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EMPLOYEE RESPONSES TO FLEXIBLE WORK SCHEDULES: AN INTER-ORGANIZATION, INTER-SYSTEM COMPARISON

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Abstract

A quasi-experimental investigation compared employee responses to the amount of discretionary time across four work schedules (a fixed hour and three variations of flexible work schedules). Hypothesized systematic differences in employee responses comprising a positive linear relationship with increases in discretionary time was not supported. Employee perceptions of time autonomy, however, did reveal a significant linear relationship with organizational attachment, organizational attendance, symptoms of stress, and job and off-job attitudes.

Employee Responses to Alternative Work Schedules: An Inter-organization, Inter-system Comparison

As a means of enriching the work environment and as a means of increasing organizational effectiveness, there has been a relatively widespread experimentation with various discretionary time systems (e.g., staggered start, flexitime, and variable working hours), hereafter generically referred to as flexible forms of working scheduling. The common denominator linking these systems is that each provides the employee with an element of choice (i.e., the opportunity to exercise some discretion) in defining the time dimensions of their working day. The systems are differentiated from one another primarily by the amount of discretion that the employees are permitted to exercise in creating their work schedules. Under the staggered start systems the individual employees choose from a number of management defined options (e.g., half hour intervals between 7:00 and 9:00 a.m.) when they wish to start their fixed-length working day. The size of the decision unit (organization, group, or individual), the frequency with which the employee is permitted a choice, and the number of available options defines the degree of discretion available to the employee under the staggered systems.

In its pure form flexitime is a system under which an employee exercises a daily decision with regard to the time of day to start work. This flexible starting time band is followed by a set of core hours specifying a time period when all employees must be at work. This system, like the others, has variations. Most of the variations are based on the amount of discretion provided to the employees through: the number of work/nonwork time bands, the size of the flexible bands, and whether time credits and debits can be created and carried forward within and between time accounting periods. The variable working hour system extends the flexitime concept by removing the required hours of work

(i.e., the core hours) of the flexitime system. Under this arrangement the employees "contract" with their organization for a specified amount of time on a daily, weekly, or monthly basis.

A plethora has been written focusing on the alleged merits of these work schedules, yet our understanding of employee responses to flexible forms of work scheduling is in an embryonic state. The conceptual statements, observations, and research that define the contemporary literature have not been driven by a well grounded theoretical paradigm which defines variables, relationships, and processes. In addition most flexible work schedules have been designed on an ad hoc basis without attending to theoretically defined and organizationally functional features.

While the literature reviewed appears to be somewhat supportive of flexible working hour arrangements the prevalence of methodological and analytic problems cannot be overlooked (Golembiewski & Proehl, 1978). The literature is strongly characterized by: anecdotal reports of flexible working hour systems, the use of non-standardized research scales, failure to include statistical treatment of the reported data, and the absence of other systematic data collection strategies. Consequently the results attributed to flexible working hour arrangements could be artifacts casting doubt on the internal validity of the research findings.

Despite these serious limitations a review of the literature identified six organization constructs (i.e., organizational attachment, organizational attendance, performance, stress, off-job satisfaction, and job attitudes) that can be employed to summarize the flexible working hour-employee response relationships. As an exploratory form of research, this investigation will operationalize a number of variables representing each construct in an attempt to test

assumptions and statements of assumed relationships that currently characterize this literature.

Harvey and Luthans (1979) note that the flexible working hour literature assumes that there is a linear relationship between the amount of discretionary time given the employee and various employee responses. Following this lead the research question guiding this study asks whether or not the amount of discretionary time makes a difference in terms of: organizational attachment, organizational attendance, stress, performance, off-job satisfaction, and job attitudes. The conceptual argument linking flexible working hours (i.e., discretionary time) with employee responses is summarized in the following observations:

1. Performance may be favorably influenced by increasing degrees of discretionary time if there is a work schedule selected that coincides with the employee's circadian rhythms, if there is a reduction in stress associated with late or near-late work arrivals, and/or if there is a reduction in stress associated with a conflict between demands on the employee's time stemming from work and personal matters.

2. Flexible forms of work scheduling should strengthen organizational attachment from a number of perspectives. Flexible working hours may be viewed as an employee benefit resulting in appreciative feelings directed back toward the organization in terms of enhanced commitment toward it. Flexible working hours may also be perceived as a positively valent organizational outcome obtainable through continued organizational membership, thereby influencing employee intentions toward absenteeism and tenure.

3. Satisfaction with off-job facets should be favorably associated with discretionary time since there will be a heightened opportunity to harmonize work and nonwork time demands.

4. Organizational attendance should increase with an increase in the amount of discretionary time. The reasons may include the following: it is easier to get to work on time, employees can more easily respond to work-nonwork conflicts without organizational penalty, the motivation to attend may be enhanced as a result of heightened organizational commitment and job satisfaction, and the employee may feel the need for a quid pro quo relationship with the organization.

5. Flexible [illegible] employees harmonize competing demands upon [illegible] life and the work environment. Consequently, stress associated with conflicting time demands decreases with increasing amounts of discretionary time.

6. Job-provided opportunities for value, need, and expectation fulfillment leads to positive job attitudes. To the extent that employees have a [illegible] for autonomy/independence, a desire to participate in job-related decisions, and/or have a need for work-personal time harmonization increasing amounts of discretionary time will have a favorable impact on [illegible] attitudes.

, it is posited that organizational attachment, organizational attendance, performance, off-job satisfaction, and job attitudes will be an increasing function of an increase in discretionary time, while experienced symptoms of stress will decrease concomitant with an increase in discretionary time.

Two central dimensions introduced by flexible forms of work scheduling are the number of time slots (e.g., 7:00, 7:15, 7:30, 7:45, 8:00) that an employee can choose from in defining the pattern of work-nonwork hours, and the frequency with which a change in the work schedule can be made. Conceptually these two dimensions define the amount of discretionary time available to the employee. The amount of discretionary time provided by the formal organization's work schedule should result in employee perceptions of time autonomy (i.e., the perception of the opportunity for one to exercise an element of choice and experience independence in the scheduling of one's hours of work). Thus, it is hypothesized that perceived time autonomy will be an increasing function of experienced discretionary time.

If, as suggested by Harvey and Luthans, the amount of discretionary time available to employees to define their work schedule is the central and critical variable in defining and differentiating work schedules, and if perceived time autonomy stems from experienced discretionary time, then the following hypothesis is relevant and substantive. Organizational attachment and attendance, performance, off-job satisfaction, and job attitudes will be an increasing function of perceived time autonomy, while experienced symptoms of stress will be negatively related to perceived time autonomy.

Method

Sample

The data for this investigation were derived from four organizations in the insurance industry. From each organization a sample was taken of production employees from word processing units. The four samples were selected to obtain variance in the amount of discretionary time available to employees for defining

the hours and pattern of hours that they could work. Each organization unit included in the study had been experiencing their form of work scheduling for more than two years.

System one (n=29 employees) used the fixed hour work schedule. All employees start and stop work at company-prescribed fixed times every day. Employees exercise no discretion in defining the hours and pattern of hours to be worked nor may they change their work schedules. System two (n=19) uses the staggered start work schedule. Employees are permitted to choose from one of eleven starting times, with options segmented in 15-minute intervals between 6:30 - 9:00 a.m. Choice of a start time is controlled by management with first preference going to the most senior employees and with a guided concern that the entire starting time band be covered with working employees. Once a selection decision is made and approved it becomes a semi-permanent decision with new choices being exercised when there is an opening at a different time slot. Then once again first preference for a change is given to the most senior employee. Reselection opportunities may occur four times in any given year. System three (n=25) uses a limited flexitime work schedule. Under this work arrangement employees may choose to start work at any time between 6:30--9:00 a.m. An employee may change this starting time every two weeks. System four (n=21) uses an extended flexitime working hour arrangement. Employees working under this time system have a daily free choice regarding starting time (7:15 - 9:00 a.m.) and a daily choice of a 30 or 50 minute lunch period.

Table 1 presents the mean values for key participant descriptive characteristics for each of the four samples. Each sample was almost totally comprised

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Insert Table 1 about here

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of female workers. A one-way analysis of variance (ANOVA) indicates that there is no significant difference across the samples in terms of education level or the individual difference variable - employee growth need strength (measured by Hackman and Oldham's Job Diagnostic Survey, 1975). ANOVA signals significant differences for employee age, company and job tenure, and salary. The Scheffe' technique shows that for the first three of these variables the extended flexitime group was older and had longer tenure than those in the other three systems yet there were no significant differences among the fixed, staggered start, and limited flexitime groups. In terms of salary the fixed hour and extended flexitime groups did not differ from each other, and both were significantly higher paid than the limited flexitime group (these data for the staggered time group could not be collected from the participating organization). It is evident from these data that systematic and significant differences do not exist as a covariate of the amount of discretionary time.

Data Collection and Research Scales

Twenty-three employee response variables were measured and grouped into the six constructs (e.g., organizational attachment, organizational attendance, performance, stress, off-job satisfaction, and job attitudes). Organizational attachment was operationalized by the measurement of three variables. Organizational commitment was measured by the Porter, Steers, Mowday and Boulain (1974) research scale. The two behavior intention variables (intention to be absent from work, and intention to quit work) were patterned after the Mobley, Horner and Hollingsworth (1978) scales.

Two constructs focused on employee behavior -- organizational attendance and performance. Organizational attendance is reflected by employee absenteeism

(measured in terms of total time lost, and the number of incidents of absenteeism). Both dimensions of absenteeism were taken from company records for the fourth quarter of a common year. The second employee behavior construct represents an assessment of employee performance. Performance was assessed by a supervisory performance appraisal. The four dimensions measured were: productivity (produces a volume of work consistent with established standards), quality of work (performs duties accurately and effectively), reliability (performs work on assigned tasks in an efficient, conscientious, dependable manner without close supervision), and reaction to problems (identifies, analyzes, and acts upon a problem in a constructive, responsible manner). Each of the four performance variables was rated on a frequency scale, where performance increments ranged from "0 to 10 percent of the time" to "91 to 100 percent of the time."

Symptoms of physical and psychological stress were measured by Patchen's (1970) seven-item self-report scales. Employee off-job satisfaction was measured with Kunin's (1955) face scales. The items focused on employee satisfaction with "your involvement": with your family, with your friends, in recreational activities and hobbies, in religious activities, in cultural activities, in volunteer activities, in personal growth/development activities, satisfaction with your leisure time in total, and life satisfaction.

Job attitudes represents the final construct which will be treated as a criterion. The Kunin face scale was employed to measure satisfaction with hours of work. Job involvement was measured by Lodahl and Kejner's (1965) scale, and general job satisfaction was measured by the short form of the Minnesota Satisfaction Questionnaire (Weiss, Dawis, England and Lofquist, 1968).

The independent variable is the amount of discretionary time available to the employee for defining the hours and pattern of hours that will be worked.

This scale was developed by totaling the number of minutes of flexible time available to the employees on a yearly basis. In addition, the frequency with which a change in their work schedule can be made was noted. Measurement of these two variables permitted the positioning of the four systems on the predictor variable. System one, the fixed hour system, provides no discretionary time to the employee. System two, the staggered start system, has 44 minutes of discretionary time with an opportunity to change work schedules four times a year. System three, the limited flexitime working hour arrangement, offers 3,900 discretionary minutes yearly with an opportunity to change the work schedule every two weeks. System four, the extended flexitime system, provides the employee with 32,500 minutes of discretionary time on a yearly basis with a daily choice of start or quitting time. As the amount of discretionary time offered by the formal organization increases this change in objective reality must be perceived before there will be attitudinal or behavioral effects. Consequently an attempt was made to measure employee perceptions of two dimensions of flexible work schedules.

Two variables (perceived time autonomy, and perceived work schedule change frequency) were developed for this study and will be treated as perceptual measures of the independent variable. Time autonomy was measured by five items (e.g., how much are you left on your own to define your own work schedules; how much discretion can you exercise in defining your work schedule; and to what extent are you able to act independently of your supervisor in defining your work schedule). The response format was a five point scale anchored: very little (1), a moderate amount (3), and very much (5). Work schedule change frequency was measured by a single item (how frequently can you change your work schedule). The response scale was an eight point scale (e.g., "I can change my

work schedule: (1) never, it is fixed, (4) approximately every 4 months, and (8) on a daily basis."

Scale Reliability

Scale reliability for all multiple item scales was assessed using the alpha coefficient (Cronbach, 1951). Since this research study focuses on inter-organizational comparison of employee responses to alternative work schedules it is imperative that the psychometric properties (i.e., scale reliability) of the measuring instruments be established for each sample.

Total sample and most subsample alpha values (see Table 2 for the reliability coefficients and for the total sample's mean and standard deviation

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Insert Table 2 about here

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statistics) were judged acceptable. Only two variables (job involvement and physical stress symptoms) had alpha values in the .30's in one sub-sample each. In both cases subsequent multivariate analyses involving these variables were performed by excluding the sample where the unacceptable alpha value was identified.

The dimensionality for time autonomy and work schedule change frequency (the two developmental scales) was examined through principle component factor analyses with oblique rotations. The unrotated eigenvalues suggested a one factor solution (1.0). This factor has primary loadings of .71 to .84 defined by the five time autonomy items with the work schedule change frequency item loading with .42. The interitem correlations among the five autonomy items are more strongly related to one another (r's = .42 to .70) than with the work

schedule change item (r = .41 being the strongest cross correlation). Thus, a five item variable called perceived time autonomy was created and employed in subsequent data analyses. The total sample reliability coefficient for time autonomy was .91, with subsample alpha values ranging between .86 and .93.

Analyses

Multivariate analysis of variance (MANOVA) was employed across the six constructs. Dependent upon the identification of a significant ($\leq$.05) main effect for the predictor variable (discretionary time) upon a general class of employee response variables, (i.e., on the six constructs identified earlier) discriminant function analysis was performed. Discriminant function analysis identifies, via a stepwise procedure, which criterion variables discriminate employee responses across the four work schedules. Next, the Mahalanobis (1936) D^2 statistic was used to identify which specific work schedules were significantly different from one another on a linear combination of the discriminating variables. Finally, zero-order correlations were employed to examine the perceived discretion-employee response relationship.

Results

Organizational Attachment. Organizational commitment and two behavioral intention variables (intention to be absent and intention to quit) were employed as indicators of the organizational attachment construct. A significant positive linear association was found between employee organizational commitment and perceived time autonomy. (See Table 3 for the zero-order correlation results.)

Insert Table 3 about here

A significant main effect (See Table 4) was also found for the objective

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Insert Table 4 about here

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indicator of the predictor variable (discretionary time) when using the organizational attachment criterion variables, yet there was a significant univariate F only for organizational commitment.

Stepwise discriminant function analysis produced significant functions which identified organizational commitment and intention to quit as the two most discriminating variables. The Mahalanobis D^2 statistic highlights the following pattern of significant differences across the four work systems. The fixed hour group had weaker organizational attachment than either of the two forms of flexible working hours. The staggered start group did not differ significantly from the fixed hour group nor from the limited flexitime group. The extended flexitime group had significantly stronger organizational attachment than did either the fixed hour or staggered start groups. The direction of the means across all three criterion variables suggests systematic increases in the dependent variables with increasing degrees of discretionary time even though significant differences do not separate each contiguous group. Thus, there appears to be partial support for the hypothesized relationships.

Stress. The zero-order correlations show that reported symptoms of psychological and physical stress decrease with an increase in perceived discretionary time. One way analysis of variance (ANOVA), however, demonstrates that there is no significant main effect of discretionary time systems on employee reports of physical and psychological symptoms of stress (See Table 5).

Insert Table 5 about here

Off-Job Satisfaction. Satisfaction with nine different off-job facets (satisfaction with: family, friends, recreation, voluntary, cultural, religious, and personal development activities; satisfaction with life, and leisure time satisfaction) were examined. Satisfaction with life, leisure time, and time spent in recreational activities had a significant ($p < .05$) positive correlation with perceived time autonomy.

Multivariate analysis (MANOVA) (see Table 6) reveals that there is no signi-

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Insert Table 6 about here

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ficant main effect for system discretionary time on employee satisfaction with these off-job factors.

Performance. There is no significant association between employee perceptions of time autonomy and the level of their performance as assessed by their supervisors. Multivariate analysis of variance shows that there is, however, a significant main effect for work schedule discretion on employee performance (see Table 7). ANOVAs reveal two significant (productivity and quality) univariate F

Insert Table 7 about here

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values. Stepwise discriminant function analysis reveals a discriminating role for each of the four performance variables. The order (strongest to weakest) of

their discriminating role is: productivity, reaction to problems, reliability, and quality. The Mahalanobis D^2 statistic suggests that the fixed hour group and the extended flexitime groups were significantly different in their performance evaluations from each of the other time systems and from one another. The limited flexitime and staggered groups do not, however, differ significantly from one another. The mean values indicate that the staggered start group consistently had the highest performance ratings. With a single exception this group was followed by the fixed hour group. Across three of the four performance criteria the extended flexitime group had the lowest performance ratings. Thus, there is not a systematic difference in the level of employee performance across different forms of work schedules such that increases in performance accompany increases in discretionary time.

Job/Work Attitudes. In general, more favorable job attitudes emerge with increasing degrees of perceived time autonomy. Job involvement, hours of work satisfaction, and general job satisfaction have a significant and positive association with perceived time autonomy.

A significant main effect (see Table 8) was found for the three job attitudes.

Insert Table 8 about here

Discriminant function analysis and the Scheffe' techniques provide the following observations. First, one-way analysis of variance identified a significant main effect for discretionary time on job involvement. Post hoc analysis conducted with the Scheffe' test identified two homogeneous subsets. In terms of job involvement the only significant difference among the three work systems included in this analysis exists between the fixed-hour and staggered systems, and the

extended flexitime system. This relationship demonstrates significantly higher job involvement in the flexitime group with decreasing degrees of job involvement accompanying a decrease in discretionary time. Mean values show a systematic change (increase) in job involvement as predicted.

Second, in terms of general job satisfaction and hours of work satisfaction the Mahalanobis D^2 statistic identifies two homogeneous subsets among the four work schedules. The fixed hour group is significantly less job- and hours-of-work satisfied than the employees working under some form of discretionary time. Yet, it is not possible to differentiate the level of satisfaction among those experiencing a discretionary form of work scheduling.

Organizational Attendance. Two indices of the organizational attendance construct were employed. Total time lost through absenteeism had a significant negative linear association with perceived time autonomy, while a significant association with frequency of absenteeism was not found.

In the MANOVA, a significant main effect (see Table 9) was found for discretionary time on organizational attendance. The univariate F statistics iden-

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Insert Table 9 about here

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tified only total time lost as significant and the same variable represents the only discriminating variable in the discriminant function analysis. The Mahalanobis D^2 statistic reveals that the fixed hour group had the weakest organizational attendance which was significantly different from the level of attendance representing the other three forms of discretionary time systems. There were no significant differences between the staggered start, the limited flexitime, and the extended flexitime groups, yet the mean values indicate that the

staggered start group had the strongest organizational attendance. The data clearly suggest that there is not a systematic increase in organizational attendance accompanying an increase in the amount of discretionary time available to the employees.

Time Autonomy. The mean values (see Table 10) for time autonomy reveal a

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Insert Table 10 about here

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systematic pattern of increasing perceived time autonomy across the four work systems. The lowest amount of time autonomy was experienced by those working under the fixed-hour system, while the greatest perceived time autonomy was reported by those working under the extended flexitime system.

A significant difference (ANOVA) on employee perceptions of time autonomy was identified across the four working hour arrangements. The Scheffe' technique reveals that the fixed hour group perceives significantly less time autonomy than any of the other three systems, which do not differ significantly from one another.

Discussion

A substantial body of literature has accumulated that is generally strongly supportive of flexible working hours and other forms of discretionary time systems. Numerous work outcomes and employee reactions have been associated with these work schedules. Although the scientific quality of this literature varies, its sheer volume creates the impression that organizational attachment and attendance, performance, employee job attitudes, and off-job satisfaction improve with increasing flexibility provided by staggered start and flexible

working hour systems. Experienced symptoms of stress appear to decline as a result of the increase in discretion provided by those work schedules.

The study reported here investigated whether there were systematic differences in employee responses across four different work schedules (within four different organizations in the same industry). These schedules (as measured by an objective criterion) provide the employees with increasing amounts of flexibility in scheduling the pattern of hours that are worked, and in the frequency with which a change in the chosen work schedule could be made. The authors speculated that there would be increasingly favorable changes across the six employee response constructs as a function of increasing amounts of discretionary time.

The study shows that there were four significant main effects representing related employee response differences (i.e., organizational attachment, performance, organizational attendance, and job attitudes) across the four work schedules. There were no significant differences across the four systems in terms of symptoms of stress experienced by the employees or their off-job satisfaction.

Across three of the four significant constructs (performance being the single exception) the fixed hour group of employees emerge with the weakest organizational attachment, organizational attendance, and the poorest job attitudes. Yet the amount of discretionary time characterizing these four work systems does not have enough efficacy to produce systematic and significant differences in employee responses across each of the three discretionary time systems. It should be noted however, that the predicted differences may not emerge as a result of an employee perceptual problem (i.e., the employees may not perceive the discretionary time made available to them by the formal organization).

In terms of organizational attachment the pattern of relationships suggests an increase in organizational attachment (particularly organizational commitment) with an increase in experienced discretionary time, yet the differences were not large enough to produce significant results across each of the work schedules. While job involvement systematically increases with the amount of discretionary time the differences are not large enough to differentiate the fixed and staggered groups from one another. The three discretionary time groups are significantly more job satisfied than the fixed hour group even though increasing amounts of discretionary time do not result in increasing levels of satisfaction. The fixed hour group has the worst attendance record, while the staggered group has the best attendance behavior. While not statistically significant it is noted that the mean values indicate that experienced symptoms of stress decrease with an increase in experienced discretionary time.

In sum, the results from this study do not support the hypothesis that there are systematic and significant differences in employee responses across systems characterized by increasing degrees of discretionary time. The results do, however, seem to suggest that there are significant differences in employee responses differentiating the fixed hour group of employees from their counterparts working under some form of a flexible time system.

A systematic linear relation was found between the employee response criterion variables and employee perceived time autonomy. That is, there was a positive linear association between organizational commitment and job involvement; life and leisure time satisfaction; and hours of work and job satisfaction accompanied by a negative association with experienced symptoms of physical and psychological stress.

The results possibly provide an explanation for the previously discussed inter-system comparisons. That is, the predicted systematic differences across the four work schedules may not have emerged because employees working under these systems may not have been fully cognizant of the actual dimensions of their work schedule per se, nor did they see these dimensions relative to other systems. As the literature on perception stresses it is not the objective stimuli to which employees frequently respond, but their perceptions of the objective reality. We witnessed a systematic shift in employee perceptions for time autonomy across the four work schedules (as would be predicted). The differences among the three discretionary time systems, however, were not large enough to be statistically significant. This observation suggests that the results of this investigation may be a function of the systems studied, and had there been greater differences among the systems the predicted results would have materialized.

One could further speculate that the amount of discretionary time is <u>not</u> the critical system design variable differentiating the various flexible forms of work scheduling. Future inquiry needs to identify the discriminating system features. Alternatively one could speculate that psychological processes are operating other than perception of time autonomy. That is, work schedules must be designed to affect psychological processes in addition to perceived time autonomy in order for the effect of these work schedules to be realized.

It is extremely difficult to ascribe the findings from this investigation to employee personality and demograhics. In terms of salary, no significant differences exist between the fixed and extended flexitime groups, yet these groups are significantly different from one another on attachment, performance, job attitudes, and organizational attendance. The fixed, staggered, and limited

flexitime groups do not differ from one another on age and tenure, yet these groups differ from one another on a number of employee response dimensions.

The results from the study may well be a function of other organizational, individual, or community based covariates that have not been identified and accounted for by the design of this study. The study is further limited by the small number of work schedules and job types included.

Future research needs are many and varied. Effort must be directed toward the development of a theoretical model to drive this research. Psychological processes that explain the work schedule-individual employee response interaction need to be identified. Research drawing upon different job types in different industries needs to be conducted following the inter-system comparison model. The experimental studies need to focus on effects due to change per se. Inquiry needs to be directed toward the identification of salient work schedule design features as they relate to perceived time autonomy and the employee response variables.

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Footnote

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TABLE 1

Participant Descriptive Characteristics

:em	Sample Size		Age	Sex	Education	Salary	Company Tenure	Job Tenure	Growth Need Strengtl
:d	29	3.28	(26-30)	1.00 (Female)	4.03 (1 year Post H. Schl.)	$ 9335	2.03 (1-3 yrs.)	2.07 (1 yr.)	44.3
ıgered	19	1.95	(21-25)	1.01 (Female)	3.95 (1 year Post H. Schl.)	No Data	1.79 (1-3 yrs.)	2.26 (1 yr.)	47.9
ted	25	3.28	(26-30)	1.00 (Female)	3.40 (High School Grad.)	$ 7797	2.28 (1-3 yrs.)	2.84 (1-3 yrs.)	41.9
:nded	21	5.67	(41-45)	1.00 (Female)	3.33 (High School Grad.)	$10127	4.67 (7-10 yrs.)	4.38 (5-7 yrs.)	44.3

TABLE 2

Reliability Estimates & Sample Descriptive Statistics

Variables	No Items	Sample	Mean	Sta. Dev.	Alphas				
					Fixed	Staggered	Limited	Extended	Total Sample
					n=29	n=19	n=25	n=21	n=94
Job Involvement	5	94	12.84	3.73	80	68	30	69	72
Organizational Commitment	15	94	69.94	7.61	88	95	89	76	91
General Job Satisfaction	20	92	67.47	14.22	88	91	91	93	92
Psychological Stress	3	93	7.71	3.20	51	62	64	89	68
Physical Stress	4	93	9.86	4.59	33	62	75	68	63
Growth Need Strength	11	94	44.34	7.61	91	84	80	93	89
Time Autonomy	5	94	15.78	6.47	89	93	86	89	91
Intention to Quit	1	94	2.31	1.50					
Intention to be Absent	1	93	1.29	.64					
Life Satisfaction	1	94	5.39	1.56					
Family Satisfaction	1	94	5.51	1.35					
Friends Satisfaction	1	94	5.60	1.67					
Recreation Satisfaction	1	94	5.37	1.43					
Voluntary Satisfaction	1	94	3.98	1.52					
Religious Activity Satisfaction	1	94	4.48	1.49					
Cultural Activity Satisfaction	1	94	4.22	1.57					
Personal Development Satisfaction	1	94	4.82	1.55					
Leisure Time Satisfaction	1	94	5.46	1.59					
Productivity	1	92	7.18	1.69					
Quality	1	92	7.29	1.57					
Reliability	1	92	7.57	1.60					
Reaction to Problems	1	92	6.93	1.99					
Hours of Work Satisfaction	1	94	5.36	1.36					
Absenteeism - Total Time	1	90	3.57	7.26					
Absenteeism - Frequency	1	89	1.47	2.84					

TABLE 3

Zero-Order Correlations

	Time Autonomy
Organization Commitment	41***
Intention to Quit	-15
Intention - Absenteeism	-11
Physical Stress	-26***
Psychological Stress	-21**
Life Satisfaction	24**
Family	05
Friends	16
Recreation	18**
Voluntary	06
Religious	14
Cultural	08
Personal Development	10
Leisure Time	19**
Productivity	-09
Quality	-03
Reliability	-02
Reaction to Problems	16
Job Involvement	26***
Hours of Work	43***
General Job Satisfaction	40***
Growth Need Strength	06
Absenteeism Frequency	-10
Absenteeism Total Time	-21**

** $p < .05$

*** $p < .01$

TABLE 4

Organizational Attachment

MEANS

System	Organizational Commitment	Intention to Quit	Intention to Be Absent
Fixed	59.31	2.55	1.41
Staggered	66.89	2.50	1.33
Limited	75.40	2.12	1.28
Extended	82.33	1.90	1.10
Univariate F	10.83	1.01	1.06
$p \leq$	.00	.39	.37

MANOVA

System Main Effect (MANOVA): Wilks Lambda F = 3.89 Sig = .00 (3,89 DF)

DISCRIMINANT FUNCTION ANALYSIS

Discriminating Variables: (1) Organizational Commitment (2) Intention to Quit

Mahalanobis

Homogeneous Subset 1: Fixed, Staggered
Homogeneous Subset 2: Staggered, Limited
Homogeneous Subset 3: Limited, Extended

TABLE 5

Stress

MEANS

System	Physical Symptoms	Psychological Symptoms
Fixed	---	8.55
Staggered	9.47	8.26
Limited	9.08	7.25
Extended	8.10	6.57

ANOVA - Physical

System Main Effect: F = .50 Sig = .61 (2,61 DF)

ANOVA - Psychological

System Main Effect: F = 1.97 Sig = .12 (3,89 DF)

TABLE 6

Off - Job Satisfaction

MEANS

System	Life	Family	Friends	Recreation	Volunteer	Religion	Culture	Personal Development	Time
Fixed	4.69	5.34	5.10	4.86	3.97	4.34	4.03	4.69	5.07
Staggered	5.68	5.58	5.89	5.63	3.58	4.26	4.16	4.89	5.89
Limited	6.04	5.80	5.84	5.80	4.60	4.72	4.36	4.84	5.52
Extended	5.33	5.33	5.71	5.33	3.62	4.57	4.38	4.90	5.52
Univariate F	3.98	.66	2.72	2.28	2.33	.45	.28	.10	1.08
$p \leq$	.01	.50	.05	.08	.08	.72	.84	.95	.36

MANOVA

System Main Effect: Wilks Lambda F = 1.18 Sig = .26 (3,90 DF)

TABLE 7

Performance

MEANS

System	Productivity	Quality	Reliability	Reaction to Problems
Fixed	7.59	7.52	7.93	6.62
Staggered	8.00	8.06	8.00	7.89
Limited	7.04	7.21	7.13	6.88
Extended	6.10	6.43	7.19	6.62
Univariate F	5.66	4.17	2.01	1.85
$p \leq$	.00	.01	.12	.14

MANOVA

System Main Effect: Wilks Lambda F = 3.90 Sig = .00 (3,88 DF)

DISCRIMINANT FUNCTION ANALYSIS

Discriminating Variables: (1) Productivity (2) Reaction to Problems
(3) Reliability (4) Quality

Mahalanobis

Homogeneous Subset 1: Fixed
Homogeneous Subset 2: Staggered, Limited
Homogeneous Subset 3: Extended

TABLE 8

Job Attitudes

MEANS

	General Job Satisfaction	Hour of Work Satisfaction	Job Involvement
Fixed	59.18	4.41	11.52
Staggered	70.05	5.37	11.58
Limited	71.64	6.08	-----
Extended	71.40	5.90	14.90
Univariate F	5.25	10.10	5.59
$p \leq$	.00	.00	.01

MANOVA

Systems Main Effect (MANOVA): Wilks Lambda F = 5.28 Sig = .000 (3,88 DF)

DISCRIMINANT FUNCTION ANALYSIS

Discriminating Variables: (1) Hours of Work Satisfaction, (2) General Job Satisfaction

Mahalanobis

Homogeneous Subset 1: Fixed
Homogeneous Subset 2: Staggered, Limited, Extended

ANOVA - Job Involvement

System Main Effect: F = 5.59 Sig = .01 (2,66 DF)

Homogeneous Subset 1: Fixed, Staggered
Homogeneous Subset 2: Extended

TABLE 9

Organizational Attendance

MEANS

System	Absenteeism Total Time Lost	Absenteeism Frequency
Fixed	8.14	2.32
Staggered	.63	.42
Limited	1.88	1.17
Extended	2.00	1.67
Univariate F	6.41	1.88
$p \leq$	.00	.41

MANOVA

System Main Effect: Wilks Lambda F = 3.36 Sig = .00 (3,85 DF)

DISCRIMINANT FUNCTION ANALYSIS

Discriminating Variables: (1) Total Time Lost

Mahalanobis

Homogeneous Subset 1: Fixed
Homogeneous Subset 2: Staggered, Limited, Extended

TABLE 10

Time Autonomy ANOVA

System	Mean
Fixed	10.59
Staggered	16.47
Limited	18.24
Extended	19.35

ANOVA

System Main Effect F = 13.61 Sig = .00 (3,90 DF)

Homogeneous Subset 1: Fixed

Homogeneous Subset 2: Staggered, Limited, Extended