Multilevel relationships between job resources and work engagement using the job demands-resources framework

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I. Multilevel theory in occupational health psychology:

• Employees are **nested within** organizations, units, cells, teams; therefore they share a common environment / social context (cf. Bliese & Jex, 2002)
• **shared perception** among group members reflecting **shared social reality** (Thomas, Bliese, & Jex, 2005)

II. Job Demands-Resources (JD-R) framework:

Empirical research clearly indicates that disposing of individual job resources is advantageous to employees’ health and well-being (e.g. Bakker & Demerouti, 2007).

**BUT** what is still unclear:

**Is it also beneficial to be part of an organizational group where others are experiencing high job resources?**
Multilevel issues

Aggregating individual-level variables to higher-level constructs (e.g. group means of colleague support) might result in either:

- Isomorphic constructs: *identical* meaning of individual- and group-level variables

- Heteromorphic constructs: *different* meaning of individual- and group-level variables → **emergent effect**

→ Same construct has different functions on different levels of analysis (cf. Demerouti & Bakker, 2011)
Research model

Group-level Job Resources

Work Engagement

Level 1

Individual Job Resources

Level 2
Hypothesis 1:

Group-level job resources emerge as an aggregated variable from individual perceptions of job resources.
Hypothesis 2:

Group-level job resources have an effect on individual work engagement in either direction, over and above individual-level job resources.
Method

Data from a multilevel organizational intervention study conducted in CH

Sample:
• N = 1,219 employees (without supervisory function) of six medium and large Swiss organizations in diverse sectors
• nested in 103 organizational cells (employees per cell: $M = 11.5$; range 2 - 44)
• females (47.7%), age $M = 38$ ($SD = 11$), organizational tenure $M = 7.7$ ($SD = 8.7$), job tenure $M = 4.8$ ($SD = 6.2$), full-time employees (74%)

Data analyses:
• Multilevel random coefficient modelling: nlme package in open-source statistical environment R (Pinheiro et al., 2011; R Development Core Team, 2011)
• Aggregation statistics: ICC(1), ICC(2), $r_{WG(J)}$
Study variables

Job resources factor:

• **Manager behaviour**: interpersonal justice, employee-oriented supervisor behaviour, social support (supervisor), appreciation (supervisor)

• **Peer behaviour**: social support (colleagues), appreciation (colleagues)

• **Task-related resources**: job control, task identity

Work engagement (absorption, dedication, vigor)

Controls:

• **Job demands**: Uncertainty at work, time pressure, work interruption, qualitative overload

• Age, gender, education, job tenure, organizational tenure
Results:  H1 – group-level job resources

Aggregation statistics:

• ICC(1) = 0.07, $F(102, 990) = 1.78$, $p < 0.001$
  → 7% of the variance in individual job resources explained by differences between groups

• ICC(2) = 0.44 (reliability of the group mean)

• mean $r_{WG(J)} = 0.97$ (range = 0.91 - 0.99)

Results provide justification for aggregating individual job resources to the group-level

H1: ✔
**Results: H2 - Multilevel analysis examining group-level job resources (dependent variable: individual work engagement)**

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</table>

Note: Controlled for gender, age, education, organizational and job tenure, cell size. Only significant control variables included. Gender is coded 0 = male, 1 = female. ***p < .001 **p < .01 *p < .05 (two-tailed).
Discussion

Working in organizational groups with high levels of peer support, appreciation and high task-related resources is negatively related with individual work engagement.

Possible mechanisms explaining emergent process:

- **Social comparison processes**, which result in lower work engagement when ‘everyone’ has a lot of support, appreciation, job control, task identity.

- **Cohesiveness and social support**, need for cooperation/communication; “Social support and cohesiveness may not always be positive“ (Westman et al., 2011, p. 561)
Thank you for your attention!

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References


