Using Job Strain and Psychological Contract Theories to Predict Employee Wellbeing in a Reformed Public Sector Agency

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ABSTRACT
This study investigates the issues that contribute to employee wellbeing in a public sector agency having undergone substantial reform. The research is based on a model that is initially demand-oriented, and is expanded to incorporate psychological contract breach and organisational justice. Hierarchical regression analyses were conducted on the 1,010 completed surveys. The results confirm the value of the job strain model (JSM) and that the inclusion of breach and fairness were worthwhile extensions of the JSM. Future research may wish to extend this approach and incorporate more of the social aspects of the work situation in studies of employee wellbeing.

Keywords: public sector, employee wellbeing, fairness, breach

INTRODUCTION
A prominent trend within public sector agencies over the past 15-20 years has been the large-scale adoption of practices that have previously dominated the private sector. These practices, and the philosophies on which they are based, are collectively referred to as New Public Management (Osborne & Gaebler; Kearney & Hays 1998). Despite the widespread acceptance of NPM, there is evidence that these reforms take their toll on employees. The many structural, procedural and cultural changes associated with NPM have been shown to impact on employee performance through a variety of means, including increased levels of employee stress, dissatisfaction (Mikkelson, Osgard & Lovrich 2000) and declining levels of organisational commitment. These employee outcomes result in substantial costs for the organisation and ultimately affect the overall efficiency and effectiveness of the agency (McHugh & Brennan 1994).

This study seeks to highlight the issues that management could focus on in order to build healthier and more effective public sector organisations operating under NPM by identifying the characteristics that contribute to the job strain experienced by employees. The framework for this research is based on a model
that is initially demand-oriented, and is expanded to incorporate psychological contract and organisational justice theory.

The Job Strain Model

The Job Strain Model (JSM) is regarded as the dominant work-stress model in the field of occupational health psychology (De Lange, Taris, Kompier, Houtman & Bongers 2004). Karasek’s (1979) original JSM used a two dimensional design involving job demands and job control to predict the amount of unresolved stress, known as strain, the individual was under, which, in turn, predicted stress-related psychological and physical illness. The original JSM has since been expanded to include social support following studies demonstrating the moderating effects of social support on job strain (Karasek & Theorell 1990). The JSM proposes that the strain felt by the employee increases when the demands of a situation exceed the levels of job control and social support available to the individual (Karasek, Baker, Marxer, Ahlbom & Theorell 1981). High strain jobs therefore represent those situations where the demands are not matched by adequate levels of decision-making authority and/or support from supervisors and colleagues. The interactive relationship between demand, control and support is referred to as the isolated strain (or ‘isostrain’) hypothesis and both this and the direct effects of individual JSM variables have been extensively tested (see van der Doef & Maes 1999 for a review). There has been mixed support for demand-control-support interactions, but research has consistently demonstrated that the variables’ main effects predict health and performance outcomes (e.g., Stansfeld, Head & Marmot 2000; Bond & Bunce 2003; De Lange, Taris et al. 2004). On the basis of this research, the present study will investigate both the additive and the interactional effects of the JSM.

Psychological contract theory

At the heart of the employee-employer relationship is a set of unwritten agreements about what one party expects to give and receive from the other (Robinson 1996; Robinson & Morrison 2000). These agreements are collectively referred to as a psychological contract and are based on a perceived
understanding of what was promised to them by the other party. An individual’s perceptions of their reciprocal obligations are often generated very early in the employer-employee relationship and can cover a range of issues including promotional opportunities, training and development and the level of decision-making responsibility that the employee will receive (Turnley & Feldman 2000). Furthermore, these perceptions may be based on explicit promises or can be more implicit (Robinson & Morrison 2000).

Extending the psychological contract literature, studies have examined the frequency and impact of situations when organisations have failed to adequately fulfil their obligations. This research has generally found that psychological contract breaches are relatively common (e.g., Robinson & Rousseau 1994) and are associated with a range of negative outcomes including reduced employees’ trust, higher levels of job dissatisfaction, reduced commitment to the organisation, declining levels of in-role and extra-role performance and increased employee turnover (Robinson & Morrison 1995; Robinson 1996).

There were two primary reasons why psychological contract theory was used to help identify the situations and conditions that are predictive of employee-level outcomes in the present study. First, transformational change programs such as those undertaken within NPM have been found to leave many employees placing less faith in their employer’s promises to them, feeling less secure in their job and experiencing higher levels of stress (Mirvis & Kanter 1992; Altman & Post 1996). These findings suggest that employees become much more conscious of previously agreed obligations when significant organisational change is occurring and hence the psychological contract literature is likely to offer worthwhile explanations for the relatively high levels of job strain experienced under NPM. The second reason for selecting psychological contract theory was that the concept draws on a very different body of literature to that on which the JSM is based. The JSM can be seen to be an extension or application of the person-environment fit approach, whereby the level of fit between the demands of the environment and the capacity of the individual influences attitudinal and behavioural outcomes, in contrast, psychological contract theory stems from the social exchange literature (Blau 1964; Adams 1965). One of the aims of this study is therefore to examine whether combining these models will significantly increase the likelihood of identifying conditions or circumstances that contribute to job strain.
The moderating influence of organisational justice

When examining the impact of the breach of psychological contract, the strength of the employees’ reaction to that breach may be moderated by how the individual cognitively assesses the organisational context that surrounds that breach. A key part of this assessment involves an interpretation of how fairly the individual was treated by the organisation (Rousseau 1995; Morrison & Robinson 1997). In situations where an individual can distinguish unfair procedures and treatment that occurred along with the breach of the psychological contract, more intense feelings of anger and frustration may result (Morrison & Robinson 1997). The extent to which the organisation is perceived to act fairly towards employees (sometimes referred to as organisational justice) has three main components: distributive, procedural, and interactional. Distributive fairness refers to the fairness of the allocation of rewards by an organisation (Fields, et al. 2000). Procedural fairness refers to the perceived fairness of the procedures that organisations use in making allocation decisions, such as having a transparent system for allocating bonuses. Interactional fairness refers to how an individual was treated during the enactment of procedures. Interactional fairness includes: (a) whether individuals believe that the reasons underlying a resource allocation decision were clearly and adequately explained to them (Bies & Shapiro 1988), and (b) whether those responsible for implementing a decision actually treated them with both respect and dignity (Bies & Moag, 1986; Shapiro, Buttnor & Barry, 1995).

Recent research has suggested that organisational justice is a contextual condition that could influence employees’ responses to a number of potentially adverse situations, not just breaches in psychological contract. For example, for the relationship between job demands and job satisfaction, employees were more satisfied in response to higher levels of job demands when they perceived their efforts to be fairly rewarded by the organisation (Janssen 2001). Similar results have also been reported when examining the relationship between job demands and innovative work behaviours (Janssen 2000), suggesting that perceptions of fairness could serve as an important cognitive mechanism that moderates the work-strain relationship in much the same way that control and support interact with job demands in
the JSM. However researchers have only just started exploring the moderating influence of fairness, control and other contextual conditions on the work-strain relationship and another aim of the present study is therefore to contribute to the job strain literature by assessing the effect of justice perceptions and job control on the relationship between job demands and job strain.

Wellbeing

Wellbeing is often seen to be composed of both psychological health and job satisfaction. Both variables are frequently used to measure job strain and are considered key dimensions of individual wellbeing (Warr 1990). Psychological health is a context-free wellbeing and refers to the feelings people have irrespective of any particular setting. In contrast, job satisfaction captures the feelings people have about themselves in relation to their job and is used to measure job-specific wellbeing. Incorporating both forms of wellbeing provides a more detailed assessment of the relationship between the working conditions and situations covered in this study and an individual’s overall level of wellbeing.

METHOD

Participants

The study sample consisted of staff from a large, Australian-based public sector organisation that had progressively introduced a variety of NPM-related initiatives over the previous five years. These changes included large-scale organisational restructuring, numerous procedural changes and the introduction of new information technology systems. A range of occupational groups were represented in the organisation including customer service staff, human resource management practitioners, psychologists, legal services staff, accountants, and clerical personnel. The organisation employed over 2,000 staff at the time the study was undertaken and all were invited to take part in the survey. A total of 1,010 completed surveys were returned to the authors, representing a response rate of 43%.

To summarise the demographic characteristics of the sample, 67% (674) of respondents were female, with approximately a quarter of respondents in each of the four age categories (29 and less years, 30-39 years, 40-49 years and 50 and more years). The majority of respondents (62%: 630) had been employed
by the organisation for nine or fewer years, and the majority (49%: 491) had acquired a tertiary education (including postgraduate studies).

Measures

Psychological Health. The GHQ-12 (Goldberg & Williams 1988) consists of 12 items in total measuring self-perceived psychological health. More specifically, six of these items measure normal functioning (i.e., being able to concentrate), whilst the remaining items measure abnormal functioning (i.e., losing self-confidence). Each item is scored on a four-point likert scale ranging from ‘not at all’ (0) to ‘much more than usual’ (3). Higher scores on the measure are indicative of higher levels of self-rated psychological health. The scale had a Cronbach’s alpha of 0.90.

Job Satisfaction. Job satisfaction was measured using 15 items developed by Warr and colleagues (Warr, Cook & Wall 1979). The measure consisted of two subscales that measure the intrinsic and extrinsic factors of the job that contribute to an employee’s satisfaction. Items were measured on a seven-point likert scale with a range of ‘Extremely Satisfied’ (1) to ‘Extremely Dissatisfied’ (7). The Cronbach’s alpha was 0.87 for intrinsic and 0.75 for extrinsic job satisfaction.

Job Demands. Job demands were measured using a quantitative workload scale developed by Caplan, Cobb, French, Harrison, and Pinneau (1980). The scale assesses both physical and psychological demands and consists of 11 items measuring the amount of work performed by the employee and the pace that it is performed at. Responses were recorded on a five point likert scale ranging from ‘rarely’ (5) to ‘very often’ (1). The scale had a Cronbach’s alpha of 0.90.

Job Discretion. Job discretion was measured using a nine item scale developed by Karasek (1985). The scale measured the degree to which individuals were able to make work related decisions and acquire new skills. Responses were recorded on a five point likert scale ranging from ‘Strongly Disagree’ (1) to ‘Strongly Agree’ (5), whereby higher scores indicated higher levels of discretion. A Cronbach’s alpha of 0.85 was recorded.
Support. Social Support from within the organisation and from non-work sources was measured using a scale developed by Etzion (1984). The scale contains nine items, seven of which require two answers, one relating to the employees work environment and the second to their life outside of work. These two responses form the two subscales: support at work and support outside work. Responses are recorded on a 7 point likert scale ranging from ‘very little’ (1) to ‘very much’ (7). A Cronbach’s alpha of 0.90 for support at work, and 0.90 for support outside work.

Psychological Contract Breach. Breach was measured through five items from Robinson and Morrison’s (2000) ‘Perceived contract breach’ measure. The scale measured the extent to which employee’s expectations were met by their employer. These items were rated on a five-point likert scale ranging from ‘Disagree Strongly’ (1) to ‘Agree Strongly’ (5), a higher score indicating a greater number of met expectations. The Cronbach’s alpha for the Breach scale was 0.90.

Organisational Fairness. Colquitt’s (2001) justice scales were used to measure four forms of fairness: procedural (the justice of processes that lead to an outcome), distributive (extent to which outcomes are consistent with implicit allocation norms), interpersonal (extent to which decision makers treat people with respect and dignity) and informational fairness (extent to which decisions makers explain the rationale). Items were recoded on a five-point likert scale ranging from ‘Very Often’ (1) to ‘Rarely’ (5), hence lower scores were indicative of a higher level of perceived fairness within the organisation. The Cronbach’s alphas were: 0.90 for procedural fairness, 0.91 for distributive fairness, 0.93 for interpersonal and 0.92 for informational fairness.

RESULTS

Prior to the commencement of the data analyses, both the independent and dependent variable measures were screened for the accuracy of scores, missing data, outliers and for violations of the assumptions of the regressions, using the checklist developed by Tabachnick and Fiddell (1996). The evaluation of these assumptions indicated that the data met the requirements for normality, linearity and homoscedasticity, particularly when investigating collinearity and multicollinearity (Tabachnick & Fiddell, 1996).
Several respondents did not answer all of the questions in the survey and the missing data was treated using listwise deletion (Roth 1994). Statistical analyses were undertaken using SPSS 12.0.1 for Windows (SPSS Inc., 2004).

Several variable transformations were required before the analyses could proceed. Initially, job demands, job control, breach and the four fairness subscales (procedural, distributive, interpersonal and informational fairness) were ‘centred’. This involved creating a new variable whereby the overall mean for each of these measures was subtracted from every respondents’ score for the particular measure. The centred variables were used as the basis for creating interaction terms (e.g. centred job demands × centred job control) and squared variables (e.g. centred job demands²).

Table 1 lists the descriptive statistics and correlations for each of the study variables. The correlations were conducted to highlight the pattern of relationships between the independent and dependent variables that would be used within the regression analyses. There are a large number of significant correlations between the target measures and predictor variables (see Table 1). Each of the predictor variables was significantly correlated with intrinsic job satisfaction, and this outcome variable was also significantly correlated with extrinsic job satisfaction and well-being. All of the predictor variables were significantly correlated with extrinsic job satisfaction and well-being, whilst these two outcome variables were also significantly correlated with each other. These relationships were also in the expected direction, keeping in mind that low scores for breach and the four fairness subscales corresponded to high levels of these independent variables. For example, breach was positively correlated with intrinsic job satisfaction, extrinsic job satisfaction and well-being, indicating that the higher the perceived breach, the lower the reported level of intrinsic/ extrinsic job satisfaction and well-being. In contrast, the correlations between the fairness subscales and the outcome measures were negative, indicating that higher levels of procedural, distributive, interpersonal and distributive fairness were associated with higher levels of intrinsic and extrinsic job satisfaction and well-being.

Hierarchical regression analyses were performed for each of the outcome measures (intrinsic job satisfaction, extrinsic job satisfaction and well-being). Blocks of independent variables were entered in the
order of: (1) demographical variables, (2) the JSM variables, (3) breach and the four fairness subscales, (4) squared job demands, breach and fairness subscales, and (5) the interaction terms. Demographic variables were entered within the first step to control for any confounding effect that tenure, gender and age may have on the relationship between the other independent variables and the outcome measures. The centred variables were used within these analyses for job demands, job control, breach and the four fairness scales.

The results of the multiple regression analyses in Table 2 indicate that the first block of the demographic variables accounted for significant amounts of variance in all three outcome variables. The JSM variables in the second step accounted for much higher amounts of variance. The third step, including breach and each of the four fairness subscales, accounted for significant amounts of variance in intrinsic and extrinsic satisfaction. Although the next step, with job demands, breach and the four fairness subscales squared, also made a significant contribution to the model for intrinsic and extrinsic job satisfaction, the amount of variance accounted for was negligible, approximately 1% for each of these outcome variables. The fifth block, which included the interaction terms, was not significant for any of the outcome variables.

The overall equation displayed in Table 2 significantly explained the variance in intrinsic job satisfaction, $R^2_{adj} = 0.713, F(33, 592) = 45.57, p < .001$. The overall equation was also significant for the outcome measures for extrinsic job satisfaction, $R^2_{adj} = 0.630, F(33, 587) = 31.27, p < .001$, and well-being, $R^2_{adj} = 0.186, F(33, 584) = 5.05, p < .001$.

In relation to the contribution made by specific predictor variables, support at work was the only independent variable that significantly predicted all three outcome measures. The tenure dummy variables of 4 years or less and 20-24 years were significant predictors of extrinsic job satisfaction, and the 20-24 years tenure group was a significant predictor of intrinsic job satisfaction. Gender was a significant predictor of intrinsic and extrinsic job satisfaction, while none of the age dummy variables were significant predictors for any of the outcome measures. Job demands significantly predicted extrinsic job satisfaction and well-being, job control was a significant predictor of intrinsic and extrinsic job satisfaction, and support outside work was a significant predictor of well-being. Breach, in addition to
procedural and distributive fairness, were significant predictors of both intrinsic and extrinsic job satisfaction, while job demands squared significantly predicted intrinsic job satisfaction and breach squared significantly predicted both intrinsic and extrinsic job satisfaction. The interaction between job demands and job control was significant for extrinsic job satisfaction, which was the only significant interaction term across the three outcome measures.

In relation to the job demands squared being a significant predictor of intrinsic job satisfaction, it appears that the relationship between these two variables represents an inverse ‘U’ shape, whereby both low and high job demands are associated with low levels of intrinsic job satisfaction, and moderate job demands are associated with high levels of this outcome variable. Note, however, that the main effect of job demands was not significant for intrinsic job satisfaction.

Breach squared was significant for both intrinsic and extrinsic job satisfaction, with a similar pattern between these variables emerging for both outcome measures. Together with the significant main effect of breach for intrinsic and extrinsic job satisfaction, it appears that low and moderate levels of breach are associated with moderate and moderate-to-high levels of intrinsic and extrinsic job satisfaction, while high levels of breach contribute to low levels of intrinsic and extrinsic job satisfaction.

DISCUSSION

The aim of the present study was to identify the environmental characteristics that were predictive of employee outcomes within an organisation that had undertaken significant shifts toward the principles of NPM. This study investigated the efficacy of the JSM variables, along with psychological contract and organisational fairness theory to predict the employee outcomes. The results indicate that the JSM variables accounted for the vast majority of the variation in intrinsic and extrinsic job satisfaction and psychological health. The psychological contract breach and organisational fairness variables captured significant portions of variance in both forms of job satisfaction, although the adjusted R2 for these predictor variables was considerably smaller than that attributed to the JSM model. In contrast, the regression step involving the interactional variables (demandxcontrol, demandxfairness, etc.) failed to account for significant variation in any of the outcome variables. In terms of the influence of individual...
variables, work-related support was the only variable that was predictive of all three target measures. Job control was significant when predicting both forms of job satisfaction, but not for psychological health. Likewise, the fulfilment of psychological contracts and the procedural and distributive forms of fairness were predictive of the job satisfaction measures, but had no influence on psychological wellbeing.

The value of the JSM variables

The results provide strong support for the additive effects of the JSM variables. The predictive capacity of work support across all three outcome measures adds weight to a growing number of studies that have shown strong associations between the advice, assistance and feedback received from colleagues and supervisors and employee wellbeing (e.g., Leong, Furnham & Cooper 1996; Swanson & Power 2001; De Lange, Taris et al. 2004). At a practical level, these findings suggest that an important way of building healthier and more satisfying working environments is to closely monitor the support needs of employees and ensure they have the guidance, feedback and assistance required to meet performance expectations. This strategy is particularly important in an organization or work unit that has experienced significant organizational change and where employees are likely to be unsure or anxious about a range of matters, including work goals, job content and future role in the organization (Balogun & Johnson 2004).

Similarly, the positive relationship between control and both forms of job satisfaction is also consistent with a number of experimental and longitudinal studies indicating that control is an important causal determinant of job strain (Bosma, Marmot, Hemingway, Nicholson, Brunner & Stansfeld 1997; Smulders & Nijhuis 1999; Terry & Jimmieson 1999; Bond & Bunce 2003).

Breaches in psychological contract and organisational fairness

One of the aims of this study was to examine whether including elements of the psychological contract with the JSM would significantly increase the likelihood of identifying conditions or circumstances that contribute to job strain. This study’s results generally indicate that psychological contract issues are useful for examining employee strain in an organisation that has undergone large-scale organisational change.
While the level of variance attributed to psychological contract breaches was considerably smaller than the JSM, the breach variable predicted both forms of job satisfaction (i.e., as fulfilled expectations increased, internal and external job satisfaction also increased). When coupled with other studies linking psychological contract violations with key employee attitudes (e.g., Robinson 1996; Kickul, Lester & Belgio 2004), there is strong evidence to suggest that strategies aimed at minimising contract breaches will enhance employee satisfaction. Employees’ awareness of their psychological contracts becomes more acute during periods of organizational change, largely because there is a greater risk that prior obligations will be violated, and hence perceived breaches are more common during periods of significant change (Robinson 1996; Turnley & Feldman 2000). In terms of organizations operating in the Australian public sector, where reforms have been implemented over a long period, managers face the challenge of continually renegotiating and altering psychological agreements to meet the changing circumstances (Altman & Post 1996). Organizations need to ensure that they do not make or convey unrealistic promises and that both employer and employee have a clear and consistent understanding of what each party will give and receive in the employment relationship. Nevertheless, contract violations may still occur and the influence of procedural and distributive fairness in the present study suggests that where breach occurs, organizations need to ensure that the procedures associated with the breach are fair and transparent, and that employees are treated in an equitable way (e.g., Colquitt, Conlon, Wesson, Porter & Ng 2001; Ellovainio, Kivimaki & Vahtera 2002; Kickul, Lester & Finkl 2002).

The present study also sought to clarify the effect of contextual conditions, in particular organisational fairness and job control, on the relationship between job demands and job strain. Previous research by Janssen (2000; 2001) found that organisational fairness moderated the relationship between job demands and several outcome variables including job satisfaction and work performance, while job control had no influence on this relationship.

Understanding the significant job demands and job control interaction for extrinsic job satisfaction is slightly complex, given that this interaction has a negative beta value, and the main effect for job demands is significant with a negative beta value and the main effect for job control is significant with a positive
beta value. Together, these results indicate a buffering interaction, whereby one of these predictor variables increasing lessens the impact of the other predictor variable. For example, the negative impact of job demands on extrinsic job satisfaction is reduced by higher levels of job control.

There are two limitations that need to be kept in mind when assessing the results of the present study. First, the study employed a cross-sectional design and therefore the results are limited to the situation when the participants were surveyed. The ability to develop firm conclusions regarding the role of internal and external coping resources, for example, would be strengthened by a longitudinal study. The second limitation relates to the reliance on the subjective views of the participants and the subsequent concern this raises about common method variance. This concern applies more to the dependent, rather than the independent variables, wherein additional objective measures of the outcome variables would have enhanced the validity of the findings. However, some reassurance is gained from research that has shown a high correlation between expert ratings of job conditions and subjective assessments (Karasek, Baker et al. 1981; Spector 1992), and the support that has been shown for the use of self-report measures of the outcome variables, especially commitment (Goffin & Gellatly 2000).

Conclusion
With the widespread and continuing adoption of NPM, managers need to be both aware of the impact that these changes can have on employee wellbeing and prepared to take steps to minimise the adverse outcomes. The success of the JSM model in predicting the three key employee outcomes highlights the value of applying this parsimonious generic model to the public sector context. Further, the results suggest that the stress associated with NPM can be ameliorated, to a large extent, by ensuring that employees have adequate levels of support from supervisors and colleagues and making sure that employees’ level of job control is commensurate with the pace, volume and complexity of demands they face. This study also found that the inclusion of breach and fairness was a worthwhile extension of the JSM. Future research may wish to extend this approach and incorporate more of the social aspects of the work situation in studies of employee wellbeing.
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### Table 1
**Descriptive Statistics and Correlations Among Study Variables**

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<th></th>
<th>Mean</th>
<th>SD</th>
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<th>9</th>
<th>10</th>
<th>11</th>
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</thead>
<tbody>
<tr>
<td><strong>Intrinsic job satisfaction</strong></td>
<td>31.06</td>
<td>7.69</td>
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<tr>
<td><strong>Extrinsic job satisfaction</strong></td>
<td>36.97</td>
<td>7.16</td>
<td>0.78**</td>
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<tr>
<td><strong>Well-being</strong></td>
<td>23.14</td>
<td>6.15</td>
<td>0.39**</td>
<td>0.41**</td>
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<tr>
<td><strong>Job demands</strong></td>
<td>39.55</td>
<td>7.15</td>
<td>-0.01</td>
<td>-0.20**</td>
<td>-0.20**</td>
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<tr>
<td><strong>Job control</strong></td>
<td>31.32</td>
<td>6.16</td>
<td>0.50**</td>
<td>0.35**</td>
<td>0.14**</td>
<td>0.27**</td>
<td>--</td>
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<tr>
<td><strong>Support at work</strong></td>
<td>43.94</td>
<td>11.67</td>
<td>0.70**</td>
<td>0.69**</td>
<td>0.39**</td>
<td>-0.16**</td>
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<tr>
<td><strong>Support outside work</strong></td>
<td>52.09</td>
<td>11.34</td>
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<td>0.20**</td>
<td>0.17**</td>
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<td>0.10**</td>
<td>0.22**</td>
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<td><strong>Breach</strong></td>
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<td>0.57**</td>
<td>0.27**</td>
<td>-0.15**</td>
<td>0.22**</td>
<td>0.47**</td>
<td>0.01</td>
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<tr>
<td><strong>Procedural fairness</strong></td>
<td>22.06</td>
<td>6.92</td>
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<td>-0.50**</td>
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<td>0.06</td>
<td>-0.28**</td>
<td>-0.43**</td>
<td>-0.09*</td>
<td>-0.47**</td>
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<td><strong>Distributive fairness</strong></td>
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<td>4.70</td>
<td>-0.37**</td>
<td>-0.45**</td>
<td>-0.19**</td>
<td>0.19**</td>
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<td>-0.41**</td>
<td>0.54**</td>
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<td><strong>Interpersonal fairness</strong></td>
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<td>-0.45**</td>
<td>-0.21**</td>
<td>0.04</td>
<td>-0.21**</td>
<td>-0.41**</td>
<td>-0.08*</td>
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<td>0.57**</td>
<td>0.34**</td>
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<td><strong>Informational fairness</strong></td>
<td>13.50</td>
<td>5.49</td>
<td>-0.45**</td>
<td>-0.51**</td>
<td>-0.23**</td>
<td>0.09*</td>
<td>-0.18**</td>
<td>-0.47**</td>
<td>-0.07*</td>
<td>-0.43**</td>
<td>0.63**</td>
<td>0.43**</td>
<td>0.74**</td>
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</tbody>
</table>

* p < .05, ** p < .01, *** p < .001

### Table 2
**Summary of Hierarchical Regression Analyses for Variables Predicting Intrinsic Job Satisfaction, Extrinsic Job Satisfaction and Well-being**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Intrinsic Job Satisfaction</th>
<th>Extrinsic Job Satisfaction</th>
<th>Well-being</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>B</td>
</tr>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenure – 4yrs or less</td>
<td>-0.99</td>
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<td>-0.06</td>
</tr>
<tr>
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<td>-0.92</td>
<td>0.86</td>
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<tr>
<td>Tenure - 10-14yrs</td>
<td>0.08</td>
<td>0.89</td>
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<tr>
<td>Tenure - 15-19yrs</td>
<td>-0.79</td>
<td>0.89</td>
<td>-0.03</td>
</tr>
<tr>
<td>Tenure - 20-24yrs</td>
<td>-1.11</td>
<td>1.07</td>
<td>-0.03</td>
</tr>
<tr>
<td>Gender - Male</td>
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<td>0.38</td>
<td>-0.10***</td>
</tr>
<tr>
<td>Age - 29yrs or less</td>
<td>-0.95</td>
<td>0.59</td>
<td>-0.05</td>
</tr>
<tr>
<td>Age - 30-39yrs</td>
<td>-0.99</td>
<td>0.51</td>
<td>-0.06</td>
</tr>
<tr>
<td>Age - 40-49yrs</td>
<td>-0.11</td>
<td>0.49</td>
<td>-0.01</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>-0.05</td>
<td>0.03</td>
<td>-0.05</td>
</tr>
<tr>
<td>Job control centred</td>
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<td>0.04</td>
<td>0.39***</td>
</tr>
<tr>
<td>Support at work</td>
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<td>0.02</td>
<td>0.38***</td>
</tr>
<tr>
<td>Support outside work</td>
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<td>0.02</td>
<td>-0.04</td>
</tr>
<tr>
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<td></td>
</tr>
<tr>
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<td>0.05</td>
<td>0.19***</td>
</tr>
<tr>
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<td>Term</td>
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<td>Coefficient 2</td>
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<td>-0.01</td>
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<tr>
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<td>Breach centred</td>
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<tr>
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<td>Interpersonal fairness centred</td>
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<td>Informational fairness centred</td>
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<tr>
<td>5</td>
<td>Job demands centred × Job</td>
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<td>control centred</td>
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<tr>
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<tr>
<td></td>
<td>Job demands centred ×</td>
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<td>0.01</td>
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<td>Interpersonal fairness centred</td>
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<tr>
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<td>Informational fairness centred</td>
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<td>0.01</td>
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<tr>
<td></td>
<td>Breach centred × Procedural</td>
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<tr>
<td></td>
<td>fairness centred</td>
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<td>0.01</td>
</tr>
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*p < .05, **p < .01, ***p < .001