High performance work practices, employee outcomes and organizational performance: A 2-1-2 multilevel mediation analysis

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Behaviours of people take place within a social context

A student’s satisfaction with learning is influenced by interactions within the classroom, the department, the faculty and the university

Research in management studies has witnessed an increasing development of both conceptual and methodological multilevel frameworks
Despite advances in multilevel frameworks in management studies,

...Human Resource Management (HRM) research has lagged behind other disciplines in applying multilevel analytical methods and theories

Up till now, the impact of HRM practices on employees is estimated mainly by single-level analytical methods
This presentation focuses on a 2-1-2 multilevel mediation model or *bathtub model*. This model is suitable for multilevel mediation analysis in which the predictor, mediator or outcome are estimated at different levels of analysis. A mediation model is one in which the underlying mechanism or process between two factors is explained by an intermediary factor.
A study on the mediating role of employee outcomes in terms of the links between high-performance work practices (HPWP) and organizational performance.

A set of mutually supportive human resource management (HRM) practices designed to optimize employees’ skills, knowledge and performance.

Examples are: selective hiring, staff development and training, job design, flexible work arrangements, incentive pay, information sharing, workplace support
Integrationist perspective
✓ HRM practices are combined into bundles to maximize their mutually supportive properties and generate larger gains.

Isolationist perspective
✓ HRM practices have unique and independent properties
✓ Organizations may focus on unique effects of individual HRM practices.
Cross-level effects of HPWP

**Mutual gains perspective**

- **Level 1**: HPWP promote employees’ job satisfaction, work engagement, commitment to the organization and well-being
- **Level 2**: HPWP improve organizational performance, financial performance, productivity, and reduce staff turnover and absence rates
- **Cross-level**: Employee outcomes have a significant mediating role in linking HPWP to organizational performance.
Cross-level effects of HPWP

Conflicting outcomes perspective

- HPWP impose greater work demands on employees, with little or no benefits for employee well-being
- \textit{Level 1}: HPWP increase the experience of work intensity, work-related pressure and stress
- \textit{Level 2}: HPWP compel employees to expend greater work effort to drive organizational performance.
- \textit{Cross-level}: HPWP influence organizational performance through employees’ experience of work intensity, work-related pressure and stress
The vast majority of studies show support for the *mutual gains perspective*. HPWP relay consistent signals about management’s desire to develop employees’ skills. Employees perceive these signals as a form of managerial ‘goodwill’ and in return exert their physical and cognitive energies at work.
However, a serious methodological weakness in this research area is limited use of appropriate multilevel mediation methods and techniques. Researchers have tended to use a single-level mediation approach, ignoring the possibility that HPWP and organizational performance may operate at a different analytical level from employee outcomes. Such studies do not account for interdependencies among employees nested within the same organization, and therefore fail to handle sources of errors more rigorously.
The cross-level prediction involve

*HPWP and organizational performance* are measured at the organizational level and *employee outcomes* at the individual level

✓ **Hypothesis 1:** The positive relationship between HPWP and patient satisfaction is mediated by employees’ job satisfaction and work engagement

✓ **Hypothesis 2:** The negative relationship between HPWP and staff absenteeism is mediated by employees’ job satisfaction and work engagement
A type of hierarchical mediation process

Multilevel mediation analysis is more suitable for mediation models involving two or more hierarchical levels.

The premise for multilevel mediation is that mediated effects are influenced by different mechanisms at Level-2 and Level-1
A 2-1-2 mediation model involving two kinds of cross-level effects:

- **2-1 portion**, the effect of a Level-2 predictor on a Level-1 mediator) and
- **1-2 portion**, the effect of a Level-1 mediator on a Level-2

Both portions of the model are examined simultaneously following a one-stage procedure.
Bathtub model

High performance work practices

Organizational performance
Staff absenteeism
Patient satisfaction

Level-2 (organizational level)

Level-1 (employee level)

Employee outcomes
Job satisfaction
Employee engagement
Advantages

✓ Separates measurement errors into relevant employee- and organizational-level components
✓ Ensures more accurate estimates of multivariate relationships.
✓ Tease out the micro- and macro-level effects of organizational practices.
✓ Account for interdependences among employees nested within the same organization
Bathtub model

- Disadvantages
  - Computationally challenging
  - Requires specialist software
  - Requires large data (at least 20 data points at level 2)
  - Model fit and parsimony are more difficult to achieve
The 2012 NHS Staff Survey

- An annual surveys by the Care Quality Commission (CQC)
- A total of 101,169 workers from 259 NHS Trusts in England participated in the survey

Data for organisational performance were obtained from other sources

- Staff absenteeism – NHS staff records for sickness absence rates
- Patient satisfaction – 2012 National Patient Survey
Measures

▸ Eight HRM practices for HPWP
  ✓ Staff training, performance appraisal, supportive management, team working, job design, job discretion, involvement in decisions, and communication

▸ Two employee outcomes
  ✓ Job satisfaction and work engagement

▸ Two organizational performance outcomes
  ✓ Patient satisfaction and Staff absenteeism
Findings

- The mediated path from HPWP through job satisfaction to staff absenteeism is significant and negative.

- The mediated path from HPWP through job satisfaction to patient satisfaction is significant and positive.
Findings

- The mediated path from HPWP through work engagement to staff absenteeism is significant and negative.

- The mediated path from HPWP through work engagement to patient satisfaction is positive but not statistically significant.
HRM research has lagged behind other disciplines in applying multilevel analytical methods and theories.

Acknowledging this methodological gap, a 2-1-2 mediation model was introduced:

- To examine simultaneously the direct impact of HPWP on employees’ job satisfaction and work engagement,

- and the role of these employee outcomes in explaining the links between HPWP and organizational performance.
The positive HPWP–satisfaction and HPWP–engagement relationships add value to the notion that HPWP have positive signalling effects.

HPWP relay consistent signals about management’s desire to develop employees’ skills.

Employees perceive these signals as a form of managerial ‘goodwill’ and in return exert their physical and cognitive energies at work.
Discussion

- Public health care context, the results demonstrate potency of HPWP beyond organizational settings (e.g. the manufacturing sector and financial institutions) where HPWP outcomes have conventionally been examined.

- The study shows the bathtub model may be applied to our understanding of HRM outcomes in hospital environments.
Thank you...