High performance work systems and employee well-being
A two stage study of a rural Australian hospital

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Abstract
Purpose – This paper aims to explore the attitudes of managers and employees to high performance work practices (HPWS) in a medium sized rural Australian hospital.

Design/methodology/approach – The study consists of two stages. Stage one involved a qualitative investigation consisting of interviews and focus group sessions with senior, middle and line management at the hospital. Bowen and Ostroff’s framework was used to examine how strategic HRM was understood, interpreted and operationalised across the management hierarchy. Stage one investigates the views of managers concerning the implementation of strategic HRM/HPWS. Stage two consisted of a questionnaire administered to all hospital employees. The mediation effects of social identification on the relationship between high performance work systems and affective commitment and job satisfaction are examined. The purpose of stage two was to investigate the views and effects of SHRM/HPWS on employees. It should be noted that HPWS and strategic HRM are used interchangeably in this paper.

Findings – At the management level the importance of distinctiveness, consistency and consensus in the interpretation of strategic HRM/HPWS practices across the organization was discovered. Findings indicate that social identification mediates the relationship between HPWS and affective commitment and also mediates the relationship between HPWS and job satisfaction.

Practical implications – High performance work systems may play a crucial role facilitating social identification at the unit level. Such practices and management support is likely to provide benefits in terms of high performing committed employees.

Originality/value – The paper argues that team leaders and managers play a key role in building social identification within the team and that organizations need to understand this role and provide recognition, reward, education and support to their middle and lower managers.

Keywords Performance management systems, Australia, Working practices, Hospitals, Human resource management, Personal health

Paper type Research paper

Introduction
High performance work systems and practices have been identified as playing a key role in the achievement of business goals and improved organizational effectiveness (Becker and Huselid, 2006; Macky and Boxall, 2007). While there is no agreement on an ideal configuration or “bundle” of such systems and practices (Macky and Boxall, 2007) the logic is that high performance work systems influence and align employees’ attitudes and behaviors with the strategic goals of the organization and thereby increase employee commitment and subsequently organizational performance (Schuler and Jackson, 1987). For example, Zacharatos et al. (2005) argue that high performance
work systems concentrate on empowering employees through increased information flows and the devolution of decision making and are associated with increased employee productivity. In line with (Macky and Boxall, 2007) this paper uses strategic HRM and HPWS interchangeably. High performance work systems are a configuration of HRM practices designed to increase employee commitment and subsequently performance (Becker and Huselid, 2006; Bowen and Ostroff, 2004; Godard, 2004; Youndt and Snell, 2004).

In theory, a labour intensive, highly motivated, highly skilled professional workforce, as in the healthcare sector, should be an ideal context for the successful implementation of HPWS. Despite empirical studies identifying the difficulties of practicing HRM in the largely government funded public health sector (Bach, 2000; Stanton et al., 2004), recent writers have highlighted the value of people management practices in healthcare that directly support other goals such as providing a quality and safe service and hence improving healthcare performance and patient outcomes (Leggat and Dwyer, 2005; Bartram et al., 2007). However, there may be mediating constructs that impact on employee attitudes and behaviours such as job satisfaction and trust in management that can also increase or decrease the impact of HPWS (Macky and Boxall, 2007). In a labour intensive industry such as healthcare, it is crucial to examine employee attitudes and behaviours and its antecedents.

In attempting to understand antecedents and mediators of attitudes and behavior, and their links to HRM strategy this paper uses qualitative case study data and quantitative survey evidence in one Australian hospital. We argue that each organization has its own unique features which impacts on overall effectiveness and the strength of its unique HRM system plays a crucial role in this process (Bowen and Ostroff, 2004; Wright et al., 1994). Bowen and Ostroff (2004) suggest that a “strong” HRM system in which HRM practices create an unambiguous social structure integrating HRM content and process creates messages for all organizational participants regarding virtuous organizational goals and practices, and subsequent individual goals and behaviors. An HRM system that is perceived as high in distinctiveness, consistency and consensus will create a “strong situation” and consistent management and employee behavior and thereby improve organizational performance (Bowen and Ostroff, 2004).

HRM scholars argue for greater research to be conducted at the organizational level exploring complex connections and relationships that can cast light on the reality of HRM operationalisation (Purcell and Hutchinson, 2007). This involves greater use of qualitative and reflexive approaches that drill-down into organizational discourse and further build on our understanding of HRM practices and processes, and how these are influenced by the context and environment (Hesketh and Fleetwood, 2006; Legge, 2005). Similarly others point to the need to include line managers and employees in data collection rather then relying simply on the views of senior managers (Hutchinson and Purcell, 2003; Wright and Boswell, 2002; Kinnie et al., 2005).

This paper reports on a two stage case study of a medium sized rural hospital in Australia. Stage one involved interviews and focus group sessions with senior, middle and line management. We investigated their views concerning the implementation of strategic HRM/HPWS at the hospital. Bowen and Ostroff’s (2004) framework was used to examine how strategic HRM was understood, interpreted and operationalised across the management hierarchy. Stage two consisted of an employee survey investigating...
their views and effects of strategic HRM/HPWS. In particular the mediation effects of social identification on the relationship between high performance work systems and affective commitment and job satisfaction were examined.

We argue that while HPWS are important in a highly professionalised industry such as healthcare, HPWS can be enhanced or undermined at the unit or team level. We suggest that organisations that rely on a highly educated and professional workforce need to not only provide an appropriate bundle of human resource management practices that can be described as HPWS, but also need to recognise the important role played by managers and team leaders at every level in team building and social identification within the work group.

The role of managers in HR

Studies have demonstrated the importance of different levels of management within the adoption and integration of HRM in organizations (Lepak and Snell, 1999; Mayrhofer et al., 2004; Valverde et al., 2006). These include; the relationship between senior HR managers and organizational strategy (Boxall and Purcell, 2003; Boxall and Macky, 2007; Guest, 1997; Macky and Boxall, 2007); the role of middle and lower level managers in the operationalisation of HRM goals and plans (Purcell and Hutchinson, 2007; Renwick, 2003; Teo and Rodwell, 2007; Thornhill and Saunders, 1998) and the devolution of HRM responsibilities to the operational levels (Hall and Torrington, 1998; Mayrhofer et al., 2004; Teo and Rodwell, 2007). Hence, the attitudes and behaviors of operational managers are crucial in integrating HRM effectively (Whitaker and Marchington, 2003).

Many researchers suggest that there are difficulties with the devolution of HR activities (Currie and Proctor, 2001; McGovern and Stiles, 1997; Renwick, 2003). For example, while operational manager involvement in HR activities is possible, practices vary considerably in the consistency of implementation across the organization (Currie and Proctor, 2001; McGovern and Stiles, 1997) which may distort, and even undermine the contribution of HR practice to organizational effectiveness (McGovern and Stiles, 1997). The knowledge and ability of operational managers to take on HR responsibilities is often questioned (MacNeil, 2003; Renwick and MacNeil, 2002) and Currie and Proctor (2001) and Renwick (2003) suggest a lack of understanding of how to enhance the willingness and ability of operational managers to take on responsibility for HR issues. Thornhill and Saunders (1998) found that managers left to inspire, develop and encourage employees without clear strategic direction have a significant negative effect on employees’ commitment, flexibility and quality of work. While Purcell and Hutchinson (2007, p. 6) argue that the role of front-line managers in the causal chain between HRM and organizational performance has largely been ignored over the last 15 years because of a reliance on single respondents in multi-employer research projects.

Middle and lower level managers are important because of their understanding of their employees and employee competence and their potential to impact on employees’ behavior (Mayrhofer et al., 2004, p. 131). These managers play a crucial role in the development of employee commitment through their leadership skills, and their ability to communicate, motivate and manage change (Thornhill and Saunders, 1998). Increasingly the role of managers is crucial to the high performance workplace debate.
High performance work systems
In bundling human resource practices to constitute a HPWS there is significant debate about what the composition should be. As Macky and Boxall (2007, p. 537) argue “While there are a number of theoretical, empirical and practical dimensions on which these constructs differ, a common theme is the notion that the HR practices involved should form a coherent, integrated ‘bundle’; a system of complementarities whose effect is greater than the sum of parts”. Hence, HPWS involve the mutual interdependence and congruence of key organizational variables including – structure, strategy, people, management style, human resource systems and functions (such as recruitment, selection, performance appraisal, teamwork, training and development, and reward management), procedures and culture (Boxall and Purcell, 2003; Schuler and Jackson, 1987). The research suggests that such high performance work systems and practices lead to improvements in employee performance and subsequently organizational performance. Also, that workplaces characterized by the adoption of high-performance work practices enjoy significant gains over their low-adoption counterparts (McDuffie, 1995; Macky and Boxall (2007).

In particular West et al. (2006) argue that high performance HR systems are especially important for hospitals in yielding superior healthcare through their impact on effective decision making and information processing. West et al. (2006, p. 986) bundle performance management/appraisal, training, decentralization, participatory management, team-based structures and employment security in their study of HPWS in the NHS and argue that these practices form an overlapping synergy likely to “yield employees capable of positively impacting on organizational performance” and in particular patient mortality. Although there are mixed views regarding the actual configuration of the “bundles” with Harris et al. (2007, p. 449) concluding from their review of HRM and performance in healthcare that there is a “confusing picture in the literature regarding which practices, policies and systems are linked to performance”. It is clear, however, that teams appear consistently in the literature.

According to Bowen and Ostroff (2004) the HRM system should send consistent signals throughout the HR infrastructure to operational management that allow them to understand the appropriate individual and collective responses. Creating and transmitting unambiguous HRM messages (e.g. organisational goals and congruent individual behaviours throughout the organisation) is an important feature of strong HRM systems (Bowen and Ostroff, 2004). Table 1 outlines the key components of strong HRM systems: distinctiveness, consistency of message and consensus between decision makers.

Team based work systems
In health, team work is an imperative with West et al. (2002) revealing that team work had an important relationship to patient mortality. Furthermore others such as Gil et al. (2005) Bass et al. (2003) and Sivasubramaniam et al. (2002) found that group processes have an important mediating role between leadership and team outcomes.

In particular Callan et al. (2007, p. 450) argue that “employees self-categorize with organizational groups and identify with them to gain benefit like self-enhancement through positive intergroup comparisons”. They cite Mael and Ashforth (1992) and Dutton et al. (1994) in arguing that group identification leads to positive intergroup support and behavior in line with group objectives. Such intergroup identification at the
work unit or professional group level, they add, defines values, attitudes, beliefs and relationships. They found that hospital employees preferred to identify with small proximate groups rather than the organization in times of change and that higher status groups were associated with higher levels of job satisfaction. Von Glinow (1988) also found that professionals tend to identify with other like-minded professionals rather than the organization for which they work. Purcell and Hutchinson (2007, p. 8) refer to research (such as Eisenberger et al., 2002; Redman and Snape, 2005; Liden et al., 2004) in arguing that supervisors and teams and the quality of these relationships with and between employees increase the “strength” of the HR system, influencing the perception of the organization, organizational commitment, positive psychological contracts, and work satisfaction. It is not just the relationships that are important here but the extent to which the supervisory managers are perceived to be the providers of HR practices.

This paper integrates these concepts of HRM strategy and high performance work systems, teams and group identification, and explores their links to employee attitudes such as job satisfaction and commitment.

**The case study**
This research project is part of a longitudinal study into people management practices in the Victorian public healthcare sector partly funded by the employers’ association and the case study hospitals. The project has spanned five years and has included key informant interviews with major industry players (Stanton et al., 2004), an industry survey (Bartram et al., 2007) and the case study investigations (Stanton et al., forthcoming).

This particular study of one rural hospital used a range of qualitative and quantitative investigations carried out in from November 2006 and July 2007. All data is cross sectional in nature. All interviews and focus groups were carried out over a three-day period in November 2006. The questionnaire was administered in July 2007. This case study is a rural hospital incorporating acute, aged care and community health services with approximately 240 staff. The government department regards this hospital as a high performer in terms of financial management and throughput; the hospital has also scored well in the accreditation process.

| Distinctiveness: features of the HRM system that capture the attention and interest of staff in organisational goals | Visibility |
| Consistency of message | Instrumentality: refers to establishing an unambiguous cause-effect relationship between the HRM system’s desired employee behaviours and associated employee and organisational performance outcomes |
| Consensus between decision makers | Validity: enables organisational participants to establish valid attributions associated with HRM and beneficial individual and organisational outcomes |

**Consistent HRM messages**

**Agreement among principal HRM decision makers**

**Fairness of HRM practices**

**Table I.**

**Source:** Bowen and Ostroff (2004)
Stage one: managers’ views on HRM

Stage one included the collection and analysis of key documentation including annual reports, human resource policy and procedure manuals, and other relevant organizational reports; seven in-depth semi-structured interviews and two focus groups of a range of managers (eight participants in each focus group). These managers included senior managers described as the executive team, and middle and line managers described as operational managers. It also included on going discussions, workshops and presentations with senior managers and HR practitioners.

These semi-structured interviews, focus groups, presentations and discussions permitted the researchers to gather rich information on the HRM system and associated processes from the perspective of a cross section of managers and allowed for a suitable cross-check of these data. As Healy and Perry (2000, p. 123) have argued, a case study approach, with multiple perceptions about a single reality, allows triangulation of several data sources which provide validity as researchers search for convergences. An interpretivist approach was used to analyze the interview data. It is the preferred paradigm when dealing with complex social phenomena; interpretation examines the way people think and act, and assumes that bias is removed by accurately describing the meanings and interpretations of participants (Healy and Perry, 2000, p. 120).

Interview schedules were based on the research questions identified from a theoretical framework developed from the researchers’ previous findings (Bartram et al., 2007) and Bowen and Ostroff’s (2004) framework. All interviews were taped with the permission of the interviewees and the transcripts were analyzed through a process of coding of the emerging themes in line with the theoretical framework.

The two research questions identified for the stage one analysis were:

*RQ1*. How does the HRM system link to organizational strategy?

*RQ2*. How is HRM understood, interpreted and operationalised across the management hierarchy?

Managerial perspectives

*Organizational strategy and the HRM system*

The hospital had a clear organizational strategy which incorporated its HR strategy. The CEO and the executive directors stated that they valued strategic HRM and had restructured the hospital’s human resource function into two sections; payroll within the corporate services department and a separate part time human resources manager appointed to expand the role of HR from an administrative focus on payroll to a strategic focus on education and development. The executive directors argued that HR was continuously under review and the organization’s key performance indicators included HR outcome data.

While HR policies were developed by the HR manager they were implemented by the executive team (including the HR manager) and cascaded down to departmental and unit managers. The HR manager then assisted in the education of managers in operationalising these policies, in providing advice on employment relations and managing the HR reporting. She argued that HR should be visible across the organization: “we’ve really focused on trying to send out that message in the last few years and trying to up skill our department managers and in future years flow that on throughout the organization, to our line managers”.

High performance work systems
An executive director argued:

... our HR manager gives the skills to our unit managers say for instance on performance management and we’ve got a leadership team that actually carries out a lot of those HR practices ... she empowers the unit managers to carry out some of those things, and she’ll ... walk through the process if you’ve got a bullying, harassment, this is what you do.

In preparing policies, the HR manager argued that consultation occurs with those affected – directors, unit managers and staff and placed communication as the top of her concerns. As a director stated:

People have really seen the value of having HRM who’s there and that can talk to them about a whole range of different things. I think that the organization has a policy of valuing our staff so it’s not really just saying it – we can actually demonstrate that there’s a whole lot of policies and procedures that have developed; for instance our Employee Assistance Programs, our staff surveys and feedback and ... really valuing communication.

Operationalising HRM

However, although there was clear consensus at the top of the organisation as one Executive Director argued “if you go much below that, it would be varied. I believe we work very well at that top level but much below departmental managers I think is where we need to work”. This view was also reflected in the managers’ focus group where comments were made about varied consistency of the HR message. However, the HR manager believed that improvements and a culture change had occurred with greater inclusion of department managers in planning and a team-based approach between HR and department managers, as she argued “the old culture here was about power and they stayed away”.

She also saw difficulties in burdening operational managers too many extra HR responsibilities arguing that “if we want to move all these things such as HR out to department managers then they need to be given the time to do it and to do it well”. Focus group members agreed arguing that the training that they had been given was helpful and made them more confident. “While they’re pushing for us to do more performance management, they’re at least giving us the tools to do it properly so that’s a good thing.”

The importance of communication was also recognized with department managers stating that although training has helped, talking in the leadership group “can be a bit intimidating ...” (focus group).

Overall, the managers in the focus group believed that “the CEO is willing to put resources into HR and consider it to be important where it hasn’t been previously”. They believed that further work could be done in freeing up the administrative burden on the HR manager by way of employing clerical assistance and they were willing to take on more HR tasks “to free up more time both for the operational level and HR level.” The managers also tended to see HR as the individual: “She’s got a lot of skills and knowledge we don’t have about HR like our performance reviews, industrial relations, performance management.” They expressed a desire for her to engage in additional training for managers in these areas.

Summary: distinctiveness, consistency and consensus

In this organization, according to the managers, strategy and HRM strategy were aligned in a way that appeared to be relevant, meaningful and accessible. The HRM
system was highly visible and understandable because of the amount of training given to managers and the emphasis on communication. The HRM system was seen to be legitimate with strong within-group agreement at the executive level. The high levels of HRM training and the amount of support provided would appear to suggest that HR practices were seen as valid and instrumental. There appeared to be consensus across the management levels on the role and functions of HR and even on the limitations and difficulties. The collection of HR performance data and reporting to the senior executive team embedded the HRM system into the organization's strategy. Overall consistency, consensus and trust appeared to be successful in this organization. However, at this stage a key limitation of this study was the lack of employee perspectives. The next stage of the project was designed to investigate employee perception not only to HR policies and practices, but to link HPWS to their attitudes and behaviors.

Stage two: employee perspectives
To explore employee perspectives we utilised Zacharatos's et al. (2005) conceptualization of HPWS and identified five hypotheses that we wished to test:

**H1.** HPWS will be positively associated with affective commitment.

The HPWS literature has demonstrated both theoretically and empirically that HPWS are positively associated with affective commitment (Macky and Boxall, 2007). Affective commitment is defined as an individual having an emotional attachment to the organization because he or she identifies with and enjoys the membership of the organization (Allen and Meyer, 1990). According to Legge (2005) by treating workers with respect and as capable and intelligent individuals, workers will become more committed to the organization and more trusting of management. This results in improved performance. Hence normative HRM models foster consistent and reinforcing HRM policies, and are associated with greater organizational commitment and subsequent employee performance. Zacharatos et al. (2005)7, p. 78) argue that “employees view HRM practices and trustworthiness of management as indicative of the organisation's commitment to them, and consequently employees reciprocate with appropriate attitudes and behaviours”. Research by Wright et al. (2003) also found that HPWS index scores were positively associated with organizational commitment. Therefore in this study we would expect to find a positive relationship between the organization's HPWS and affective commitment from employees:

**H2.** HPWS will be positively associated with job satisfaction.

Studies also demonstrate that job satisfaction is positively related to HPWS (Macky and Boxall, 2007). Guest (1997) found that employees who reported higher numbers of HPWS practices are more likely to report high job satisfaction. Liden et al. (2000) argue that when employees feel that their work can influence outcomes that affect their organization and that their work is meaningful, they tend to feel more involved and therefore gain a sense of satisfaction with their job. In this study we would expect to find a positive relationship between HPWS and job satisfaction:

**H3.** HPWS will be positively associated with social identification of employees with their unit-level colleagues.
Social identification, defined as an individual’s development of a social identity, plays a major role in the formation and development of collective attitudes and behavior (Tajfel, 1982; Tajfel and Turner, 1986; Mael and Ashforth, 1992; Ellemers et al., 2004). Social identity theory suggests that people wish to belong to a group that they consider is distinctive from other groups in order to increase their self-esteem. Their perception of the group forms the basis of the individual’s social identity (Tajfel and Turner, 1986). As social identification with the group develops, belongingness to the collective is strengthened (Tajfel, 1982), hence social identification acts as a social glue (Van Vugt and Hart, 2004).

The social identification process brings about the strengthening of collective attitudes (Kelly, 1998; Ashforth and Mael, 1989). Members act in a manner that is “congruent with the salient aspects of their identity”. This leads to “greater pride and loyalty in the group” (Iverson and Buttigieg, 1997, p. 1488). High identifiers exhibit strong group loyalty because they have an extremely positive impression of their group membership (Van Vugt and Hart, 2004).

Forrester and Tashchian (2006) argue that social cohesion is associated with other workgroup characteristics, many of which are the fundamental underpinnings of HPWS such as clarity of targets, adequacy of resources, legitimacy of decision-making authority and the motivational potential of work. Moreover, Campion et al. (1996) argue that social cohesion is also related to work group characteristics such as job design, context and interdependence. In a professional environment built around teamwork as in the healthcare sector we would expect that there would be a positive association between HPWS and social identification:

H4. Social identification will mediate the relationship between HPWS and job satisfaction.

H5. Social identification will mediate the relationship between HPWS and affective commitment.

Since the role of the team is important in the healthcare industry we would also expect that social identification has the potential to mediate the impact of HPWS on collective attitudes. For example HPWS can influence members’ collective attitudes through leaders providing visionary and inspiring organizational goals and developing work design that creates synergy and camaraderie among team members. Transformational leaders can utilise HPWS such as selective recruitment, extensive training, self-managed teams and decentralized decision making and raise the collective consciousness of followers by means of their appeal to higher ideals and organizational goals (Forrester and Tashchian, 2006). By communicating the mission of the organization and integrating organizational strategy and HPWS, leaders and managers can encourage a sense of pride of employees in the organization and a willingness to exert extra effort. Hence strong social identification increases the intrinsic value of an individual’s efforts in relation to the goals of the collective (Shamir et al., 1993). The sense of oneness that develops between person and group “strengthens the member’s motives for contributing personal resources to the organization” and feeling an important part of the team or unit – leading to greater feelings of job satisfaction and organizational commitment (Knoke, 1990, p. 42).

Management literature demonstrates consistent positive associations between organizational commitment and employee performance (Macky and Boxall, 2007).
Macky and Boxall (2007, p. 541) argue that “committed workers not only identify psychologically with their employer and feel stronger attachment to the organization, they are also more likely to expend discretionary effort towards achieving organizational ends”. Wright et al. (2003) also claim that HPWS may enhance employee performance through organizational commitment and job satisfaction. Hence we would expect social identification to mediate the relationship between HPWS and job satisfaction and HPWS and affective commitment.

The survey
In July 2007, a questionnaire was distributed by the researchers to all staff members (240 employees) at the hospital. We utilized Zacharatos’s et al. (2005) conceptualization of HPWS which is primarily based on Pfeffer’s seven HPWS factors including: employment security, selective hiring, extensive training, teams and decentralized decision making, reduced status distinctions, information sharing and contingent compensation. Zacharatos et al. (2005) also included three additional practices which are transformational leadership, quality work relationships and the measurement of management practices.

All surveys were returned by pre-paid post directly to the university researchers. Confidentiality of the participants was assured as the researchers did not have access to the names and contact details of participants. A reminder letter was sent out three weeks after employees received the initial questionnaire. Finally, 68 completed questionnaires were received by the researchers. This marked a satisfactory response rate of 28 per cent (Alreck and Settle, 1995). In social science research response rates of between 25 per cent and 30 per cent are extremely common and are generally regarded as satisfactory (Alreck and Settle, 1995). Moreover, given the size of the data set we ensured that we did not “over-fit” the data by adding an excessive number of variables. It should be noted that each mediation (regression) model consisted of only three variables. In line with Hair et al. (1998) we adhered to the desired level of between 15 and 20 observations for each independent variable used in the regression analyses.

Of these respondents 87 per cent were female, the mean age was 43 years and 67 per cent of respondents were employed part-time. Nurses represented 44 per cent of the sample and management and administrators represented 27 per cent. The rest included allied health and others. The mean hours worked per week were 30 hours and over 40 per cent of respondents held a bachelor degree or higher qualification. The sample characteristics are generally representative of the rural health services characteristics. Based on our discussions with the senior management team and document analysis we are very confident that the sample is representative of the workforce at the hospital.

Measures used in the multivariate analyses
Unless indicated otherwise, numerical values represent the following responses: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree. In the factor analysis, we used principal components analysis with varimax rotation. The values of multi-item variables were constructed by taking the mean of the component item values.

Outcome variable. Members responded to eight items relating to affective commitment, adapted from Allen and Meyer (1990). Seven items loaded on one factor. Item “I think I could become easily attached to another organization as I am to this one” was
subsequently omitted. Sample items included: “I would be very happy to spend the rest of my career with this organisation”, “I really feel that this organisation’s problems are my own”, “This organisation has a great deal of personal meaning to me” \((\text{alpha} = 0.87)\).

**Predictor variables.** There were two predictor variables. They measured individual perceptions of high performance work systems (HPWS) at the rural health service, the individual members’ social identification with their work group or unit members.

We measured HPWS by adapting the measure developed by Zacharatos et al. (2005). The adapted HPWS measure comprised of 55 items. The HPWS measure comprised of eight constructs including: employment security (all two constructs included); selective hiring (all eight constructs included); extensive training (five constructs included, three omitted); self-managed teams and decentralized decision making; reduced status distinctions; information sharing (all seven constructs included); transformational leadership (all seven constructs included); high-quality work (all four constructs included). The original measure was designed to be completed by human resource managers within business organizations. The researchers adapted this measure to test the perceptions of employees within the health service. Measurement of management practices and compensation contingent on safe performance were omitted from the questionnaire as the vast majority of Australian public health care workers do not have contingent compensation as their wages and working conditions determined by centralized collective bargaining agreements which do not include performance based payment systems. Also, in consultation with management, the researchers decided to omit the construct of measurement of management practices as the majority of employees would not be in a position to accurately respond to these statements. The 38 items loaded on a single factor \((\text{alpha} = 0.85)\). The internal reliability of the scale demonstrate internal reliabilities according to the 0.70 criterion suggested by Nunnally (1978). In total, 17 items were not included in the final solution.

We used eight items adapted from Hinkle et al. (1989) to create a social identification variable. Sample items include: “I’m glad I belong in my unit”, “I am an important part of my unit”, “I feel strongly tied to my unit”, “I don’t think my unit is that important” (reverse-scored) \((\text{alpha} = 0.88)\). The eight items loaded onto one factor solution.

We used Allen and Meyer (1990) to create an eight-item measure of affective commitment \((\text{alpha} = 0.83)\).

A six-item job satisfaction scale was adapted from the Job Descriptive Index (Smith et al., 1969) \((\text{alpha} = 0.87)\).

**Results**

The means, standard deviations and zero-order correlations for all variables included in the regression analyses are shown in Table II.

We tested all hypotheses by following Baron and Kenny’s (1986) three-step procedure for assessing the mediating role. First, the predictor variable (HPWS) should be significantly related to the mediator (social identification). We carried out this investigation by regressing the mediator (social identification) on the predictor (HPWS). This process demonstrated that HPWS had a significant effect on social identification \((b = 0.76, p < 0.01)\) and satisfied the first criterion for mediation. Thus \(H1\) is supported.
Second, the predictor variable (HPWS) should be significantly related to the outcomes (affective commitment). The second criterion for mediation was satisfied in the regression \( (b = 0.74, p < 0.01) \) therefore \( H3 \) is supported.

Third, the mediating variable (social identification) should be related to the outcomes (affective commitment) with the predictor (HPWS) included in the equation. The third criterion for mediation was satisfied in the regression. In both regressions the predictor variable (HPWS) had a non-significant beta weight in the third step \( (b = 0.17, p = \text{ns}) \) and the mediator variable (social identification) had a significant beta weight \( (b = 0.71, p < 0.01) \), so complete mediation. \( H5 \) is supported.

The mediating role of intra-group identification on the relationship between HPWS and job satisfaction was also tested using Baron and Kenny’s (1986) procedure. First, the predictor variable (HPWS) should be significantly related to the mediator (social identification). We carried out this investigation by regressing the mediator (social identification) on the predictor (HPWS). HPWS had a significant effect on social identification \( (b = 0.76, p < 0.01) \). This satisfied the first criterion for mediation and \( H2 \) is supported.

Second, the predictor variable (HPWS) should be significantly related to the outcomes (job satisfaction). The second criterion for mediation was satisfied in the regression \( (b = 0.50, p < 0.01) \).

Third, the mediating variable (social identification) should be related to the outcomes (job satisfaction) with the predictor (HPWS) included in the equation. The third criterion for mediation was satisfied in the regression. In both regressions the predictor variable (HPWS) had a non-significant beta weight in the third step \( (b = -0.01, p = \text{ns}) \) and the mediator variable (social identification) had a significant beta weight \( (b = 0.75, p < 0.01) \), so complete mediation. \( H4 \) is supported.

Finally, the variance inflation factors of most of the variables were close to 2, never reaching 10. These results indicate inconsequential levels of multicollinearity (Hair et al., 1998).

**Summary**

In stage two we set out to explore the attitudes of employees to HPWS in the case study organization. In particular we focused on the links between HPWS, affective commitment, social identification with their work group and job satisfaction. We were also keen to test the mediation effect of social identification on the relationship between HPWS and affective commitment and job satisfaction. The results demonstrate that all five hypotheses were supported. In the first three hypotheses HPWS were positively associated with affective commitment, job satisfaction and social identification of

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<tr>
<td>Affective commitment</td>
<td>31.17</td>
<td>6.65</td>
<td>0.70*</td>
<td>0.47*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job satisfaction</td>
<td>22.93</td>
<td>5.18</td>
<td>0.55*</td>
<td>0.50*</td>
<td>0.71*</td>
<td></td>
</tr>
</tbody>
</table>

* \( p < 0.01 \)

Table II.
employees with their colleagues. These findings support current research in the literature (Macky and Boxall, 2007; Wright et al., 2003). However, the interesting finding in this study is the mediation effect of social identification of team members at the unit level. It was clear that the level of social identification with the work group mediated the relationship between the high performance work systems in the organization and employees’ affective commitment and job satisfaction.

**Discussion and conclusion**

The combination of qualitative and quantitative methods in this case study capturing the perspectives of managers and employees identifies some significant findings. First, the importance of executive leadership in implementing HR/HPWS and practices is crucial to their success (see Boxall and Purcell, 2003). In this study it was the CEO who gave HR legitimacy, provided leadership, committed resources and provided the links between organizational strategy and HR strategy. It was the CEO who created the strong within group agreement at the executive level which led to between-group agreement throughout the organizational hierarchy. The role of managers at all levels of the organizational hierarchy in operationalising HRM is crucial (Bowen and Ostroff, 2004; Thornhill and Saunders, 1998) and the further away managers are from the strategy makers the more challenging it is to keep them informed, engaged and empowered particularly in large and complex organizations. Hence, we argue that the key to creating a strong HRM system is high level leadership that uses its authority to transmit relevant, consistent and valid HRM messages across the organization.

Second, the study raises some important implications of developing and utilizing HPWS in any organization. If we assume, based on empirical evidence, that affective commitment and job satisfaction lead to improved organizational performance then understanding the factors that contribute to affective commitment and job satisfaction are crucial. While HPWS factors such as selective recruitment, employment security, and employee involvement in decision making are important, it is not enough just to focus on optimal configurations and bundles of HR practices. What this study demonstrates is that the role of team or workgroup and the individual employee’s connection to the team and belonging to the team (social identification) can undermine or enhance employee commitment and job satisfaction and hence the effectiveness of the organization’s HPWS. This finding again highlights the role of the team leader or manager and their skills and abilities in creating cohesive, inclusive and supportive teams that people feel connected to and want to be part of. It supports Purcell and Hutchinson’s (2007, p. 16) finding that these managers are important to creating, or transmitting, impressions of the organization (commitment) and in making jobs satisfying by influencing how demanding the job is, how much autonomy the employee has and the sense of achievement that comes from doing the job. In turn, this research highlights the importance of the organization in understanding the key role of the team leader/manager and providing recognition, reward, support and training to enable this job to be done well. In this case study operational managers clearly wanted to be involved in HR decision making and did not feel overburdened, instead they called for more autonomy and more responsibility but did require support and training from HR. If managers are left to make decisions without support and guidance the result is often inconsistency leading to perceptions of unfairness and fuelling complaints and grievances by employees (see Bowen and Ostroff, 2004; Thornhill and Saunders, 1998).
Third, in this study the role of social identification at the unit or team level was an important factor in harnessing a positive attitudinal impact of HPWS; an important role of the team leader/manager. Research generally demonstrates that satisfied and committed employees are usually high performing employees and are less likely to leave the organization (Stratton et al., 1995), and enhance patient satisfaction and quality of healthcare (Tzeng and Katefian, 2002). As it is not just hospitals that are organized into units or work teams, this finding can be extrapolated to other organizations where teams play an important role. In a tight labour market, such as the health sector, continued shortages of many clinicians and professionals and high labour turnover represent serious challenges for managers. It is essential not just to recruit good staff but also to retain them. The results in the paper indicate to some extent that effectively utilizing HPWS and harnessing social identification at the team level among like-minded professionals may have positive implications for employees and organizations. This study has made some progress in picking up West et al. (2006, p. 997) plea to “focus on whether and how HRM systems influence the extent of cooperation and multidisciplinary team working among hospital staff since this has been repeatedly shown to be related to patient outcomes” (West and Borrill, 2006).

Finally, also demonstrated is the value of identifying key HR performance indicators, embedding their collection at all managerial levels and regular reporting of this data in creating a managerial mindset that HR can contribute to organizational effectiveness. As Harris et al. (2007) have argued if employees receive complimentary messages about what is expected of them they are able to identify appropriate behaviors. Organizations that capture and analyze data on employee attitudes and behaviors can in turn identify areas where they need to improve organizational practice.

Despite the potential importance of our results for management practitioners, this study is not without its limitations. First, the size of the employee data set is small and this limited the complexity of the quantitative study. Second, the problem of mono-source bias is another limitation (e.g. independent and dependent variables are from the same source). However, despite these limitations the results provide some valuable insights for management practitioners concerning the development of strategic HRM/HPWS in the health sector.

References


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