

Systematic review of the links between human resource management practices and performance

M Patterson,^{1*} J Rick,² S Wood,³ C Carroll,⁴
S Balain⁵ and A Booth⁴

¹Institute of Work Psychology, University of Sheffield, Sheffield, UK

²Health Services Research Group – Primary Care, University of
Manchester, Manchester, UK

³School of Management, University of Leicester, Leicester, UK

⁴School of Health and Related Research (SchARR), University of Sheffield,
Sheffield, UK

⁵Management School, University of Lancaster, Lancaster, UK

*Corresponding author



Executive summary

Health Technology Assessment 2010; Vol. 14: No. 51

DOI: 10.3310/hta14510

Health Technology Assessment
NIHR HTA programme
www.hta.ac.uk





Executive summary

Context for this review

The UK NHS is the largest employer in Europe, involving complex and diverse services and work roles. The NHS continues to undergo substantial organisational change, as indicated by increased emphasis on performance targets representing drivers at local, national and clinical level.

Human resource management (HRM) is being seen as a vital element in the successful realisation of these change programmes and is being given a greater prominence than it has traditionally. It is therefore timely to assess the evidence we have on what human resource (HR) initiatives are most effective.

HRM in the UK

Over the past two decades, growing research attention has been given to exploring the links between organisational performance and HRM systems and processes, and especially the much-touted modern, high-involvement management approach. This has generated a large body of literature, largely cross-sectional in nature, i.e. measures of performance and systems are taken at the same time, so it is not possible to determine cause and effect. Reviews of this literature have given rise to the perception that the significance of HRM in determining organisational performance has largely been proven. Increasingly, however, a number of researchers are questioning whether the claims for evidence of a universal link between HRM and performance are overstated – while they endorse the importance of this line of research, they particularly draw attention to methodological limitations of the studies and the heterogeneity of the measures of HRM used across the studies.

This report presents the results from a wide-ranging series of systematic reviews of the evidence on HRM and performance. The searches included literature published up to June 2006 and covered the general HRM literature, not simply the health literature. It is distinctive in a number of ways:

- The quality criteria that were used to select papers for inclusion incorporated a

longitudinal study design filter, as this may provide evidence about the causal direction of relationships between HRM and relevant outcomes in a way that cross-sectional data cannot.

- The review considers single HRM practices and is not confined to collectivities of them, or ‘bundles’ as they are known in the high-performance management literature.
- The review covers issues around the implementation of HRM in practice and the measurement of relevant intermediate outcomes in the HRM performance chain.
- Within the health-specific literature, the review is focused, in particular, on the impact of HRM on patient outcomes.

How widespread is the use of HRM practices in the UK?

The first part of this review is concerned with evidence on the use of HRM in the UK and the fidelity or accuracy with which HRM practices are implemented. Limited evidence on the use of HRM is available. A review of national survey data identified some evidence on the use of specific HRM practices in 10 broad practice categories, although very little was disaggregated to the health sector level. The most commonly cited practices were family-friendly and work organisation ones, which were used in 70% of workplaces. The data do not always indicate the precise extent of the use practices within organisations, i.e. whether practices apply to all, or some, of the workforce.

Little is known, therefore, about what HRM practices are used within the NHS at the present time. A more detailed picture could be achieved through further analysis of the Workplace Employment Relations Survey (WERS) or through bespoke future surveys.

How well implemented are HRM practices?

A further important consideration in assessing the impact of HRM practices is *implementation fidelity*, i.e. the accuracy with which policies are implemented by organisations in practice. Research from social policy, where the concept

of implementation fidelity is more established, indicates that the fidelity with which a practice is implemented is related to its efficacy. Within HRM, this review found only a few studies that had collected data on the implementation of a policy and this appeared to be an area that was largely ignored in the HRM literature. The majority of research focuses on policy or intended HRM practices rather than actual or implemented practices. This finding has considerable implications for interpretation of the research and understanding why a study might find a weak, or no, relationship between a practice and its intended outcome. This review proposes a framework for understanding and explaining processes at work in evaluating and achieving implementation fidelity, within the context of HRM and policy. Appendices 3 and 4 present guidance and a checklist for evaluating fidelity, based on these findings.

For all new HRM practices, the process of implementation should be clearly stated and adherence to the implementation needs to be evaluated as well as any intended outcomes.

Impact of HRM

The remit for the second part of this review was to consider the evidence for the impact of HRM practices on intermediate outcomes (the intended outcomes of HRM) that may ultimately impact on final outcomes such as organisational performance or patient care. In other words, the focus was on HRM interventions and employee mental, emotional and attitudinal states (and their measurement), thought to influence employee behaviours that are salient to effective organisational performance.

HRM practices and outcomes considered in the review

Broad categories of HRM interventions and intermediate outcomes were generated through the literature. This list was refined over the course of the study to produce 10 HRM categories and 12 intermediate outcome categories. Seven patient (final) outcomes were derived from the NHS Performance Indicators (Healthcare Commission 2005) and the NHS Improvement Plan (NHS 2005). No final outcomes were specified in the non-health-care literature (i.e. any longitudinal studies of HRM practices were considered for inclusion):

- HRM practices:
 - work design

- staffing
- training and development
- compensation and rewards
- communication
- family friendly
- single status/status harmonisation
- employee representation and participation
- appraisal/performance management
- bundles of practices
- intermediate outcomes:
 - motivation
 - job satisfaction
 - organisational commitment
 - occupational commitment
 - engagement
 - burnout
 - job involvement
 - turnover intentions
 - psychological contract
 - organisational justice
 - organisational support
 - organisational climate
- final outcomes:
 - patient safety
 - patient-centred care
 - patient waiting times
 - patient satisfaction
 - health-related quality of life
 - patient mortality
 - patient stay
 - re-admissions.

Overall findings on impact

HRM in health and non-health settings

There is an imbalance in the practices covered, so in both health and non-health areas certain domains of HRM are covered disproportionately more than in others. This highlights areas of HRM that have yet to be researched, including in an NHS context. Additionally, very few replication studies were found, so many of the findings in this report are based on only a small number of studies that precludes the development of generalisable conclusions.

Some HRM practices have been the subject of research in both the health and the non-health sectors. However, the specific practices that have been studied within each HRM category do differ, so there is little evidence to show whether similar HRM practices have the same effects in health and non-health settings. An implication of this finding is that care needs to be taken when adopting HRM practices from outwith the NHS – it cannot be assumed that the same practices are appropriate in both settings or that the same effects will accrue.

No single HRM practices or bundle of practices were found to be a panacea. However, our review does enable us to identify some potentially effective practices for both health and non-health areas.

- In the area of work design, practices that enhance employee autonomy and control are influential in relation to a number of outcomes and there is consistent evidence for the positive impact of increased job control (in various forms) on employee outcomes such as job satisfaction, absence and health.
- In the parallel field of employee participation, the small number of studies reviewed here supports the widely advocated principle of involving employees in the design and implementation of changes (e.g. job redesign) that affect their work. Specifically in the health literature, employee involvement through quality improvement teams was found to be effective in terms of improved patient outcomes.
- In the area of training, findings are consistently positive for the impact of training on the specific intended outcomes of the training initiatives.
- Support for the impact of performance management practices is found and particularly the importance of feedback on performance outcomes and the use of participative goal setting.

Such evidence points to the HRM methods that can be used to support and enhance change processes within the NHS. The findings in the work organisation area are particularly promising in the light of considerable changes in methods of service delivery that are ongoing in the NHS. Opportunities for job and service redesign within the NHS offer great scope for future exploration. The use of training to support the implementation of change is also highlighted in the good practice around implementation fidelity identified by this review, and therefore is important evidence on the process of HRM policy development and practice.

Relationships between intermediate outcomes

The relationships amongst intermediate outcomes were also examined. Moderate to high correlations were found between all of the intermediate outcomes for which data were available. The associations, although strong, do not suggest construct redundancy and it is reasonable to

conclude that each of the intermediate outcomes identified in this review may contribute uniquely to efforts to understand and manage employee behaviours.

The review also explored the correlations between intermediate outcomes and productivity-enhancing behaviours (e.g. individual job performance, employee turnover). The relationships between most intermediate outcomes and behaviours were significant and of small to moderate strength. The premise here is that intermediate outcomes are determinants of salient employee behaviours, which, in turn, enhance organisational performance. These data do not prove a causal link but do demonstrate associations.

Impact of intermediate outcomes on final outcomes

This review was unable to identify any longitudinal evidence to assess whether intermediate outcomes, such as job satisfaction or burnout, impact on patient-care outcomes. In the non-health field, a small number of longitudinal studies were identified that examined the impact of intermediate outcomes (mostly average employee job satisfaction) on organisational performance. While the studies in this review show associations, the evidence on the casual direction of this relationship is mixed. This relationship is a crucial link for the premise that HRM influences final outcomes partially through its impact on employee outcomes such as job satisfaction, and we clearly need more substantial data sets for surer interpretation.

Measuring intermediate outcomes in the NHS

The report presents information on the reliability of measures in each of the intermediate outcome areas identified for review. Where possible, the specific measures used in the included studies were reported on. Where an intermediate outcome area was not covered by the studies included in this review, the subject experts on the research team identified an appropriate measure for inclusion. Details of the measures, their items and reliabilities are presented in Chapter 10.

These measures represent a basic toolkit that could be used or adapted for future NHS-based research of the HRM performance link.

Future research foci

Many of the problems of the studies taken collectively arise from the small-scale funding that characterises social science. Developing a 'big science' project that permits repeat surveys, a broad coverage of practices, independent audits of practices, and reliable and valid performance measures would be desirable. Smaller-scale projects would still be useful, for example, to delve into the fidelity of implementation issue, but they would have more value if set in the context of bigger studies. Existing data sets, for example, the WERS and Healthcare Commission (HCC) staff survey, could be usefully revised to take account of some of the learning from this and other overviews. More attention needs to be given to the intermediate variables between HR practices and organisational

performance. Thus, multilevel studies that embrace the individual, team and organisational level (and, in the case of the NHS, Trust level) are needed. Finally, studies of interventions aimed at improving HR outcomes and performance should be encouraged, together with a mechanism for bringing together researchers and organisations before the interventions take place. This would allow pre- and post-intervention measurement of relevant HRM practices and outcomes.

Publication

Patterson M, Rick J, Wood S, Carroll C, Balain S, Booth A. Systematic review of the links between human resource management practices and performance. *Health Technol Assess* 2010;**14**(51).

NIHR Health Technology Assessment programme

The Health Technology Assessment (HTA) programme, part of the National Institute for Health Research (NIHR), was set up in 1993. It produces high-quality research information on the effectiveness, costs and broader impact of health technologies for those who use, manage and provide care in the NHS. 'Health technologies' are broadly defined as all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care.

The research findings from the HTA programme directly influence decision-making bodies such as the National Institute for Health and Clinical Excellence (NICE) and the National Screening Committee (NSC). HTA findings also help to improve the quality of clinical practice in the NHS indirectly in that they form a key component of the 'National Knowledge Service'.

The HTA programme is needed in that it fills gaps in the evidence needed by the NHS. There are three routes to the start of projects.

First is the commissioned route. Suggestions for research are actively sought from people working in the NHS, from the public and consumer groups and from professional bodies such as royal colleges and NHS trusts. These suggestions are carefully prioritised by panels of independent experts (including NHS service users). The HTA programme then commissions the research by competitive tender.

Second, the HTA programme provides grants for clinical trials for researchers who identify research questions. These are assessed for importance to patients and the NHS, and scientific rigour.

Third, through its Technology Assessment Report (TAR) call-off contract, the HTA programme commissions bespoke reports, principally for NICE, but also for other policy-makers. TARs bring together evidence on the value of specific technologies.

Some HTA research projects, including TARs, may take only months, others need several years. They can cost from as little as £40,000 to over £1 million, and may involve synthesising existing evidence, undertaking a trial, or other research collecting new data to answer a research problem.

The final reports from HTA projects are peer reviewed by a number of independent expert referees before publication in the widely read journal series *Health Technology Assessment*.

Criteria for inclusion in the HTA journal series

Reports are published in the HTA journal series if (1) they have resulted from work for the HTA programme, and (2) they are of a sufficiently high scientific quality as assessed by the referees and editors.

Reviews in *Health Technology Assessment* are termed 'systematic' when the account of the search, appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

The research reported in this issue of the journal was commissioned by the National Coordinating Centre for Research Methodology (NCCRM), and was formally transferred to the HTA programme in April 2007 under the newly established NIHR Methodology Panel. The HTA programme project number is 06/91/06. The contractual start date was in March 2005. The draft report began editorial review in April 2009 and was accepted for publication in June 2009. The commissioning brief was devised by the NCCRM who specified the research question and study design. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' report and would like to thank the referees for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

The views expressed in this publication are those of the authors and not necessarily those of the HTA programme or the Department of Health.

Editor-in-Chief: Professor Tom Walley CBE

Series Editors: Dr Martin Ashton-Key, Professor Aileen Clarke, Professor Chris Hyde,
Dr Tom Marshall, Dr John Powell, Dr Rob Riemsma and Professor Ken Stein

Editorial Contact: edit@southampton.ac.uk

ISSN 1366-5278

© 2010 Queen's Printer and Controller of HMSO

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (<http://www.publicationethics.org/>). This journal may be freely reproduced for the purposes of private research and study and may be included in professional journals provided that suitable acknowledgement is made and the reproduction is not associated with any form of advertising.

Applications for commercial reproduction should be addressed to: NETSCC, Health Technology Assessment, Alpha House, University of Southampton Science Park, Southampton SO16 7NS, UK.

Published by Prepress Projects Ltd, Perth, Scotland (www.prepress-projects.co.uk), on behalf of NETSCC, HTA.

Printed on acid-free paper in the UK by Henry Ling Ltd, The Dorset Press, Dorchester.