

**Change Initiatives, Stressors, and Job Satisfaction: A Social Information Processing
Perspective**

ABSTRACT

Scholars have argued that it is necessary develop new theoretical perspectives in order to better understand how managers, as change agents in public sector agencies, react to change. This study is a response to this call by adopting a Social Information Processing theoretical lens to investigate the consequences of managerialist-inspired change initiatives on employee outcomes in public sector organizations. Survey data about experiences of change initiatives, participation in change decision making, and provision of change information, change-induced stressors, and job satisfaction and psychological wellbeing were collected from a cross-sectional sample of 659 public sector managerial employees from agencies across Australia. The dataset was randomly split into a calibration and a validation sample to empirically test a hypothesized model using Partial Least Squares analysis. Statistically significant paths common to the calibration and validation samples showed that public sector agencies implemented flexibility-focus change initiatives that are related to an increase in change-induced stress. There is also evidence to suggest that provision of change information reduced change-induced stressors, but contrary to expectation, participation in change decision-making increased stressors. Overall, the evidence suggests that top management led flexibility-focus change initiatives induces stress, job dis-satisfaction and psychological strain.

Since the 1980s public sector organisations around the world have been subject to far-reaching change characterised by devolution and delegation of authority and autonomy (Christensen and Lægreid, 2011a). This change is evident in a variety of national systems including the UK (O'Reilly & Reid, 2011), USA (Yang & Kasserkert, 2009), and Scandinavia (Ibsen, Larsen, Madsen & Due, 2011). In these any many other nations, such reform has followed a similar pattern leading to the rise of managerialism as the dominant paradigm characterized by organizational restructuring (downsizing and delayering), redundancies and retrenchments, and increasing emphasis on accountability (Lynn, 2006).

Managerialist-driven change is one that is informed by a centralized hierarchy that follows an ideology of 'performance' (O'Reilly & Reed, 2011). Indeed, the notion of managerialism as 'ideology' more generally is well established in the literature (e.g., Deem & Brehony, 2005) implemented on the strength of exaggerations about the problems facing the public sector (Hood, 2000) that in turn has led to a dystopian nightmare (Diefenbach, 2009). In such an environment it comes as no surprise that organizational change in the public sector is often considered to be problematic due to the challenges in enacting reforms 'in a complex political environment...' and little is known of the impact of these reforms on public sector managers as they are often responsible for initiating and implementing change (Fernandez & Pitts, 2007: 324). The consequences of such change on employee well-being has become an abiding interest to researchers and practitioners particularly given the range of adverse outcomes including increased stress, reduced job satisfaction and declining organizational commitment (Mikkelsen, Osgard, & Lovrich, 2000; Lindorff, 2009).

While this line of research is continuing to grow, there has been a tendency to focus on public sector employees generally and little is known about the impact of these changes on the health and attitudes of public sector managers, the people who are generally responsible for implementing the reforms (Noblet & Rodwell, 2009b). Ferlie, Hartley and Martin (2003,

S11) noted that public sector management research could examine the experience of public managers as they are expected to 'implement national or local change initiatives'. This group often reports experiencing managerialism differently from lower level employees and a key goal is to identify the specific sources of stress faced by senior management involved in the delivery of these reform programs (Butterfield, Edwards & Woodall, 2005). So far there has been a focus on improving the qualities and techniques of public sector managers, particularly in enhancing their leadership abilities. Noblet and Rodwell (2009b) for example suggest that public sector managers must develop more awareness of the impacts of change on employees and be able to ameliorate the negative impacts. In spite of this controversy national governments and international organizations continue to pursue managerialist-inspired change agendas in an uncritical way. In the light of such claims and counterclaims about managerialism more research is required to isolate and deconstruct the various influences and relationships in ways that will provide critical examinations of current perspectives and develop new theoretical insights (Meier & O'Toole, 2009).

In this study we aim to investigate the pathways through which managerialist reforms are associated with the psychological well-being and job satisfaction of public sector managers and provide new insights into managerialist reform. Our focus is on this group because they have key managerial and leadership responsibilities for implementing reform (Fernandez & Pitts, 2007) and hence, they are much more likely to play prominent roles in executing and monitoring change programs (Bordia et al., 2004). This increased responsibility for the implementation of public sector reform initiatives can have a number of implications, most notably in terms of their access to information and decision-making processes. Public sector managers involved in delivering large-scale change initiatives are generally informed of the reasons why the reforms are necessary and, given their responsibility for implementing these initiatives in the manner they were intended, often have

a much better understanding of what the changes will involve (Butterfield, Edwards & Woodall, 2005). Senior personnel are also more likely to actively participate in change-related decisions that will affect their work area (including specific work roles) and will have the ability to make suggestions on the timing or scope of the changes or to voice concerns regarding the changes themselves (Lindorff, 2009).

To inform the analysis we draw on three lines of theory and research. Firstly there is the Social Information Processing perspective (Miller, Johnson & Grau, 1994; Salancik & Pfeffer, 1979) in which the ‘need for information’ and communication in facilitating change is of key importance (Whelan-Berry & Somerville, 2010). Secondly, there is recent research that connects provision of information to opportunities to participate in change-related decisions (e.g., Allen et al., 2007; Rafferty & Jimmieson, 2010). Thirdly, there is a large body of organizational change research that suggests the best way of developing theory is to examine the connections between antecedents, explicit reactions and change consequences (Oreg, Vakola & Armenakis, 2011). In integrating these three lines of theory and research in the context of public sector change, the need for information and participation can be conceptualised as antecedents of ‘soft managerialism’ (Put & Boukaert, 2011). Bordia and his colleagues (2004) argue that participation implies and requires communication when implementing change in public sector organizations. We also bring into focus three major explicit reactions to managerialist reform by employees documented in the literature, namely: stress, declining psychological well-being, and decreased job satisfaction (e.g., Korunka et al., 2003; Yang & Kassekert, 2009).

In examining these issues we identify paradox as identified by Hood and Peters (2004: 269) in the form of ‘outcomes and developments that were unexpected, unintended, or contrary to received belief’. In doing so we extend established research evidence gathered over the past decade (e.g., Stewart & Kringas, 2003; Bordia et al., 2004; Allen et al., 2007;

Rafferty & Jimmieson, 2010) by providing new and nuanced understanding of change in that positive and negative change is identified, how these connect to information and participation is examined, and in turn how these impact on employee stress, psychological well-being, and job satisfaction are explored. We also illuminate hypocrisy (that we define as pretence of goodness that conceals motives) of managerialist-inspired action during organizational change in a 'discourse of dissemblance' employed by public sector managers. Together these contribute to further understanding about an intensification of NPM dubbed 'post-New Public Management' by Christensen and Lægreid, (2011b) and an emerging legitimation of powerful elite groups who have privileged agency in decisions about the delivery of public services termed 'leaderism' (O'Reilly & Reed, 2011). When applied to our study managerialism seems to be about action whereas leaderism is invoked as a discourse. According to O'Reilly and Reid (2011: 1092) managerialism and leaderism are a 'relational pair' in that one invokes the other.

Change Management and Stressors

The literature about participation and information as key change processes has a long history. Oreg et al. (2011) and Miller et al. (1994) show that the roles of participation and information in change have been researched since the late 1940s and point out that they are two of the most commonly researched process variables in the change literature. A key aspect of successful change management is that participation (Amiot et al., 2006) results in empowerment and control. Social Information Processing (Salancik & Pfeffer, 1979) theory posits that job attitudes result from available information influencing employees' perceptions of their needs and job characteristics. In employing Social Information Processing as a theoretical lens, it is argued that the environment at work, in particular, how employees receive information about change, have an influence over the decision making process during

change (e.g., Miller et al., 1994). Change-related communication is widely recognized one of the key drivers of change as it allows change agents to focus on using information to build employees' understanding of the need for change (Whelan-Berry & Somerville, 2010). Hence, during organizational change, relevant information provides a sense of urgency and updates for employees, which minimizes negative outcomes associating with organizational change (Amiot et al., 2006; DiFonzo & Bordia, 1998).

Recent research suggests that information and participation are closely related. Miller et al. (1994) argue that change information without participation will not be effective in facilitating change because participation creates a sense of ownership of the proposed change. This is supported and developed by Bordia et al. (2004) who demonstrate that participation and information create acceptance and support for change and tend to lower levels of anxiety among employees. Similarly, Allen et al. (2007) conclude that it is important to connect information with participative strategies to assist in the successful implementation of change.

Within the public sector management literature, most organizational change studies have their origins in "managerialism". Korunka et al. (2003) examine the implementation of quality assurance-related change that they argue is an element of New Public Management (NPM). They conclude that participation and information are important and interrelated organizational resources in deployed during such change. The research by Stewart and Kringas (2003) into Australia's public sector 'administrative reform' suggests that change in this context corresponds to the general research findings on organizational change. They provide evidence to demonstrate the importance of information and consultation in helping facilitate these changes finding that information (communication) and participation (consultation) work together to increase acceptance of change. This is supported by Rafferty and Jimmieson (2010) in their research of Australian law enforcement agencies. They find that change information and participation impact on individual and team stress and wellbeing.

Organizational change has a direct and positive impact on stressors. Doyle, Claydon and Buchanan (2000, S64) reported that British public sector managers reported ongoing cynicism, fatigue and burnout from change. Only a small number of managers reported positive consequences of organizational change in the British public sector. This finding was also reported in the Australian context (e.g., Noblet & Rodwell, 2009a; Noblet et al., 2005; Teo, Yeung & Chang, 2012). Similarly, Dahl (2010) concluded that as a result of the implementation of different change initiatives in large Danish organizations, employees report higher levels of stress. As employees are involved and participate in the decision making surrounding their job and received information about the change initiatives, it is anticipated that change resistance will be minimized (Miller, Johnson & Grau, 1994), and thus, reducing the stress surrounding the change process. Therefore we proposed the following hypotheses:

Hypothesis 1. There will be a positive association between the adoption of change initiatives and the extent to which managers participate in the decision-making processes surrounding changes in their jobs.

Hypotheses 2. There will be a positive association between the adoption of change initiatives and the provision of information about changes that take place in the workplace.

Hypothesis 3. There will be a positive association between change initiatives and change-induced stressors.

Change and Employee Attitudes

Within the public sector literature explicit reactions of rising stress levels are important to consider alongside the consequences of lower wellbeing and rising job dissatisfaction (Diefenbach, 2009). Ibsen et al. (2011) provide evidence to support these assumptions in their study of Scandinavian public sector agencies. They find that

managerialist change is connected to rising stress levels amongst employees. Further evidence is provided by Korunka et al., (2003) who find that among Austrian public employees there is a significant relationship between managerialist-inspired change and rising stress levels, declining employee well-being, and reduced job satisfaction. Noblet and Rodwell (2009b) however, argue that managerialist change is not only associated with stress but that this stress may be ameliorated by information. We hypothesize that ongoing access to information and decision-making input will be closely associated with the extent to which senior public servants can prevent or reduce stressful working conditions that arise during managerialist-oriented change programs. The types of job stressors examined in the current study are those that are specific to the social, organisational and economic contexts typically experienced in public sector organisations that have introduced, or are introducing, managerialist reforms.

There are a number of studies that have identified stressors commonly encountered in an NPM/managerialist context. For example, Noblet et al. (2005) noted that local council employees experienced several specific stressors including lack of resources to accomplish tasks, insufficient time to complete work on time and to the standard expected, fast-paced workloads, unrealistic performance targets and inadequate consultation regarding organizational change. Pick, Teo, and Yeung (2012) support these findings in their study of Australian public universities where resourcing issues were found to be a major stressor for university administrative staff. Change also creates uncertainty. Song's (2008) study showed public sector employees experienced four dimensions of uncertainty during reform: structural and systematic (e.g., the overall direction of the agency), new administrative demand (e.g., whether the agency will have the ability to meet client needs), job-related (e.g., the extent to which people will be relocated) and unpredictability in the decision-making process (e.g., whether people will have the information they need to make decisions).

How people respond to potentially stressful situations will vary considerably and what one person perceives to be a key source of stress, someone else may see as a challenge and source of stimulation. Job stress theories such as the stress appraisal process (Lazarus & Folkham, 1984) have long recognised this individual variability and have posited that access to external resources (such as information, guidance and discretionary decision-making) can play a key role in whether a potentially adverse condition or situation is perceived as a threat or a challenge. Public sector research generally supports the importance of external resources. In particular, active involvement and participation in the change process was associated with reduced uncertainty and enhanced feelings of control (Bordia et al., 2004). Communication during public sector change provides employees with the opportunity to minimize uncertainty and to accurately predict the outcomes of change initiatives. This is because factors such as access to information, control over the work situation and opportunities for participating in change processes outweigh the negative effects of high job demands and uncertainty in the work situation (Falkenberg et al., 2009).

There are a number of variables used to measure employee outcomes in the adoption of NPM-related initiatives. Job satisfaction is an important dimension of employee wellbeing (Korunka et al., 2003). Similarly, psychological strain is frequently used as one of the dependent variables in occupational stress studies (Van der Doef & Maes, 1999). These views are generally consistent with studies indicating that an increase in job control is closely linked the job satisfaction and well-being of change participants (Pettit, Goris & Vaught, 1997; Ferrie et al., 1998).

In summary, the aforementioned literature indicates that managerialist-inspired reforms can give rise to a number of stressors that are commonly experienced in the context of these change programs (hereafter referred to as 'context-specific' stressors). Furthermore, ongoing access to external resources such as information and decision-making influence can

help public sector managers combat the negative effects associated with these more context-specific stressors. In view of the above review, we have formulated the following hypotheses.

Hypothesis 4. There will be a negative association between the extent to which public sector managers participate in the decision-making processes surrounding changes in their jobs and change-induced stressors.

Hypothesis 5. There will be a negative association between the amount of change information received and change-induced stressors.

Hypothesis 6. There will be a negative association between change-induced stressors and psychological well-being of public sector managers.

Hypothesis 7. There will be a negative association between psychological well-being and job satisfaction of public sector managers.

Hypothesis 8. There will be a negative associate between change-induced stressors and job satisfaction of public sector managers.

Hypothesis 9. Psychological wellbeing will partially mediate the negative association between change-induced stressors and job satisfaction.

Together, these hypothesized relationships form a pattern of causal paths (Figure 1).

The strength and direction of these relationships is tested using Partial Least Squares (PLS) path analysis.

 Insert Figure 1 about here

METHODS

Data and Sample

A self-completed questionnaire together with a cover letter was mailed out to 4000 randomly selected senior public sector executives in the state public service in Australia.

After deleting returned mail due to change of address and/or person leaving the organization, we received 659 usable surveys (representing 16.5 percent response rate). Although this is a low response rate, it doubles the response rate normally expected from using a 'cold' direct mail approach (Reed, 1998). One-way ANOVA was undertaken to examine whether there was any significant difference between pre- and post-follow up surveys (Armstrong & Overton, 1977). No significant difference was found and hence we combined both samples into a single dataset for data analysis. Respondents were mainly male (54.6 percent), occupied senior and middle management appointments (73.4 percent), aged between 41-60 years (68.4 percent), and worked in their current organization for more than 10 years (40.5 percent).

Data were input into SPSS for initial statistical analysis. Exploratory factor analysis (EFA) was conducted using principal axis factoring with varimax rotation. *SmartPLS* (Ringle, Wende, & Will, 2005) was utilized to analyze the hypothesized model. Partial Least Squares (PLS) is a technique used for estimating path coefficients in causal models and the software allows for the simultaneous testing of hypotheses. It is also appropriate for samples which do not have the usual normality assumptions and it is considered to be appropriate for small sample size (see Chin, 2010). Mediation analysis was conducted using the Sobel's test (Preacher & Hayes, 2008).

In the first instance, we utilized the random number function in SPSS to split the data into a calibration and validation sample for path analysis. The hypothesized model was initially analyzed using *SmartPLS* on the calibration sample (N=327). The resultant path model was then validated using the validation sample (N=332). Prior to undertaking the path analysis, an ANOVA was carried out to examine the difference in the means of the key variables between the calibration and validation samples. The result showed that there was no statistically significant difference in means between the two samples.

Measures

Average variance of estimates (AVEs) and composite reliability coefficients of the scales are reported in the results section. All of the scales were previously validated scales and have been previously used in the Australian public sector context, as reported below.

Organizational change initiatives. This construct assesses the extent to which Australian public sector organizations have implemented a series of organizational change initiatives. The items were based on an extensive review of the type of organizational initiatives adopted by Australian public and private sector organizations conducted by Palmer and Dunford (2001). Sample items include delayering, outsourcing, flexible work and empowerment. Respondents were asked to what extent their organization adopted a number of change initiatives in the past five year. This scale was based on a 5-point Likert scale (from ‘*Not at all*’ to ‘*Completely*’). EFA and discriminant analysis in *SmartPLS* resulted in two factors. These factors were operationalized as formative scales (for the discussion on formative versus reflective scales (see Diamantopoulos et al., 2008 and Petter et al., 2007). Factor one, ‘flexibility-focus change’, included four items such as ‘reduced internal boundaries’, ‘reduced external boundaries’, ‘flexible work groups’, and ‘empowerment’. The second factor, ‘external-focus change’ comprised of four items including ‘disaggregation’, ‘outsourcing’, ‘short-term staffing’, and ‘networks/alliances’.

Participation in change. We adopted a five item 5-point scale ranging from (Jimmieson, White & Peach, 2004) to operationalize ‘Participation in Change’. Ranging from ‘*Not at all*’ to ‘*A Great Deal*’, it assesses the respondents’ perception of their participation in the decision-making processes surrounding changes in their jobs. Sample item includes ‘To what extent can you voice your concerns about changes that affect your job?’

Change information. We used a five-item scale to ascertain participants' perceptions of the amount of change information provided and their understanding of what the change involved developed by Jimmieson, Terry and Callan (2004). Sample item includes 'How clearly are you informed about the implications that changes will have for your job?'

Change-induced Stressors. Respondents were asked to respond to a 33-item situation-specific stressors scale that required them to indicate the extent that each of the factors listed was a source of stress in their job (refer to Appendix 1 for a list of the situational-specific stressors). A 5-point rating scale ranging from 'Not at all' to 'Major source of stress' was used. This list of stressors was developed by Noblet et al. (2006) to examine the relationship between NPM reforms and the stress-related outcomes experienced by Australia-based public service employees.

Context-specific stressors which were rated by at least 50 percent of respondents as being a moderate, large or major source of stress (that is, a score of three, four or five on the 5-point scale) were retained for further analysis as recommended by Noblet and colleagues (2006). An exploratory factor analysis of these 26 stressors led to the identification of four factors: 'Information Stressors' (five items, sample item includes 'Lack of resources to accomplish tasks'), 'Time Stressors' (eight items), 'Senior Management Stressors' (three items), and 'Customer Service Stressors' (two items). These factors were then used in the path analysis to represent a reflective construct measuring changed-induced stressors.

Psychological wellbeing. We adopted the GHQ-12 scale (Goldberg and Williams, 1988) to measure self-perceived psychological health. Following the literature (see Gao et al., 2004) this construct was operationalized to comprise three sub-scales, depression, anxiety, and lack of confidence. Respondents rated their health on a four-point scale ranging from 3 (more so than usual) to 0 (much less than usual). A sample item is 'Have you recently been

able to concentrate on whatever you're doing?'. A higher value corresponds to higher psychological health (or less psychological strain).

Job satisfaction. We employed a 15-item scale by Warr et al. (1979) to measure participants' satisfaction with a range of work-related issues including physical working conditions, career prospects, colleagues and job security. Respondents rated the items on a 7-point scale ranging from 'extremely dissatisfied' to 'extremely satisfied'. The two sub-factors were intrinsic and extrinsic satisfaction, operationalized as a reflective scale.

Validity and reliability. The size of the calibration and validation samples are both considered to be sufficient to achieve a medium effect size of 0.80 for a path model with seven constructs (Green, 1991:503). Employing the techniques recommended by Ringle et al. (2005), we assessed the significance of PLS parameter estimates by using the bootstrap option incorporated within the *SmartPLS* software. Bootstrapping with 500 sub-samples is carried out to provide extra confidence that the results are not sample-specific by using repeated random samples drawn from the data. It was also important to ensure discriminant validity of the reflective construct. This was assessed by using AVE (Fornell & Larcker, 1981).

Collecting data from a single source requires checks for common method bias to be conducted. In this study, ex ante strategies were undertaken to check for the presence of common method bias (see Chang, van Witteloostuijn, & Eden, 2010; Podsakoff et al., 2003). The first consideration was survey design. The first step was to develop different scale endpoints and formats for the independent and dependent measures. The items were written in such a way to ensure that respondents were not looking to provide 'right' or 'wrong' answers, and respondents were explicitly asked to answer as honestly as possible. Once the survey questions were completed, they were placed in random order and then piloted to ensure there were no items that included ambiguous, vague or unfamiliar terms. The survey

was then administered in such a way that respondents were assured anonymity and confidentiality.

Three statistical checks for common method bias were also deployed. Firstly, a single common latent factor analysis was computed using AMOS. The analysis showed that the paths accounted for 0.07 percent of the variance in the common latent factor. The next test of common method bias was undertaken following the process discussed by Podsakoff et al. (2003). We used 'Formalization' (Palmer & Dunford, 2001), a five-item reflective scale, as the single common method bias factor. Sample items include 'rules and procedures manuals' and 'documents on fringe benefits'. Results showed that none of the paths from this method factor to any of the constructs in our model were statistically significant. These results support the conclusion that common method bias was not a concern when interpreting the findings.

To ensure common method variance was not affecting the results of this study Harman's ex-post one factor test was undertaken (Podsakoff & Organ, 1986). All the variables used were entered into an unrotated factor analysis to determine the number of factors. The analysis produced 19 factors (with eigenvalues greater than 1.0) accounting for 68.15 percent of the variance. This result suggests that common method variance is not an issue in the current study.

The quality of the proposed structural model was assessed using R-square of the dependent variables and the Stone-Geisser Q-square test for predictive relevance (Chin, 2010). Since the values were stable for both omission distances and the majority of the Q-squares were greater than zero, we were confident that the model was stable and satisfied the predictive relevance requirement. Unlike other covariance-based structural equations modeling techniques, *SmartPLS* does not have an in-built computation of goodness of fit

indices. We calculated the global goodness of fit index as reported by Tenenhaus et al. (2004) to determine the fit of the PLS model.

RESULTS

The results suggest that the model has discriminant validity. The correlation matrix shows that the square of the AVEs reported (in the diagonal) are greater than the corresponding off-diagonal correlation coefficients (see Table 1). There is a high goodness of fit in the calibration and validation samples. The calibration model has a global goodness of fit index of 0.387 while the validation model has a global goodness of fit index of 0.371. Both of these indices were considered to be a high goodness of fit (Wetzels et al., 2009). The R-squares for job satisfaction for the calibration and validation models were 25.9 percent and 30.5 percent respectively (see Figure 2).

 Insert Table 1 about here
 Insert Figure 2 about here

The path analysis produced a number of interesting findings (see Table 2). While the EFA produced two sets of change variables: flexibility-focused change and externally-focused change. Analyses from the calibration and validation samples demonstrate that only one of the change initiatives, that is, flexibility-focused initiatives, were statistically significant in both samples. As reported in the previous section, flexibility-focused change initiatives (comprising flexible work groups, empowerment, and the reduction of internal and external boundaries) leads to the provision of change information (Hypothesis 1b) and participation in change decision making (Hypothesis 2b). Hypothesis 3 was not supported. The results showed that change initiatives were not associated with change-induced stressors. Surprisingly, Hypothesis 4 was not supported. The results suggest that participation in

change is associated with an increase in stressors, despite a statistically significant path. Hypothesis 5 was supported as there is a statistically negative association between the amount of change information received and change-induced stressors.

 Insert Table 2 about here

Hypothesis 6 was supported. There is a positive association between the presence of stressors and an increase in psychological strain. Stressors were also found to be connected to lower job satisfaction (or more job dissatisfaction) and Hypothesis 7 was found to be supported. Hypothesis 8 was supported. Increases in psychological strain were found to have a concomitant effect on job satisfaction. To test the mediation hypothesis, results of a Sobel test showed that the hypothesis was supported in both samples, such that psychological wellbeing partially mediated the negative consequences of change-induced stressors on job satisfaction.

DISCUSSION AND IMPLICATIONS

The aim of this research was to examine how managerialist-inspired reform is associated with psychological wellbeing and job satisfaction. The results revealed a complex set of relationships some of which were not expected. The results of this study not only provide support for existing literature about the relationships between explicit reactions to change (i.e., stress) and change consequences (i.e., psychological well-being and job satisfaction), they also offer new insights into the implementation of organizational change initiatives in the public sector suggesting that the situation is more nuanced than first suspected.

The results of this study suggest that change initiatives, especially flexibility-focus initiatives, result in more stress among public sector managerial employees. These change

initiatives were consistent with that which Diefenbach (2009) classifies as managerialist change (i.e., increasing flexibility, trimming-down of standards, procedures, structures and processes, reducing compartmentalization and internal barriers, improving internal communication and cross-boundary collaboration, and making decision-making more efficient). When change to improve organizational effectiveness and efficiency focuses on people, it has a more positive impact on employees. It has been argued that when competently implemented, increased flexibility leads to an increase in psychological wellbeing (Moen et al., 2011). This was uncovered in the current study as flexibility-focused change initiatives impact on stress and psychological strain.

The current study showed that flexibility-focus change initiatives have an effect on the stressors of public sector managerial workforce, via change information and participation in decision making. The four types of change-induced stressors such as time, information, relationships with senior management, and customer service-related stressors, are the result of the participation and change information provision. The finding contributes to the literature by showing that flexibility-focus change initiatives result in managers' experiencing workload and time demands, inadequate information about their work, and dealing with difficult relationship. These stressors were characteristic of an environment where managerialist-inspired philosophy is the norm.

Information giving was found to have reduced stress caused by the flexibility-focus change initiatives. This finding corroborates the literature that links change information and that these are necessary facilitators in gaining acceptance and support for change (e.g., Amiot et al., 2006; DiFonzo & Bordia, 1998; Whelan-Berry & Somerville, 2010). In contrast to existing literature it was also found that participation in change decision making resulted in more stressors at work. While this finding contradicts that by DiFonzo and Bordia (1998), in this study the participants were individuals who tend to be the recipient of change initiatives

demanded by senior management which could explain increased stress. The top-down requirement to participate in change decision making, might create additional stressors in day-to-day operational responsibilities. These findings open up new lines of research giving weight to Meier and O'Toole (2008) who call for systematic research to establish an evidence base about the relative merits of managerialism.

In applying social information processing theory the need for information seems to be a useful concept. The results of this research raise questions requiring further investigation, in particular about the relationships between the need for information, the nature of change, and the willingness of managers to provide change information. This research suggests that 'talk' (communication) and 'involvement' (participation) as the dual processes of change are being deployed in flexibility-focus change, but with different result on stress than intended. Our findings provide detail understanding about the differential impact of these two change processes on managerial stress (see DiFonzo & Bordia, 1998; Diefenbach, 2009).

The results about job satisfaction reveal a negative relationship with change-induced stressors. Psychological wellbeing was found to act as a mediator of this relationship such that improving psychological wellbeing might enhance job satisfaction. This finding corroborates the finding provided by the meta-analysis by Faragher et al. (2005) suggesting that the psychological wellbeing level of public sector managers can be improved by providing more information about change and how these could reduce the level of change-induced stressors.

For public sector management researchers there are a number of implications. It can be argued that selectivity in the implementation of managerialism and leaderism, 'serves to establish and further secure their (managers) own positions and interests' (Diefenbach, 2009) while creating 'surface consensus [while] differences in values and interests continue to be evident at other levels' (O'Reilly & Reid, 2011). The evidence in our research suggests that

flexibility-focus change is associated with increased information and participation. One explanation could be that managers are attempting to protect and control their 'superordinate prerogative' and desired discursive structures of managerialist power (O'Reilly & Reid, 2011). Another relates to post-NPM. Christensen and Lægreid (2011b: 403) conclude that post-NPM reforms have supplemented NPM reforms over the past decade leading to 'increased central control' and 'producing increased complexity'. In this research we have provided some detail on how public sector managers respond. In the light of these findings then we can now extend Lapsley's (2009) argument that managerialist change is neither all bad nor all good. We argue that it is not necessarily just managerialism that is the problem but also managers themselves.

The path model generated in the current investigation provides useful insights into the mechanisms through which public sector change programs can influence the health and attitudes of managerial personnel and points to a number of areas where agencies can mitigate the adverse outcomes of organizational change.

CONCLUSION

In summary, the current study responded to the call by public sector management scholars (such as Butterfield et al., 2005; Fernandez & Pitts, 2007; Ferlie et al., 2003) to specifically study the reactions of managerial employees in change management as these employees tend to be responsible for implementing change initiatives in their respective agencies. Our findings showed that this group of managerial employees experience specific sources of stress because they are more likely to play prominent roles in executing and monitoring change programs (Bordia et al., 2004). As these managers are given the opportunity to participate in the decision making process surrounding the change initiatives, they reported the presence of a number of change-induced stressors, which have negative consequences on job satisfaction and psychological wellbeing.

Limitations and Future Research Implications

There are a number of limitations that should be considered when assessing the generalizability of the findings. To minimize the effect of common method bias, several tests were employed. One-way ANOVA testing was also applied to assess whether the merging of the surveys from two different time periods was appropriately performed. While the response rate was low, the sample size was sufficient to allow the findings of the model to have general relevance. We also randomly split the dataset into two samples for calibration and validation purposes. In retrospect it would have been useful to collect data about the quality of information and trust in sources of information. This would have been beneficial to the analysis to provide more insights into the applicability of social information processing theory as a lens to explain how public sector managers react to change. Consistent with the call by Oreg and his colleagues (2011, 514), future work should use research design appropriate for studying the longitudinal effects of change at the individual level, collect data from multi-raters, and objective indicators, to supplement self-report information.

Taking into account the limitations, this study provides useful theoretical insights into the value of Social Information Processing theory for understanding change in the public sector. In particular we provide empirical evidence about how managers, as agents of change, respond to change (Oreg et al., 2011). It was found that the 'need for information' in facilitating change should be placed alongside the nature of change and how managers respond to that change. We extend the recent research that connects provision of information to participate in change-related decisions in that in the public sector the two are connected but participation in change has a negative effect on change-induced stressors. Clearly further research is required to identify the processes that generate this phenomenon. We also provide some evidence to support the work of Oreg et al. (2011) in which they suggest that organizational change can be best understood by examining the connections between

antecedents (change initiatives), explicit reactions (stressors) and change consequences (psychological wellbeing and job satisfaction).

In the area of public sector leadership, there are number of questions that could be pursued in further research. The nature and characteristics of 'positive' and 'negative' change and how these relate to managerialism could be investigated further. This has the potential to contribute to the debate about the desirability of managerialist reform and help examine Lapsley's (2009) question about whether it is a 'cruel, cruel disappointment', Prothehough and Pick's (2002) assertion that it is a 'sinister new orthodoxy', and Diefenbach's (2009) argument that it should be 'deconstructed and neutralized'.

Following Hood and Peters (2004) discussion of contemporary public sector reform we found paradox in the provision of information and participation. It is received wisdom in the literature that one cannot have participation without some kind of information exchange (see Oreg et al., 2011). Our study suggests that they are separate but related constructs which are differentially invoked depending on the nature of change and have varying effects on stress. More research is needed to explore whether they are two variables of a single construct or are constructs in their own right. We also found evidence of hypocrisy in that the results of this study suggest a positive relationship between positive change and information and participation but negative relationships when change is negative. The requirement for more evidence about why managers behave in this way is important since this has significant implications for public sector organizations and employees. One pointer may be found in O'Reilly and Reed (2011) who refer to the 'third face of power'; where managers deny lower level staff access to higher-level management agendas, except in this research the evidence suggests that such denial is selective to suit particular agendas. This is curious and worthy of further research to explore whether this has a connection to a struggle to preserve positional interests inherent in management hierarchies.

The theoretical framework, results and discussion presented in this study illuminate unexpected relationships between change, participation, information and stress that are worthy of further research. Much of the previous research examining the health and attitudinal outcomes associated with NPM-oriented reforms has focused on the experiences of public sector workers generally, rather than specific groups such as managers. A major contribution of this study is that it has extended earlier research to identify the pathways through which managerialist-inspired organizational change cascades through processes (participation and information), to explicit affective reactions (stress) and then to consequences (psychological well-being and job satisfaction). As key change agents, public sector leaders and managers have the dual responsibility of implementing reforms in accordance with requirements of executive-level personnel, governments and community groups, whilst at the same time, ensuring that agency staff have sufficient levels well-being and job satisfaction to be able to carry out these new ways of operating.

In this research we have developed new, nuanced understandings about how change is implemented in the public sector that have yet to be fully examined. The contribution of this study has been to illuminate paradox and hypocrisy in managerialism and how managers implement managerialist change. This gives new perspectives on 'post-New Public Management' (Christensen & Lægreid, 2011b) and 'leaderism' (O'Reilly & Reed, 2011). The results of this study indicate that it is not just managerialism that needs to be challenged but also the mindsets and behaviours of managers in the public sector that should be subject to critical attention.

References

- Allen, J., Jimmieson, N.L., Bordia, P., & Irmer, B.E. 2007. Uncertainty during organizational change: Managing perceptions through communication. *Journal of Change Management*, 7(2): 187-210.

- Amiot, C.E., Terry, D.J., Jimmieson, N.L. & Callan, V.J. 2006. A longitudinal investigation of coping processes during a merger: Implications for job satisfaction and organizational identification. *Journal of Management*, 32: 552-574.
- Armstrong, J., & Overton, T. 1977. Estimating non response bias in mail surveys. *Journal of Marketing Research*, 14: 396-402.
- Bordia, P., Hobman, E., Jones, E., Gallois, C., & Callan, V. 2004. Uncertainty during organizational change: Types, consequences, and management strategies. *Journal of Business & Psychology*, 18: 507-532.
- Bordia, P., Hunt, E., Paulsen, N., Tourish, D., & DiFonzo, N. 2004. Uncertainty during organizational change: Is it all about control? *European Journal of Work and Organizational Psychology*, 13: 345–365.
- Butterfield, R., Edwards, C., & Woodall, J. 2005. The new public management and managerial roles: The case of the police sergeant. *British Journal of Management*, 16: 329-341.
- Chang, S-J., van Witteloostuijn, A. & Eden, L. 2010. From the Editors: Common method variance in international business research. *Journal of International Business Studies*, 41: 178–184.
- Chin, W.W. 2010. How to write up and report PLS analyses. In Chin, W.W. (Ed) *Handbook of Partial Least Squares Analysis: Concepts, Methods and Applications*, 645-688. Springer, Berlin Heidelberg.
- Christensen, T., & Læg Reid, P. 2011a. Introduction. In T. Christensen, & P. Læg Reid (Eds.). *The Ashgate Research Companion to New Public Management*, 1-13. Farnham, UK: Ashgate.

- Christensen, T., & Lægreid, P. 2011b. Beyond NPM? Some developments and features. In T. Christensen, & P. Lægreid (Eds.). *The Ashgate Research Companion to New Public Management*, 391-404. Farnham, UK: Ashgate.
- Dahl, M.S. 2010. Organizational change and employee stress. *Management Science*, 57(2): 240–256.
- Deem, R. & Brehony, K. 2005. Management as ideology: The case of "New Managerialism" in higher education. *Oxford Review of Education*, 31(2): 217-35.
- Diamantopoulos, A., Reifler, P., & Roth, K.P. 2008. Advancing formative measurement models. *Journal of Business Research*, 61(12): 1203-1218.
- Diefenbach, T. 2009. New public management in public sector organizations: The dark sides of managerialistic 'enlightenment'. *Public Administration*, 87(4): 892-909.
- DiFonzo, N. & Bordia, P. 1998. A tale of two corporations: Managing uncertainty during organizational change. *Human Resource Management*, 37: 295-303.
- Doyle, M., Claydon, T. & Buchanan, D. 2000. Mixed results, lousy process: The management experience of organizational change. *British Journal of Management*, 11(special issue): S59-S80.
- Faragher, E., Cass, M., & Cooper, C. 2005. The relationship between job satisfaction and health: A meta-analysis. *Occupational and Environmental Medicine*, 62: 105-112.
- Ferlie, E., Ashburner, L., Fitzgerald, L., & Pettigrew, A. 1996. *The New Public Sector in Action*. Oxford, Oxford University Press.
- Ferlie, E., Hartley, J. & Martin, S. 2003. Changing public service organizations: Current perspectives and future prospects. *British Journal of Management*, 14: S1–S14.
- Fernandez, S. & Pitts, D.W. 2007. Under what conditions do public managers favor and pursue organizational change? *American Review of Public Administration*, 37: 324-341.

- Ferrie, J.E., Shipley, M.J., Marmot, M.G., Stansfeld, S., & Davey Smith, G. 1998. The health effects of major organisational change and job insecurity. *Social Science Medicine*, 46(2): 243-254.
- Falkenberg, H., Näswall, K., Sverke, M. & Sjöberg, A. 2009. How are employees at different levels affected by privatization? A longitudinal study of two Swedish hospitals. *Journal of Occupational and Organizational Psychology*, 82: 45-65.
- Fornell, C., & Larcker, D.F. 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18: 39-50.
- Gao, F., Luo, N., Thumboo, J., Fones, C., Li, S-C. & Cheung, Y-B. 2004. Does the 12-item General Health Questionnaire contain multiple factors and do we need them? *Health and Quality of Life Outcomes*, 2, doi: 10.1186/1477-7525-2-63
- Goldberg, D., & Williams, P. 1988. *GHQ: A Users Guide to the General Health Questionnaire*. Windsor: NFER-Nelson.
- Green, S.B. 1991. How many subjects does it take to do a regression analysis? *Multivariate Behavioral Research*, 26: 499-510.
- Hood, C. 2000. Paradoxes of public-sector managerialism, old public management and public service bargains. *International Public Management Journal*, 3(1): 1-22.
- Hood, C., & Peters, G. 2004. The middle aging of new public management: Into the age of paradox? *Journal of Public Administration Research and Theory*, 14(3): 267-282.
- Ibsen, C.L., Larsen, T.P., Madsen, J.S., & Due, J. 2011. Challenging Scandinavian employment relations: The effects of new public management reforms. *International Journal of Human Resource Management*, 22(11): 2295-2310.
- Jimmieson, N., Terry, D., & Callan, V. 2004. A longitudinal study of employee adaptations to organisational change: The role of change-related information and change-related self-efficacy. *Journal of Occupational Health Psychology*, 9: 11-27.

- Jimmieson, N.L., White, K.M., & Peach, M. 2004. Employee readiness for change: Utilizing the theory of planned behavior to inform change management. *Academy of Management Best Conference Paper Proceedings*, Briar Cliff, N.Y.: Academy of Management.
- Jones, L. 2008. Employee perceptions of organizational change: Impact of hierarchical level. *Leadership & Organization Development Journal*, 29(4): 294-316.
- Korunka, C., Scharitzer, D., Carayon, P., & Sainfort, F. 2003. Employee strain and job satisfaction related to an implementation of quality in a public service organization: A longitudinal study. *Work & Stress*, 17: 52-72.
- Lapsley, I. 2009. New public management: The cruelest invention of the human spirit? *Abacus*, 45(1): 1-21.
- Lazarus, R., & Folkham, S. 1984. *Stress, Appraisal and Coping*. New York: Springer.
- Lindorff, M. 2009. We're not all happy yet: Attitudes to work, leadership, and high performance work practices among managers in the public sector. *Australian Journal of Public Administration*, 68: 429-445.
- Lynn, L.E. Jnr, 2006. *Public Management: Old and New*. New York and London: Routledge.
- Meier, K., & O'Toole, L. Jnr 2009. The proverbs of new public management: Lessons from an evidence-based research agenda. *American Review of Public Administration*, 39(1): 4-22.
- Mikkelsen, A., Osgard, T., & Lovrich, N. 2000. Modeling the effects of organizational setting and individual coping style on employees subjective health, job satisfaction and commitment. *Public Administration Quarterly*, 24: 371-397.

- Miller, V., Johnson, J.R., & Grau, J. 1994. Antecedents to willingness to participate in a planned organizational change. *Journal of Applied Communications Research*, 22(1): 59-80.
- Moen, P., Kelly, E.L., Tranby, E. & Huang, Q. 2011. Changing work, changing health: Can real work-time flexibility promote health behaviors and well-being? *Journal of Health and Social Behaviour*, 52(4): 404-429.
- Noblet, A. & Rodwell, J.J. 2009a. Identifying the predictors of employee health and satisfaction in an NPM environment. *Public Management Review*, 11: 663-683.
- Noblet, A.J, & Rodwell, J.J. 2009b. Integrating job stress and social exchange theories to predict employee strain in reformed public sector contexts. *Journal of Public Administration Research and Theory*, 19: 555-578.
- Noblet, A., Rodwell, J., & McWilliams, J. 2006. Organisational change in the public sector: Augmenting the demand control model to predict employee outcomes under New Public Management. *Work & Stress*, 20: 335-352.
- Noblet, A., Teo, S.T.T., McWilliams, J., & Rodwell, J. 2005. Which work characteristics predict employee outcomes for the public-sector employee? An examination of generic and occupation-specific characteristics. *International Journal of Human Resource Management*, 16: 1415-1430.
- Ogbona, E. & Harris, L.C. 2005. Work intensification and emotional labour among UK university lecturers: An exploratory study. *Organization Studies*, 25(7): 1185-1203.
- O'Reilly, D., & Reed, M. 2011. The grit in the oyster: Professionalism, managerialism and leaderism as discourses of U.K. public services modernization. *Organization Studies*, 32(8): 1079-1101.
- Oreg, S., Vakola, M., & Armenakis, A. 2011. Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *Journal of Applied Behavioral*

- Science*, 47(4): 461-524.
- Palmer, I. & Dunford, R. 2001. The diffusion of managerial innovations: A comparison of Australian public and private sector take-up rates of new organizational practices. *International Public Management Journal*, 4: 49–64.
- Petter, S., Straub, D. & Rai, A. 2007. Specifying formative constructs in information systems research. *MIS Quarterly*, 31: 623-656.
- Pettit, J. D., Goris, J. R. & Vaught, B. C. 1997. An examination of organizational communication as a moderator of the relationship between job performance and job satisfaction. *Journal of Business Communication*, 34(1): 81-98.
- Pick, D., Teo, S., & Yeung, M. 2012. Friend or foe? New managerialism and technical, administrative and clerical support staff in Australian universities. *Higher Education Quarterly*, 66(1): 3-23.
- Podsakoff, P.M., & Organ, D.W. 1986. Self-report in organizational research: Problems and prospects. *Journal of Management*, 12: 533-544.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y, & Podsakoff, N.P. 2003. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88: 879–903.
- Preacher, K.J. & Hayes, A.F. 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40: 879-891.
- Prothehough, R., & Pick, J. 2002. *Managing Britannia: Culture and Management in Modern Britain*. Exeter, UK: The Brynmill Press.
- Put, V. & Bouckaert, G. 2011. Managing performance and auditing performance. In T. Christensen, and P. Læg Reid (Eds.). *The Ashgate Research Companion to New Public Management*, 223-236. Farnham, UK: Ashgate.

- Rafferty, A.E., & Jimmieson, N.L. 2010. Team change climate: A group-level analysis of the relationships among change information and change participation, role stressors, and well-being. *European Journal of Work and Organizational Psychology*, 19(5): 551-586.
- Reed, D. 1998. Moving targets. *Marketing Week*, 21(41): 51-54.
- Ringle, C.M., Wende, S., & Will, A. 2005. *SmartPLS 2.0 (beta)*. Hamburg: www.smartpls.de
- Salancik, G.R. & Pfeffer, J. 1978. A social information processing approach to job attitudes and task design. *Administrative Science Quarterly*, 23: 224-253.
- Stewart, J. & Kringas, P. 2003. Change management: strategy and values in six agencies from the Australian public service. *Public Administration Review*, 63(6): 675-688.
- Song, Y. 2008. An exploratory study of organizational uncertainty in times of changing and transitional public administration in Korea. *International Review of Administrative Sciences*, 74: 235-249.
- Tenenhaus, M., Vinzi, V.E., Chatelin, Y-M., & Lauro, C. 2005. PLS path modelling. *Computational Statistics and Data Analysis*, 48: 159-205.
- Teo, S.T.T., Yeung, M.E. & Chang, E. 2012. Administrative stressors and nursing job outcomes in Australian public and nonprofit health care organizations. *Journal of Clinical Nursing*, 21: 1443-1452.
- Van der Doef, M., & Maes, S. 1999. The job demand-control (-support) model and psychological well-being: A review of 20 years of empirical research. *Work & Stress*, 13: 87-114.
- Warr, P., Cook, J., & Wall, T. 1979. Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of Occupational Psychology*, 52: 129-148.

- Wetzels, M., Odekerken-Schröder, G. & van Oppen, C. 2009. Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS Quarterly*, 33: 177-195.
- Whelan-Berry, K.S. & Somerville, K.A. 2010. Linking change drivers and the organizational change process: A review and synthesis. *Journal of Change Management*, 10(2): 175-193.
- Yang, K., & Kassekert, A. 2009. Linking management reform with employee job satisfaction: Evidence from federal agencies. *Journal of Public Administration Research and Theory*, 20(2): 413-436.

Appendix 1. Context-Specific Stressors Experienced by Public Sector Managers in Australia

Source of Stress	Time	Information	Senior Mgt	Customer Service
19. Not having enough time to do job as well as you would like	√			
17. Busy, fast paced workload	√			
18. Insufficient time to take meal breaks	√			
2. Long working hours	√			
6. Insufficient staff to complete work on time and to standard expected	√			
20. Frequent interruptions	√			
4. Lack of resources to accomplish tasks	√			
16. Unrealistic performance targets	√			
10. Not knowing what's happening in other work areas		√		
9. Lack of contact with workers from other departments or sites		√		
8. Lack of information on why certain decisions are made		√		
11. Unclear expectations		√		
5. Not having enough say in what happens in your organisation		√		
32. Disagreements/conflict with management			√	
30. Unfair treatment from more senior staff			√	
31. Supervisor constantly finding fault in your work			√	
25. Dealing with abusive or difficult customers				√
26. Constant contact with customers				√

FIGURE 1 Proposed Path Model

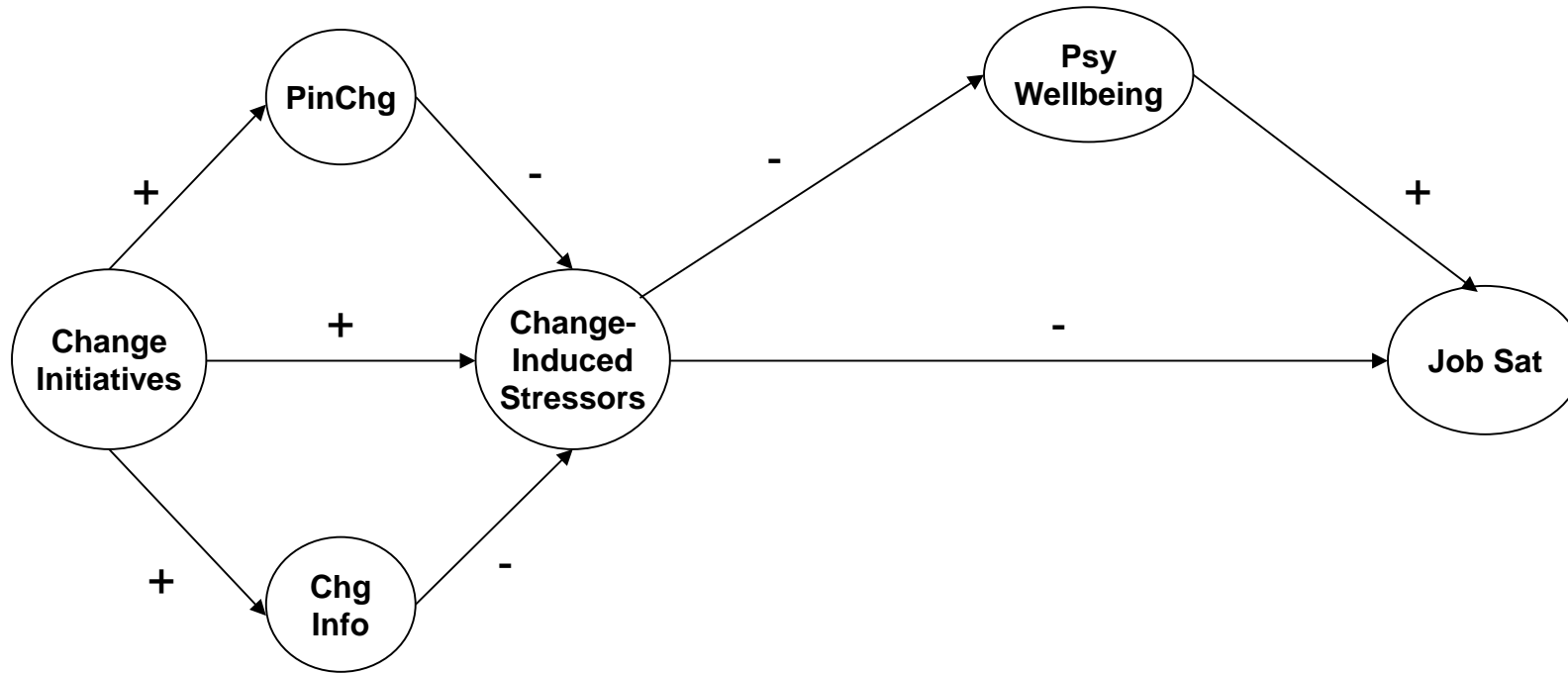


TABLE 1 Mean, Standard Deviation, Composite Reliability Coefficients, AVE and Correlations

	Mean	SD	α	AVE	1	2	3	4	5	6	7
1. Flexibility-Focus Change	2.64	.82	--	--	1.00						
2. External-Focus Change	2.33	1.13	--	--	.24***	1.00					
3. Participation in Change	3.19	1.00	.96	.81	.38***	-.17***	<i>.81</i>				
4. Change Information	3.20	.98	.97	.85	.39***	-.16***	.79***	<i>.85</i>			
5. Change-Induced Stressors	2.25	.66	.89	.66	-.27***	.13**	-.40***	-.47***	<i>.56</i>		
6. Psychological Wellbeing	1.67	.43	.77	.53	.32***	-.04	.26***	.29***	-.41***	<i>.53</i>	
7. Job Satisfaction	22.15	6.65	.94	.88	.37***	-.14***	.51***	.51***	-.66***	.44***	<i>.88</i>

Note:

Square of AVEs are shown in diagonal row as *italicized*

N=659 (full sample)

p<.01, *p<.001

TABLE 2 Results of Path Analysis

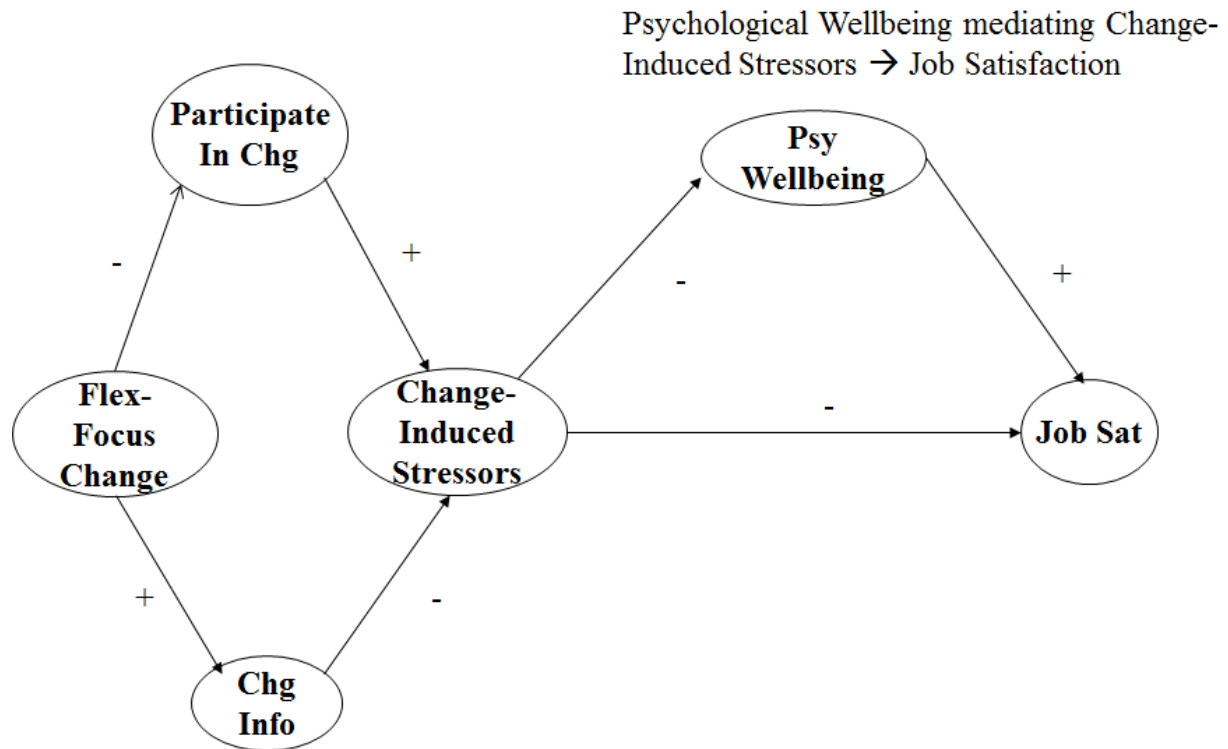
Paths	Calibration Model (N=227)			Validation Model (N=332)		
	Path coefficient	t-statistic	sig. level	Path coefficient	t-statistic	sig. level
H1b. Flex Focus → Change Info	0.47	10.2798	***	0.36	7.9928	***
H2b. Flex Focus → Participation in Change	0.42	9.3696	***	0.42	9.7342	***
H4. Change Info → Stressors	-0.30	2.9548	**	-0.40	4.3888	***
H5. Participation in Chg → Stressors	0.22	2.3619	*	0.27	2.9764	**
H6. Stressors → Psy Wellbeing	-0.28	5.7212	***	-0.20	3.0803	**
H7. Stressors → Job Satisfaction	-0.26	5.0969	***	-0.28	5.7826	***
H8. Psy Wellbeing → Job Satisfaction	0.37	6.1688	***	0.43	9.1777	***
H9. Psy Wellbeing mediating Change-Induced Stressors → Job Satisfaction	Sobel's test=4.1948, p<.001			Sobel's test=2.9202 , p<0.01		

Note: Only statistically significant paths in both calibration and validation samples are reported

n.s. not significant

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

FIGURE 2 Results of Path Analysis



Note:

Only statistically significant paths that are found in both the calibration and validation samples are shown in the above figure.

The calibration model has three additional statistically significant paths which were not found in the validation model. These were Flex → Stress, External-Focus → Change Info and External-Focus → Participation in Change.