

UNDERSTANDING PAY SATISFACTION: THE LIMITS OF A COMPENSATION SYSTEM IMPLEMENTATION

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ABSTRACT: Although a common organizational intervention, research investigating the impact of compensation system implementation on employee outcomes is limited. As one type of intervention, job evaluation usually includes substantial employee participation in order to improve employee pay satisfaction. This assumption, however, is rarely validated. To address this weakness, the present study examines, in a quasi-experimental field study at a manufacturing firm ($N = 168$), the extent to which participation in the job evaluation process during a compensation system implementation influences pay satisfaction. Both longitudinal and between-group comparisons failed to show a participation effect on pay satisfaction, casting doubt on the organizational development benefits of this common intervention.

KEY WORDS: Pay satisfaction; compensation; job evaluation; organizational development.

Interventions aimed at altering employee satisfaction with compensation systems take many forms. In particular, job evaluation has become a popular method for determining organizational compensation levels (McCormick, 1979; Milkovich & Newman, 1993). The goal of this

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procedure is to develop an internally consistent job hierarchy in order to achieve a pay structure acceptable to both management and labor (Gerhart & Milkovich, 1992; Milkovich & Newman, 1993). One of the most common methods of conducting job evaluation involves determining a set of compensable factors, numerically scaling them, assigning weights in terms of their relative importance, and then applying them to a set of jobs based on a job analysis (Doverspike, Carlisi, Barrett, & Alexander, 1983). This process has been termed the *point method* of job evaluation (Milkovich & Newman, 1993).

A key, but often implicit, goal of this method is to enhance employee perceptions of pay satisfaction and pay fairness. However, we could find no empirical studies documenting this effect in the research literature. To address this deficiency, the present study examines, in a quasi-experimental field study, the extent to which participation in the job evaluation process during a compensation system implementation influences pay satisfaction. To provide an understanding of why participation may influence pay satisfaction, we briefly review the job evaluation and fairness and participation literatures.

JOB EVALUATION

Job evaluation is a “generic term for a set of procedures that attempt to measure the organizational value or worth of a job for the purpose of scientifically establishing wage and salary rates” (Doverspike, Carlisi, Barrett, & Alexander, 1983, p. 476). While others define job evaluation in slightly different ways, all focus on systematic procedures that establish differences among jobs for the purpose of determining pay (e.g., Hahn & Dipboye, 1988; Hornsby, Smith, & Gupta, 1994; McCormick, 1979; Milkovich & Cogill, 1984; Schwab, 1985).

In addition to providing a measure of organizational worth, job evaluation is also designed to gain agreement about a wage structure (Milkovich & Cogill, 1984). That is, another focus of job evaluation is to “rationalize and gain acceptability” for the manner in which wages are distributed (Munson, 1963, p. 60). One key index of the acceptability of a job evaluation system is pay satisfaction. As Carey (1977) notes, “if pay is to satisfy employees—and that is what salary administration is all about—then each pay rate must be established with at least some consideration for the views of the people in and around the job” (p. 32). As an outcome of the job evaluation process, however, pay satisfaction has long been neglected in organizational research, with most of the recent attention focused on pay satisfaction dimensionality and not its determinants (e.g., Judge & Welbourne, 1994). Few studies have examined pay satisfaction as a result of pay intervention and change programs (Hene-

man, 1985). This gap in the literature is unfortunate since understanding the determinants of pay satisfaction may lead to improved compensation system design and implementation (Gerhart & Milkovich, 1992).

FAIRNESS AND PARTICIPATION

Because compensation decisions are particularly salient and important to employees, the process by which they are made is likely to influence employee satisfaction. A number of different strategies have been developed to minimize the negative consequences that often accompany hierarchical decision making. One class of techniques utilize participative decision making where employees become involved by participating in the decision making process (Neuman, Edwards, & Raju, 1989). The psychological dynamics that underlie these interventions can be understood within a procedural justice framework. This perspective focuses on the procedures or processes used to make decisions and their relative fairness (Folger & Greenberg, 1985; Greenberg, 1987, 1990a). It thus concerns *how* decisions are made. While different criteria of procedural justice have been discussed (see Greenberg, 1990a, for an overview), all conceptualizations include aspects of participation and involvement. These two elements are critical to perceptions of fairness, particularly when allocation decisions are made (Barrett-Howard & Tyler, 1986).

The potential importance of procedural fairness for compensation systems was noted by Folger and Greenberg (1985), although they focused only on systems that either provide information (open pay systems) or choice (cafeteria-style benefit plans). That is, they did not discuss instances where individuals were actually involved in the process of changing a compensation system. Milkovich and Newman (1993), however, suggest that the manner in which a pay decision is made may be as important as the actual decision. Support for this comes from research showing that perceptions of procedural justice contribute significantly to pay satisfaction (Folger & Konovsky, 1989). It appears that the opportunity to express one's opinion, regardless of actual influence over the decisions made, enhances perceptions of procedural justice (Tyler, Rasin-ski, & Spodick, 1985), and involvement in the process seems to satisfy the desire to have one's opinion considered. As a result, including important stakeholders in the job evaluation process may increase perceptions of fairness and pay satisfaction because it allows them to have a voice in the design of the pay plan, even if they ultimately have little direct control over the final pay levels assigned.

Two studies have investigated process-related issues in the context of implementing pay plans. While they do not directly relate to job evaluation, they are important for the present research because they show

how process involvement can influence pay plan outcomes. In one study, Lawler and Hackman (1969) examined the effectiveness of participatively developed pay incentive programs. Compared to groups who had the incentive plan imposed, those who participated had improved attendance. Lawler and Hackman concluded "that participation in the development and implementation of a plan may have more of an impact on the effectiveness of a plan than the mechanics of the plan itself" (1969, p. 470). In another study, Jenkins and Lawler (1981) examined how participating in the design of a pay system influences employee reactions. They found that participation in pay system design resulted in significantly greater pay satisfaction. These studies highlight the importance of employee participation and involvement in the compensation system design process and how this influences compensation outcomes.

THE PRESENT STUDY

This review highlights weaknesses in the job evaluation literature and defines the methodological approaches and hypotheses adopted in the present study. First, there is a lack of research investigating the basic question of how implementing a compensation system influences pay satisfaction. As noted earlier, the fairness and participation literatures suggest that employee involvement is essential when making pay decisions because it helps employees understand the process by which pay decisions were reached. The present research investigates this issue via a quasi-experimental field study and leads to the first hypothesis:

H1: Implementing a participatively developed compensation system will increase pay satisfaction.

The second methodological approach used in the present study is a non-equivalent dependent variables design (Cook & Campbell, 1979). That is, pay satisfaction is not typically considered a unitary construct. Instead, pay satisfaction can be subdivided into four dimensions (Heneman & Schwab, 1985), (1) satisfaction with pay level, (2) satisfaction with raises, (3) satisfaction with structure and administration, and (4) satisfaction with benefits. It seems likely that a job evaluation will differentially influence these dimensions of pay satisfaction, thus resulting in differential predictions:

H2: Satisfaction with pay structure and administration will increase following a job evaluation implementation, while satisfaction with benefits will be unaffected. Satisfaction with pay

level and raises may increase slightly because they may be secondary benefits of having a job evaluation system.

Third, few studies have examined how the level of involvement or participation in the job evaluation process influences the acceptability of a new compensation system. The present study examines this issue by comparing the pay satisfaction of employees who had varying degrees of participation in the job evaluation process (e.g., participated in the job analysis, completed surveys, reviewed materials, and so on), leading to the final hypothesis.

H3: As employees have greater participation in the pay plan implementation, they will experience commensurate increases in their satisfaction with pay.

METHOD

Setting and Intervention Methodology

The present study was conducted while implementing a new pay plan for exempt (salaried) jobs at a medium-sized manufacturing company based in the midwest. This organization was founded approximately ten years prior to the present intervention. It began with only ten employees and has grown to its current size of over 1000 employees in exempt and nonexempt jobs. During this period of rapid growth, employees were compensated in a somewhat haphazard manner as no criteria was ever developed to determine pay levels and no compensation structure was ever established. As the company became larger, this lack of a compensation structure became more problematic, resulting in concerns over internal pay equity. It was at this point that the authors were contacted to help the organization design a compensation structure for exempt jobs. As we will detail, this new structure focused on internal pay equity through the identification and rating of a series of participatively developed compensable factors.

To better understand how this job evaluation operates as an organizational development (OD) intervention, it is useful to integrate the current intervention into the broader OD literature. Morgeson, Aiman-Smith, and Campion (1997) have recently summarized a number of these models and outlined a meta-view of OD implementation theories. In short, there exist a number of stages or steps in any organizational development implementation which includes discontent, diagnosis, data feedback and goal establishment, planning and implementation, evaluation and feedback, and stabilization. The present intervention is dis-

cussed in the context of the framework outlined in Figure 1 and reviewed below.

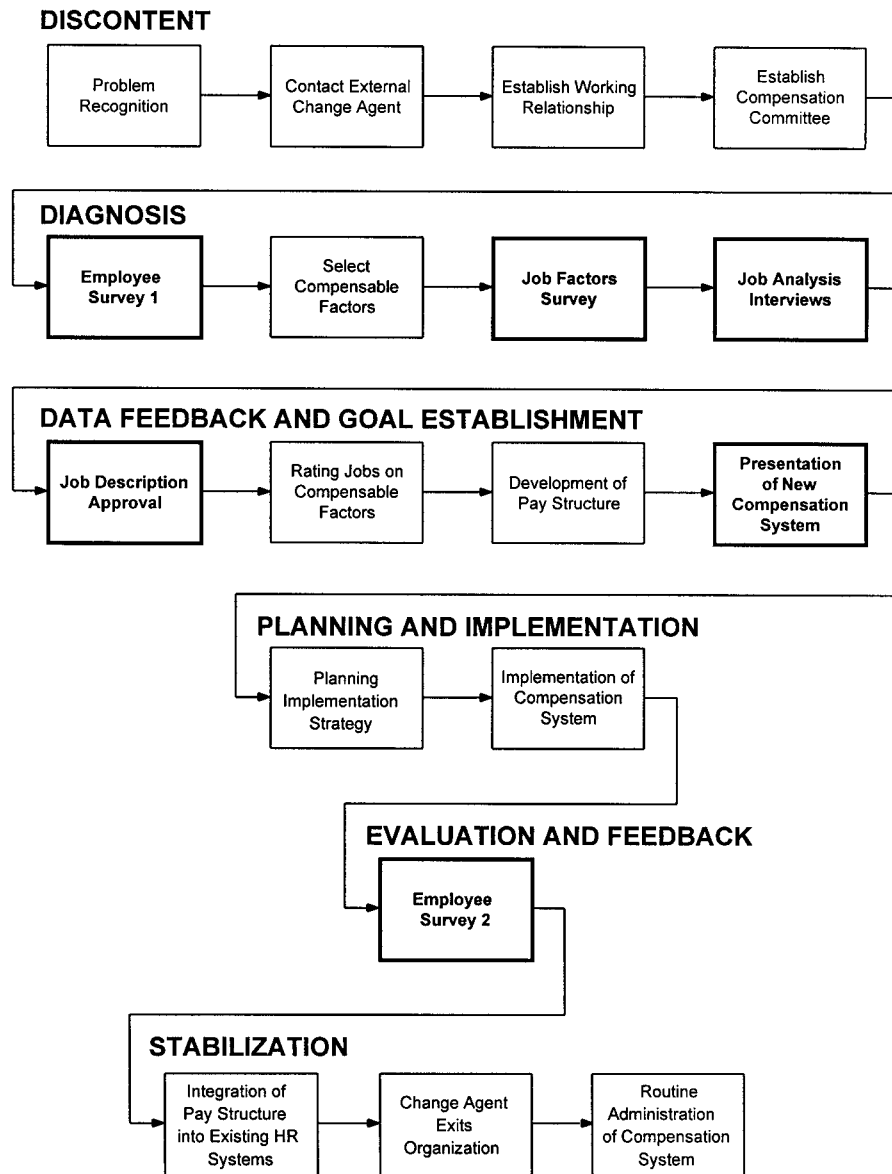
Discontent. The discontent stage is concerned with problem identification and recognition (Lippitt, Watson, & Westley, 1958) as well as the establishment of a relationship with a change agent (Beer, 1980). After we were contacted by the organization and a working relationship was established, the first step was to create a compensation committee. This committee was composed of nine senior managers (mostly vice presidents) and functioned both as an oversight group that reviewed and approved the project as well as a working group that made judgments about job worth.

Diagnosis. The diagnosis stage involves the collection of accurate and valid information (Argyris, 1970) which provides an understanding of issues and problems that exist within the organization (Cummings & Srivastva, 1977). This began with a survey of all employees, which measured satisfaction with the existing compensation system, knowledge of the compensation system, as well as obtaining employee input about what they considered to be the most important compensable factors. This information was then used by the compensation committee to identify and select the final set of compensable factors. Following this, all exempt employees received a job factors survey, which asked for a written description of their job on each of the compensable factors. Then, a randomly selected sample of incumbents were interviewed by one of the authors to gather more specific detail on the job as necessary. This resulted in over 100 interviews.

Data Feedback and Goal Establishment. The data feedback and goal establishment stage involves sharing the collected information (Beer, 1980), identifying the systems to target for change (Beckhard, 1969), and developing goals and strategies to address the problem (Lippitt et al., 1958). Since the present intervention was focused on altering the compensation system, this stage primarily involved developing the pay structure and providing feedback on the progress of the implementation. Based on the surveys and interviews, job descriptions were written and provided to incumbents and supervisors for their approval. All incumbents were included in the job description approval phase, regardless of whether or not they were involved in the interview or completed a job factors survey.

Next, anchored rating scales were developed by the authors to optimally distinguish among the range of jobs in this company. These scales were then independently rated by each author, which was followed by a meeting to discuss all differences to a consensus rating. The compensation committee then reviewed and revised the ratings. The committee

Figure 1
Implementation Methodology



Note. Boxes in bold indicate steps where employees participated and were involved in the implementation process.

also weighted the compensable factors in terms of their importance to the overall work of the jobs via a Delphi technique (Delbecq, Van de Ven, & Gustafson, 1975). This data formed the basis for developing the pay structure. Based on this job evaluation rating process, as well as a consideration of the existing pay rates, a pay structure was determined by defining six pay grade levels. Since one important purpose of a job evaluation is to improve employee knowledge of the pay system, a presentation was given by the human resource manager to all employees through a series of group meetings. It described the purpose of the project, the steps taken, the final pay structure, and how the information was to be used.

Planning and Implementation. The planning and implementation stage involves first establishing specific details of the change effort (Beer, 1980) and then implementing the change (Beckhard & Harris, 1977). Aspects of the planning process occurred throughout the preceding stages, which included selecting and rating the compensable factors as well as developing the pay structure. Once the pay structure was established, the specific details of the implementation were determined. Following this, the new compensation system was implemented.

Evaluation and Feedback. The evaluation and feedback stage involves evaluating the success of the change effort (Blake & Mouton, 1968) as well as providing feedback about the effect of the change. Three months following implementation and one year after the initial employee survey, a second pay satisfaction survey was administered. This measured the satisfaction with the new compensation system and provided, via write in comments, employees the opportunity to provide feedback to management about the new compensation system.

Stabilization. The stabilization stage concerns maintaining change over time (Morgeson et al., 1997). Thus, it involves the change agent leaving the organization (Lippitt et al., 1958) and putting in structures to maintain the change (Beckhard & Harris, 1977). This was accomplished in the present research by integrating the new pay structure into existing human resource systems through the preparation of a policy manual outlining policies and procedures for routine compensation decisions.

Sample

The employees (Pretest $N = 135$; Posttest $N = 122$) who participated in this project held a wide variety of exempt jobs (e.g., purchasing agent, engineer, network specialist, manager) from a range of departments (e.g., manufacturing, industrial engineering, sales). A smaller group (Pretest $N = 33$; Posttest $N = 44$) of employees in *nonexempt*, salaried

jobs (mostly in clerical and administrative positions) who did not participate in the job evaluation and did not have their compensation system altered were included as a comparison group. Statistical power was 88% to detect a medium effect size ($d = .50$; $p < .05$, one-tailed) and XX% to detect a small effect size ($d = .XX$; $p < .05$, one-tailed; Cohen, 1988). Response rates were 69%, 62%, 80%, and 88% for pretest exempt, posttest exempt, pretest nonexempt, and posttest nonexempt samples, respectively.

Measures

The dependent measures of this study were the four dimensions of pay satisfaction taken from the Pay Satisfaction Questionnaire (PSQ; Heneman & Schwab, 1985). This instrument has demonstrated adequate reliability and dimensionality (Heneman & Schwab, 1985; Judge & Welbourne, 1994). Respondents indicated their degree of satisfaction with various aspects of pay on a 5-point “very satisfied” (5) to “very dissatisfied” (1) scale. The PSQ consists of a three-item satisfaction with pay level scale ($\alpha = .83$; e.g., “My current salary”), a four-item satisfaction with raises scale ($\alpha = .78$; e.g., “My most recent increase”), a six-item satisfaction with structure and administration scale ($\alpha = .85$; e.g., “The company’s pay structure”), and a four-item satisfaction with benefits scale ($\alpha = .94$; e.g., “My benefits package”).

Procedure

When completing the first employee survey, both exempt and nonexempt groups anonymously completed the PSQ. This is hereafter referred to as the pretest data collection period. Three months following program implementation, all exempt and nonexempt employees again anonymously completed the PSQ. This is hereafter referred to as the posttest data collection period. At the posttest, exempt employees also indicated on a 2-point scale (1 = “no,” 2 = “yes”) whether they had: (1) completed the first employee survey, (2) completed the job factors survey, (3) participated in a job analysis interview, (4) reviewed the written job description, or (5) attended the presentation which outlined the new compensation structure. Thus, these questions measured the extent to which the individual had been involved in each of the steps detailed (in bold) in Figure 1. These items were summed and form the level of participation scale ($\alpha = .73$). At posttest, all employees also indicated their department, the number of months since their last pay increase, the amount of their last pay increase (in %), and the grade level of their job in the new compensation system. These were used as control variables in the correlational analyses.

Thus, the present study is a 2×2 factorial design, with one factor indicating the timing of the measurement (pretest or posttest), and the other factor indicating the treatment (with employees in exempt jobs comprising the treatment group, and employees in nonexempt jobs comprising the control group).

RESULTS

Table 1 contains the means, standard deviations, and intercorrelations among the study variables for all respondents at both the pretest and posttest. All satisfaction measures were moderately intercorrelated (r 's from .27 to .68). Both satisfaction with pay level and satisfaction with structure and administration were negatively correlated with the number of months since last increase, while positively correlated with the grade level of the job. Grade level was positively related to the percentage of last increase.

Table 2 contains the means, standard deviations, and number of respondents separated by time and treatment. The analyses of variance are presented in Table 3. Contrary to our first hypothesis, levels of pay satisfaction did not increase following the implementation of a compensation system. Contrary to our second hypothesis, there were no significant interaction effects. This was the case both for the pay scale predicted to show the strongest effect (i.e., satisfaction with pay structure and administration), as well as for the other three pay satisfaction scales. To control for the potentially biasing influence of individuals who did not participate in the pretest but completed the posttest (e.g., those who are new hires), additional analyses were conducted excluding individuals who did not complete the first pay satisfaction survey. No differences were found.

Supplemental regression analyses were also conducted in an attempt to control for the influence of level of participation, months since last increase, percent of last increase, and departmental affiliation on satisfaction scores. Since these control variables were not available for the pretest data, the group pretest mean on the dependent variables was subtracted from individual posttest satisfaction scores. This forms the dependent variable in the first regression analysis. The control variables were then entered as a block (where departmental affiliation was dummy coded). The residual value from this first regression analysis was saved and used as the dependent variable in the second regression analysis, where treatment condition was the predictor. Again, no differences were found between control and treatment groups.

Finally, level of participation in the job evaluation project did not correlate significantly with any of the pay satisfaction scales (H3; Table

Table 1
Correlation Matrix

Variable	<i>Pretest</i>											<i>Posttest</i>	
	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	<i>M</i>	<i>SD</i>
1. Treatment ^a				.14	-.02	-.12	-.12	-.05	-.05				
2. Satisfaction with Pay Level	2.88	.89	.14		.68**	.48**	.27**	.05	-.19*	.09	.27*	2.85	.85
3. Satisfaction with Raises	3.17	.85	-.12	.58**		.53**	.38**	.07	-.15	.11	.17	3.02	.84
4. Satisfaction with Structure & Administration	2.71	.82	-.09	.56**	.41**		.37**	-.06	-.21**	.02	.23*	2.72	.82
5. Satisfaction with Benefits	3.44	.87	-.13	.37**	.33**	.30**		-.09	.03	-.02	.08	3.45	.88
6. Level of Participation ^b									-.01	.10	.03	1.81	.27
7. Months Since Last Increase										.06	.11	7.15	4.64
8. Percentage of Last Increase											.39**	.05	.02
9. Grade Level ^{c,d}												3.49	.92

Note. Pretest correlations are below the diagonal; posttest correlations are above the diagonal. Sample sizes range from: 168–161 for pretest sample, 166–134 for posttest sample.

^a1 = nonexempt, 2 = exempt. ^bExempt jobs only ($N = 122-109$). ^cExempt jobs only ($N = 78-72$). ^dGrade level ranges from 1 (lowest) to 6 (highest).

* $p < .05$, ** $p < .01$, two-tailed.

Table 2
Means, Standard Deviations, and Sample Size for Treatment and Control Groups
at Pretest and Posttest on Satisfaction Measures

Satisfaction with:	<i>Pretest</i>		<i>Posttest</i>	
	Control	Treatment	Control	Treatment
Pay Level				
<i>M</i>	2.63	2.95	2.65	2.93
<i>SD</i>	.83	.89	.93	.81
<i>N</i>	33	135	44	122
Raises				
<i>M</i> 3.36	3.12	3.05	3.01	
<i>SD</i>	.78	.86	.90	.82
<i>N</i>	32	129	41	121
Structure & Administration				
<i>M</i>	2.86	2.68	2.88	2.66
<i>SD</i>	.80	.82	.73	.84
<i>N</i>	33	130	43	119
Benefits				
<i>M</i> 3.67	3.39	3.63	3.39	
<i>SD</i>	.79	.88	.82	.89
<i>N</i>	33	135	44	122

1). This was true of both the five item scale as well as each individual participation item. Because the number of months since last increase and grade level of the job were correlated with satisfaction with structure and administration, they were partialled out of the correlation between level of participation and that satisfaction measure. Since the percentage of last increase was uncorrelated, there was no need to use it as a control variable. Even with these controls, however, there was no relationship between level of participation and satisfaction with structure and administration ($pr = -.08$).

DISCUSSION

Overall, our results fail to support the hypothesized relationships. Neither the pay plan implementation nor the degree of participation in the process had an effect on the satisfaction measures. This was the case for the pay satisfaction scale relating to structure and administration, as well as for the other three scales. This lack of effects is somewhat puzzling given the presumed value of job evaluation for enhancing pay

Table 3
Analysis of Variance for the Effect of Time and Treatment Status on
Satisfaction Measures

Source	<i>df</i>	<i>MS</i>	<i>F</i>
Satisfaction with Pay Level			
Time ^a	1	.01	.01
Treatment ^b	1	5.14	6.89**
Time × Treatment	1	.03	.04
Explained	3	1.75	2.35
Residual	330	.75	
Satisfaction with Raises			
Time ^a	1	1.84	2.61
Treatment ^b	1	1.02	1.44
Time × Treatment	1	.56	.79
Explained	3	1.09	1.54
Residual	319	.71	
Satisfaction with Structure & Administration			
Time ^a	1	.00	.01
Treatment ^b	1	2.41	3.62
Time × Treatment	1	.02	.03
Explained	3	.81	1.22
Residual	321	.66	
Satisfaction with Benefits			
Time ^a	1	.01	.01
Treatment ^b	1	3.94	5.21*
Time × Treatment	1	.02	.02
Explained	3	1.32	1.74
Residual	330	.76	

^a1 = pretest, 2 = posttest. ^b1 = nonexempt, 2 = exempt.

* $p < .05$, ** $p < .01$, two-tailed.

satisfaction. There are, however, a number of sample, study design, and measurement considerations which may have limited our ability to find an effect. They are reviewed below, followed by implications for research and practice.

Limitations

In job analysis interviews and write-in comments, some employees complained that they were compensated at below-market rates. The job evaluation, however, focused solely on internal pay equity (i.e., pay levels relative to other jobs in the same organization) and not on external pay equity (i.e., pay levels relative to similar jobs in other organizations). It may be that when external pay equity is highly salient, no amount of internal equity will result in increased pay satisfaction. Similarly, partic-

ipation may not matter if there are great concerns about external equity. In short, internal pay equity may be a necessary, but not sufficient, condition for pay satisfaction.

These findings suggest that the relationships among procedural justice, distributive justice, and pay satisfaction are more complex than previous acknowledged and thus have implications for future research. While some have suggested that low outcomes will be judged fair if procedures are fair (e.g., Greenberg, 1987), others have suggested that "it is entirely possible . . . that when outcome favorability is low in an absolute sense, procedural justice will have little buffering effect" (Brockner & Wiesenfeld, 1996, p. 206). Thus, procedural justice may operate within limits of distributive justice. If distributive justice is too low, procedural justice may not matter.

Another limitation is that the research design was a quasi-experiment rather than a true experiment. We had a comparison group, not a control group. That is, only employees in exempt jobs received the treatment and only employees in nonexempt jobs were in the comparison group. While the pre-post design helps mitigate this concern somewhat since it takes prior levels of pay satisfaction into account, these groups may differ in unknown ways that weaken our ability to draw clear comparisons. Relatedly, despite the fact that their jobs were not included in the job evaluation study, the employees in nonexempt jobs may have felt they participated in the design of the pay plan because they completed the satisfaction surveys along with the exempt employees and attended the same follow-up meeting that presented the pay plan. If the nonexempt employees felt as though they had participated in the project, their pay satisfaction would have been inflated compared to a true control group. This concern is lessened, however, by the fact that the employees in nonexempt jobs did not show any meaningful change from pretest to posttest.

There were also limitations from a measurement perspective. First, there was low variance on the level of participation measure, both at the item and scale levels. That is, most exempt employees who returned surveys participated in all phases of the job evaluation process. While this should have increased our chances of finding mean differences on the satisfaction measures between pre and posttest, it attenuates any correlation between level of participation and pay satisfaction. Second, there was a large amount of missing data on the satisfaction with structure and administration items (up to 40%). Although supplemental analyses suggest that nonrespondents were not significantly different on the measures included in the study, this may indicate that many employees did not fully understand the pay system. If so, this might explain why their pay satisfaction did not increase.

Implications for Research and Practice

Should additional research obtain similar findings, it appears there are a number of implications for research and practice. With respect to research, this study illustrates the importance of using more rigorous designs so we can begin to critically examine the effects of organizational interventions. Other researchers (e.g., Eden, 1985; Terpstra, 1981) have suggested that as the methodological rigor of the study increases, the likelihood of finding significant positive results decreases. Thus, the positive effects of a job evaluation might have been incorrectly presumed in the present context had a rigorous study not been conducted. Such a strategy in future studies will allow researchers to better understand the nature of intervention dynamics and outcomes.

The results obtained in the present study raise a number of issues which deserve further research attention. For example, does participation influence pay satisfaction at all, or is its influence mediated by other variables? To what extent does participation in the job evaluation process lead to perceptions of procedural justice? What is the relative contribution of internal versus external equity considerations? Is the level of organizational trust important for perceptions of procedural justice (see Brockner & Wiesenfeld, 1996) and satisfaction outcomes?

Integrating the job evaluation process with the OD implementation literature yields practical insight as well. For example, in examining our implementation methodology (Figure 1) it is clear there were many opportunities for participation and involvement. It is also true, however, that employees could have participated in many other ways as well. That is, employees could have been involved on the compensation committee, in determining compensable factors, and in the development of the pay structure. Before concluding that participation in a job evaluation has no positive effects, future compensation implementation efforts should attempt to foster increased participation in each of the six stages outlined as a means of increasing perceptions of participation and procedural justice. For example, future efforts might spend more time communicating to employees, such as highlighting the level of employee participation and emphasizing procedural fairness (see Greenberg, 1990b).

Three final points deserve mention. First, evaluation is the key to improving OD as a science. Thus, the use of rigorous designs informs theory and practice. Second, OD learns tremendously from null findings. That is, it allows us to critically examine our fundamental assumptions and increase our knowledge of the underlying processes that occur during organizational interventions. Third, publishing null findings from well conducted studies is critical to the accuracy of meta-analyses (e.g.,

Neuman, Edwards, & Raju, 1989) and narrative reviews of the future. Without these publications, an inaccurate and inappropriate perspective will exist concerning OD interventions.

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