

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

Chidiebere Ogbonnaya

*Norwich Business School, University of East Anglia*

# Background

- ▶ 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

# Background

- ▶ 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

# Background

- ▶ 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.*

- ▶ Ogbonnaya, C. & Valizade, D. (2016). High performance work practices, employee outcomes and organizational performance: A 2-1-2 multilevel mediation analysis. *The International Journal of Human Resource Management*

# About HPWP

- ▶ 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

# About HPWP

## ▶ *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.



## ► *Conflicting outcomes perspective*

- ✓ HPWP impose greater work demands on employees, with little or no benefits for employee well-being
- ✓ *Level 1*: HPWP increase the experience of work intensity, work-related pressure and stress
- ✓ *Level 2*: HPWP compel employees to expend greater work effort to drive organizational performance.
- ✓ *Cross-level*: HPWP influence organizational performance through employees' experience of work intensity, work-related pressure and stress

# Research objective

- ▶ 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.

# Research objective

- ▶ 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 interdependences among employees nested within the same organization, and therefore fail to handle sources of errors more rigorously.

# Research objective

- ▶ 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*

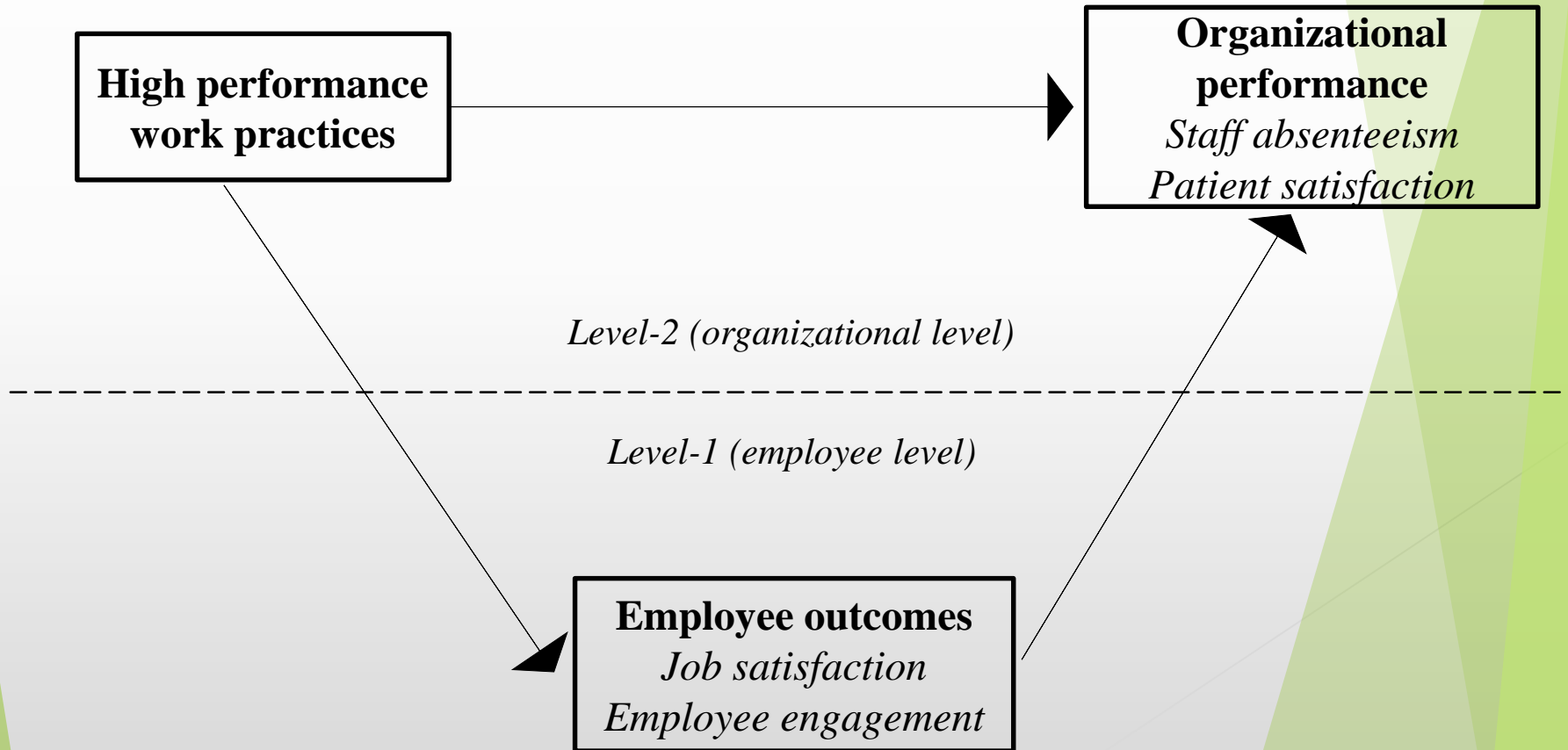
# Bathtub model

- ▶ 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

# Bathtub model

- ▶ 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



# Bathtub model

## ► 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

# Sample

- ▶ **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.

# Discussion

- ▶ 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.

# Discussion

- ▶ 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...*