TO BE A FORM OF
1. government  4. other (please specify):
2. private business/industry
3. non-profit agency

/___/  Are you:
1. employed by someone else
2. self-employed
3. Both