STRONG FOUNDATIONS: EVIDENCE-BASED HR

CORPORATE RESEARCH FORUM

crf

Bird&Bird

Sponsored by:

Mercer

ORACLE



STRONG FOUNDATIONS: EVIDENCE-BASED HR

Prof. Rob Briner, Nigel Guenole, Wendy Hirsh, Gillian Pillans



© CRF. All rights reserved.

No part of this publication may be reproduced, stored in retrieval system or transmitted in any form or by any means without prior permission in writing from the publisher.



BIRD & BIRD COMMENTARY

Bird&Bird

As this timely report shows, evidence-based practice is increasingly important for HR. In today's dynamic business landscape, it can help in:

- Reducing bias and discrimination in decision-making, fostering a culture of fairness and respect.
- Promoting respect for HR and other decision-makers.
- Ensuring that strategies around recruitment, performance, promotion and compensation are driven by merit, and are aligned with an organisation's values and objectives.
- Identifying gaps in skills and development, with a view to implementing more targeted policies and training.
- Driving compliance with fast-changing rules and regulations.

Many of these areas are covered in the Bird & Bird International HR Services team's new initiative <u>Managing compliance: The People Risk Agenda</u>. So far, this has included <u>a guide</u> to criminal liability arising from workplace obligations, a webinar on managing sexual <u>harassment risks</u> and <u>a guide to compliance triggers linked to workforce numbers</u> – all taking a global approach.

At our heart, employment lawyers are in the business of reducing and responding to legal risks in organisations, and the associated costs and liabilities. To deliver the practical and targeted advice that our clients demand, we need to call on multiple sources of evidence – from constantly evolving employment laws and regulations, to court and tribunal decisions, to legal commentary, to our past experiences in advising other companies on similar issues.

Indeed, while HR is deeply embedded in a single organisation, we can leverage evidence from multiple businesses across sectors, from tech start-ups to multinationals, of course respecting the important duties of confidentiality that we owe to our clients. We also observe causal connections between decisions and results, because we are often involved in legal cases that we have advised on from the outset.

In a sense, this is nothing new. However, HR are increasingly proactively asking us for insights around what other companies are doing, to inform their own approach. This shows that HR are increasingly viewed as critical decision-makers, who are expected to justify their strategy, as well as defending their decisions when legal disputes arise – as they do in all businesses.

Our insights can only assist up to a point. The evidence we use is generally fact-specific, and qualitative rather than quantitative. We don't have visibility of the contextual factors that can be instrumental in determining whether a course of action will be successful, for example what stakeholders in the organisation are saying or thinking. Therefore it is crucial for us to work as partners with our clients, sharing the evidence that both sides can provide and working together to decide what actions to take. We also recommend taking time for a 'wash-up' at the end of a case or project to evaluate what went well and areas that could be improved, with a view to using the project as evidence for the future.

By working together, we believe the benefits of taking an evidence-based approach can help drive a culture of high performance, promoting fairness and transparency, and strengthening legal compliance.

Rob Briggs, Senior Associate, Bird & Bird LLP



MERCER COMMENTARY

Mercer

Over a decade after CRF published its first report on Evidence-Based HR, what has changed in terms of HR's use of workforce data, metrics and analytics? The size of the HR technology market, for one thing. According to <u>estimates</u>, the size of the global HR technology market was around \$32 billion in 2021, and it is forecast to jump to \$76.5 billion by 2031. It's clear that organisations have been investing heavily in HR systems to gather and analyse people data, to increase efficiencies and to enable better employee experience and collaboration. But has people data been embedded into their central Management Information Systems to sit comfortably alongside financial, operating and customer data?

This new CRF report argues that we have indeed made significant advances in using HR evidence-based practices to support business decisions. With HR now a strategic advisor and people issues top of mind for the C-Suite, there is an even brighter spotlight on reliable people data, insights and storytelling. At Mercer, we believe in the power of evidence gathered through workforce sciences, and the necessity of people insights to drive critical workforce and organisational transformation decisions. And yet there is much more to do. Of course, our data is a strange mix of fact and fancy. It comprehends salary and sentiment; when people joined and why they signed on; skills gaps and employees' interest areas; turnover rates and workers' attitude data. In this sense though, the closest analogy lies in parallels with the customer experience, as HR gets better at utilising additional people data from other functional areas and keeps learning from their counterparts in marketing and sales. Enhancing the employee experience is indeed the top priority of HR today, as per Mercer's Global Talent Trends Study.

To come full circle: where will we be in 10 years' time? Will Generative Artificial Intelligence (GAI) have supplanted the techniques and themes identified in this report? Will it have fundamentally disrupted jobs, addressed bias, enabled smarter decision-making and redefined our organisational lives? Will GAI help HR make better use of data and drive better insights? Will we use critical thinking more creatively after probing GAI's conclusions? Possibly. At Mercer, we have already begun to examine the <u>implications of Generative AI for the HR</u> function, for the business, and for the future of work at large. It is imperative for HR to factor this into their strategy as soon as they can.

What is certain is that evidence-based practices will continue to mature and evolve significantly in HR and across functions. The challenge will be wading through vast amounts of interdisciplinary data to create insight and meaning. The focus will be on 'reflective practice' and the ethical use of data.

This timely report provides a great springboard for deeper discussions on how to adopt a scientific approach to any HR and business intervention. And, most importantly, how to balance hard and soft evidence to marry empathy and economics in everything we do. It also prompts us to embrace forward-looking analytics, to anticipate and plan for the unknown.

Nick Starritt, Employee Experience Region Lead for UK/Europe, Mercer



ORACLE COMMENTARY

ORACLE

People Analytics and the Journey Towards Evidence-Based HR

Over the past decade, the role of HR within businesses has undergone significant changes. The increased demand for HR support from business stakeholders and the effects of the COVID-19 pandemic have elevated the prominence of HR as an internal function.

Over the past decade, evidence-based HR (EBHR) has also developed in various ways. And whilst there is no doubt that it could be developed further, perhaps the most important development is that the interest in and use of people analytics – one form of evidence – has increased during this period.

People analytics has undergone its own evolution, driven by advancements in technology and the availability of data, as well as developments in skills and privacy awareness.

The use of modern, cloud-based HR technology now makes it possible to analyse both unstructured and structured data with relative ease. Methods for handling large data sets are now automated through the cloud, meaning that thousands of variables and millions of cases can be manipulated by HR. Such analysis cannot be run easily on legacy 'on-premise' systems. Additionally, the way in which data is presented has evolved, with intuitive and attractive dashboards becoming commonplace.

The latest developments in technology and data capture therefore offer the potential to be a major game-changer for HR in delivering an even better evidence-based approach.

So as HR professionals, how do we best embrace this? This is far from straightforward to do and presents us with challenges, including:

- Recruiting and developing HR professionals with the necessary diagnosis, data and AI skills
- Moving from delivering multiple competing HR interventions to evaluating their effect and understanding their impact on target outcomes against business strategy
- Figuring out how we can more easily and effectively improve predictions and strategic planning for business leaders when comparing data trends across time periods.

While much progress has been made, it is clear that there is much to do to help people analytics reach its potential. To help solve these challenges, Oracle HCM Cloud has at its core the philosophy of a unified approach for all HR and talent data. With Oracle HCM Cloud and <u>Oracle Analytics</u>, combined recruitment, reward, diversity, performance, skills, and talent data enables HR to collaborate around a single trusted view of employees. This provides data to support HR decision-making wherever there is an outcome to improve, some idea of the causes of that outcome, and data to analyse. For example, predicting employee turnover or employee engagement.

Powered by artificial intelligence, Oracle HCM Cloud provides HR professionals with a holistic, up-to-date view of employees' skills to help attract, develop, and grow the right talent.

Oracle HCM Cloud customers are leveraging this data and the machine learning within the technology to make informed decisions and to create evidence-based experiences for employees to benefit them and their business at large. Click on our <u>e-book</u> to find out more.

Sarah Horne, Executive Director, HR Transformation, Oracle EMEA Daniel Balshaw, Director, HR Transformation, Oracle UK&I



STRONG FOUNDATIONS: EVIDENCE-BASED HR

Evidence-based HR (EBHR) is a process which delivers better informed and hence more accurate answers to two fundamental questions. First, which are the most important problems (or opportunities) facing the organisation which are relevant to HR? Second, which solutions (or interventions) are most likely to help?

The fundamental idea underpinning EBHR is that we are more likely to identify important problems or opportunities for improvement, or to develop effective solutions, if we follow the principles of evidence and incorporate critical thinking in our decision-making. The discipline of EBHR can help HR avoid fads and fashions and most importantly help focus on supporting the organisation to deliver its objectives. EBHR can help HR shift from justifying its existence to using evidence to identify appropriate courses of action in response to business needs. It provides strong foundations upon which HR can build its business impact and effectiveness.

Being evidence-driven means adopting three principles: incorporating multiple sources and types of evidence and information into decision-making, adopting a structured and explicit process to gather data and use evidence, and focusing on the most trustworthy and relevant evidence.

The EBHR process involves six steps:

Designing and asking answerable questions to help identify the problem/ opportunity or solution/intervention

Collecting evidence of different types from multiple sources which will help answer the question

Rating the trustworthiness and relevance of the evidence

Aggregating the most trustworthy and relevant evidence

Applying this evidence to answer the questions which help identify the problem/opportunity or solution/intervention

Assessing the process and outcome.

KEY TAKEAWAYS A common misunderstanding of EBHR is that it is just about using scientific data. Evidence-based practice is actually about using multiple sources of evidence. We identify four sources of evidence that are particularly relevant to HR: stakeholders' views and perspectives; the professional expertise of practitioners; evidence from inside the organisation; and scientific evidence.

One of the biggest developments in HR over the last decade has been the rise of HR analytics. Technology, analytical methods, awareness of privacy and ethical issues and the availability of data are progressing rapidly. Analytics can be a useful source of evidence and there is significant potential in using analytics to improve HR decision-making. However, analytics is not contributing to EBHR as much as we might expect. To address this challenge, it's important to start in the right place: focus on the business strategy to identify where analytics is likely to add value to the most important business outcomes.

EBHR needs to take account of the politics and power dynamics of organisations and the influence of key stakeholders. Getting early input from senior management and internal customers is fundamental. Their continuing involvement in developing solutions makes it much more likely that senior managers are bought in to the proposed solutions, and also that they have real desire to make change happen and are committed to taking the necessary steps.

We consider how far EBHR has come since CRF's last research in 2011. We found that HR professionals have become more aware of the concept of EBHR and aspire to be more evidence-based. The expectations of HR's stakeholders have evolved and enablers such as technology and data have progressed. We conclude there is still some way to go for HR to achieve the potential benefits of EBHR in terms of impact on business outcomes.

From our research we identify nine key themes that summarise what we see as the current state of play:



Multiple sources of evidence are used to some extent, but not as much as they could be.

Understanding and application of EBHR as a defined process and approach is limited. HR practitioners often lack confidence in applying EBHR principles.

Some organisations are doing something very close to EBHR.

Evidence and data should be used to help HR support the business in achieving its goals, not to justify HR's existence. The key is to evaluate how HR initiatives impact business outcomes in a meaningful way.

EBHR is not complicated but it is difficult. There are many barriers such as the commercial and analytical capacity of HR professionals and availability of data. The capability of HR – both competence and confidence – needs to be developed.

The quality of data and evidence could be better. We need to focus on using the best available data to avoid the 'garbage-in, garbage-out' problem.

Evidence from external benchmarking or what others do needs to be treated with caution. Just because something works elsewhere doesn't mean it will work in your organisation and popular activities may simply be fads.

EBHR is political and stakeholders need to be included in the dialogue about evidence.

We set out the principal barriers to EBHR. These include the difficulty of quantifying business benefits and establishing links between cause and effect of HR actions, access to relevant and robust evidence, navigating the power dynamics of organisations, and the skills of the HR profession.

• We identify some quick wins that HR could easily adopt to become more evidencebased in our work. These include better sense-checking of our arguments and evidence, using existing data better and more often, benchmarking judiciously and with caution, focusing on implementation not just design, and evaluating to improve practice. We provide some practical checklists to assist professionals in these areas.

▶ Is EBHR worth it? It's important to remember that EBHR is about making betterinformed, not perfect, decisions. By following the EBHR process, we will be better positioned to identify the most relevant business issues, to develop more effective solutions and make a difference to business outcomes. In the next stage of our research, to be published in 2024, we will develop a range of practical resources and detailed guidance that HR professionals can use to deepen their practice of EBHR.



1.0 SETTING THE SCENE FOR EBHR TODAY

CO-AUTHOR



ROB BRINER is Professor of Organisational Psychology at the School of Business and Management, Queen Mary University of London. He previously worked at Birkbeck College, University of London. His publishing and research have focused on several topics including wellbeing, emotions, stress, motivation and everyday work behaviour.

1.1 BACKGROUND TO THE REPORT

In 2011, CRF published *Evidence-based HR: From Fads to Facts?* In that report, we examined what was then the relatively new idea of EBHR to better understand its meaning and relevance to the HR profession. We discussed the idea with a range of senior HR professionals and academics who first advocated its adoption.

WHAT DID THAT REPORT FIND?

First, EBHR as a concept had emerged fairly recently from a number of business school academics in the US and Europe, though evidence-based practice in general has a much longer history across a range of fields. It was clear that many HR professionals we spoke to were relatively unaware of the term or what it meant. However, the most effective HR functions had always routinely used evidence to guide their decision-making, although they might not call it 'evidence-based HR'.

Second, the early emphasis in EBHR was on encouraging HR practitioners to make better use of published scientific evidence relevant to HR. This reflects the fact that its earliest proponents were academics who are the producers of such scientific evidence. This focus was understandable but also potentially misleading as a key strength of evidence-based practice lies in its use of multiple sources and types of evidence. It's not just about 'the science'. Third, making better use of evidence and critical thinking to make better-informed decisions not only helps make HR less susceptible to HR fads and 'best practice', but crucially helps to make HR more effective and able to focus on helping the organisation achieve its objectives. It also helps HR shift from attempting to use evidence to prove its value or justify its existence to using data to identify an appropriate course of action to address a business need.

Fourth, the report concluded that it was difficult to establish with much certainty whether or not EBHR would flourish and become embedded within HR practice:

"So will EBHR take off and make a real difference? The jury is still out. One risk is that it will look like academics telling practitioners that they should spend more time reading journal articles. Another is that few organisations will invest enough in their data systems or analytical capability to support practitioners in understanding how people management really affects business."

2011 CRF REPORT EVIDENCE-BASED HR: FROM FADS TO FACTS?

There is no doubt that the HR function has changed significantly over the past decade. Business stakeholders have become more demanding of HR and HR has become more prominent as an internal function, a trend accelerated by the COVID-19 pandemic. Technology and the proliferation of HR analytics have played a particularly prominent role in reshaping the function.

Over the past decade EBHR has also developed in various ways, though there is no doubt that it could be developed further. CRF have therefore decided to revisit this topic by producing two new reports. This report is the first and provides a stock take of where we are now by examining what has changed since 2011, seeking the current views and perspectives of senior HR professionals through a survey and interviews, exploring the role of people analytics within EBHR and providing some initial suggestions for how we can strengthen our EBHR practice.

The second report will be published in 2024 and will consider how HR professionals and HR functions can become more evidence-based by providing a range of practical resources and detailed guidance, including a model, methodology and key principles for practitioners to use.



1.2 THE ORIGIN AND MEANING OF EVIDENCE-BASED PRACTICE

All practitioners in every field always use evidence of some sort and to some extent when making decisions about what to do. However, we do not necessarily use evidence particularly well, limiting our effectiveness as practitioners.

For example, we all have various biases which are likely to affect the evidence we choose to pay attention to and the evidence we would rather ignore. We may decide to implement an intervention because it's familiar to us, because lots of others are doing it or even simply because we like it, rather than because we are reasonably sure we understand the problem and the preferred solution.

Evidence-based practice first emerged in medicine just over 30 years ago as a practical approach to helping medical professionals make better-informed decisions about both the diagnosis and treatment of their patients. Medical practitioners have of course always used evidence but there was growing concern that it was often less than optimal, which in turn was harming patients.

Since then, the evidence-based practice approach has been adopted to varying degrees by other professionals across a number of fields including policy-making, policing, architecture and management, with the same goal of helping practitioners become more effective through making better-informed decisions.

EXAMPLES OF OTHER FIELDS USING EVIDENCE-BASED PRACTICE TO HELP PRACTITIONERS MAKE BETTER-INFORMED DECISIONS

- Architecture
- Conservation
- Design
- Economics
- Education
- Facility management
- Finance
- Forecasting
- Healthcare management
- International development
- Management
- Medicine
- Philanthropy
- Policing
- Policy-making
- Social work
- Software engineering
- Urban planning

Across these diverse fields, there is a high degree of consensus about what evidencebased practice means and how it should be done. Though definitions across fields vary slightly, the underlying principles of evidence-based practice are identical.

The fundamental idea is that we are more likely to identify important problems (or opportunities) and effective solutions (or interventions) if we follow these three principles and incorporate critical thinking into our decision-making process:

1 PRINCIPLE

Incorporate multiple sources and types of evidence and information

2 PRINCIPLE

Adopt a structured and explicit process of gathering and using evidence

3 PRINCIPLE

Focus on the most trustworthy and relevant evidence

Incorporating multiple sources and types of evidence (*Principle 1*) helps in two ways. First, it facilitates triangulation. By gathering data of different types from multiple angles and sources we can cross-check and build a more accurate evidence picture. Second, it enables us to contextualise and make sense of a particular piece of evidence. For example, external benchmarking evidence about a 'best practice' may be judged to be irrelevant or unhelpful when evidence from the context or setting is examined and taken into account. Making good use of evidence requires a structured and explicit process (*Principle 2*). The urge to fix problems before they are clearly understood is strong. One element of this structure is to ensure that we first use multiple sources and types of data to identify potential problems (or opportunities) that are the most important to key stakeholders. Only when such problems are reasonably well-understood do we then work on identifying the most likely solutions (or interventions) by again considering multiple sources and types of data.

The second element of the structure involves identifying good questions and then answering them as best we can by systematically collecting and aggregating evidence of different types from multiple sources. Determining which are the right questions before embarking on the search for answers enables us to make better-informed decisions more effectively.

Because the quality and relevance of evidence can vary enormously, it's vital to pay most attention to the most trustworthy and relevant evidence (*Principle 3*). Using poorer quality evidence that is not so relevant to our context will not help us make better-informed decisions, as such evidence is more likely to be unreliable and inappropriate. Focusing on the most trustworthy and relevant evidence is also more efficient as we can make sure we do not waste resources collating low value evidence. Rather than using *all* the available evidence, we use only the best *available* evidence.

These three foundational principles reflect what practitioners (and people in everyday life) tend to do to some extent when making decisions – particularly important decisions. In this sense, evidence-based practice is nothing new or different. Rather, it provides a guiding framework which pinpoints key elements of what we already do to make better-informed decisions.

The introduction of evidence-based practice in various fields over the last few decades has stimulated some important questions about what being evidence-based really means in practice.



COMMON PRACTITIONER QUESTIONS

ABOUT THE MEANING OF EVIDENCE-BASED PRACTICE

We always use evidence and data - so aren't we doing it already?

It's true that we always use evidence, but we don't always follow the principles of evidence-based practice and are therefore not using evidence as effectively as we could.

Is it just about quantitative data?

No. Evidence-based practice involves the use of any type of evidence, data or information so long as it is trustworthy, relevant to the context and helps answer the question being asked.

Is it mostly about scientific findings?

Scientific findings are only one important source of evidence. Evidence-based practice in any field also considers at least three other sources of evidence: stakeholders' views, perspectives and judgements; professional expertise of practitioners; and data and evidence from the context or setting.

Does this approach take ethical issues into account?

Yes. By considering stakeholder's views and reflecting on professional expertise, any ethical issues will become apparent.

Doesn't it inhibit innovation and experimentation?

Not at all. Innovation and experimentation are themselves evidencebased. Innovations and experiments are unlikely to be practically useful unless they are based on a good understanding of the evidence for the problem or issue at hand and a good understanding of the evidence for why the innovation or the experiment is likely to be effective.

How does the idea of 'best practice' fit in?

By following the principles of evidence-based practice it becomes clear why we should be extremely cautious about ideas such as 'best practice', identifying 'what works?', or external benchmarking. Once we take account of the reliability of the data supporting these ideas and incorporate multiple sources of evidence, it becomes clear that we need to be considering more carefully what is likely to work in our particular context for the specific issues we are dealing with, rather than simply copy what others are doing.

Do we need to apply an evidence-based practice approach to every decision?

Not really. It makes more sense to invest time and resources on making more-informed decisions when the consequences of those decisions may have important consequences.

Most of these questions can be answered by reflecting on the principles of evidencebased practice discussed earlier.

Next, we explore the development and relevance of evidence-based practice in HR.



2.0 **THE EVOLUTION OF EVIDENCE-BASED PRACTICE IN HR:** WHERE HAVE WE COME FROM?



"Whatever data you have access to, taking an evidencebased approach means thinking more critically about defining the issue you're trying to solve and only then identifying the information that will best help you understand the problem at hand – data is only one part of this."

SARAH HORNE, EXECUTIVE DIRECTOR, HR TRANSFORMATION, ORACLE EMEA

Here, we consider elements of the history of EBHR, a definition of EBHR, a description of the process and a more detailed example. As discussed, the basic principles, definition and the process of evidence-based practice are very similar across a range of diverse fields. However, EBHR also tends to function slightly differently in different fields depending on a number of factors including the context and history of particular professions and that profession's relationship with its key stakeholders.

2.1 A BRIEF HISTORY OF EBHR

As mentioned in the introduction, there have been some significant events in EBHR after the publication of our first report in 2011. This timeline locates that report in a historical context by also showing some of the events that occurred before its publication.

Since 2011, there have been two main types of change. The first is increasing interest from HR professional bodies. In the US, SHRM published a short opinion piece and a special issue of its quarterly journal *People + Strategy* on EBHR. CIPD in the UK published a positioning paper stating its support for EBHR, changed its profession map to include evidence-based practice and started providing various resources for its members. The second type of change we can observe is the growing number of articles, books and other resources designed to support HR professionals.

Perhaps the most important change is whether or not HR professionals are actually practising in a more evidence-based way. This is difficult to assess as there are no reliable data on which to make such a judgement. However, it is clear that the interest in and use of people analytics – one form of evidence has increased during this period. We also attempt to address this question in the next chapter of this report when we consider the survey results and insights from our interviews.

A TIMELINE OF EVIDENCE-BASED HR



Evidence-based Practice: A Critical Appraisal – Evidence-Based Human Resource Management Chapter in book **ROB BRINER**

2000



Why HR Practices are

Not Evidence-based

Article in Academy of

Management Journal

EDWARD E LAWLER III

ост 2007

Becoming an Evidence-based HR Practitioner Article in Human Resource Management Journal **DENISE ROUSSEAU** & ERIC BARENDS

2011



Evidence-based HR:

The Bridge Between

Your People and

Delivering Business

Strategy

2015 SPRING 2016



The Role of Scientific Findings in Evidence-Based HR Article in SHRM's People + Strategy **ROB BRINER & ERIC BARENDS**



Make Better Decisions with Evidence-Based HR Short article in SHRM's HR Magazine SHONNA WALTERS

NOV 2017



Evidence-Based Management: How to Use Evidence to Make Better Organizational Decisions Book **ERIC BARENDS & DENISE ROUSSEAU**

SEP 2018

EVIDENCE-BASED HUMAN RESOURC MANAGEMENT

Evidence-Based HRM at Birkbeck Launch of first ever Professional Doctorate BIRKBECK

JAN 2022

FEB. 2007

Is HRM Evidencebased and Does It Matter? Institute for Employment Studies **Opinion** Paper

ROB BRINER



Tried and Attested Article in CIPD's People Management

JANE PICKARD

Tried

attested

NOV. 2007

CRF Report WENDY HIRSH & **ROB BRINER**



Evidence-based HR:

From Fads to Facts?

AUG. 2011 JAN. 2015

Evidence-based HR: Under the Microscope Article in UK HR Magazine **KATIE JACOBS**



In Search of the Best Available Evidence **CIPD** Positioning Paper

DEC. 2016





Map Updated to Include 'Evidencebased' as One of the Three Core Values of the Profession **CIPD** Profession

2018

CIPD

III ALCOR CIPD α Ξ

WINTER. 2019

Embracing Evidence-Based Management – The Basics of Evidence-**Based Practice** Article in Special Issue of SHRM's People + Strategy

ROB BRINER



Building an Evidence-based People Profession CIPD relaunches and extends its online EBHR resources

APR. 2023

CIPD



13





2.2 A DEFINITION OF EBHR

We have already discussed the three main principles of evidence-based practice in general:

- **PRINCIPLE** Incorporate multiple sources and types of evidence and information
 - **PRINCIPLE** Adopt a structured and explicit process of gathering and using evidence
 - **PRINCIPLE** Focus on the most trustworthy and relevant evidence

But how can we define EBHR and how do these principles apply specifically to HR?

We define EBHR as a process which delivers better-informed and hence more accurate answers to two fundamental questions: first, which are the most important problems (or opportunities) facing the organisation which are relevant to HR activities? Second, which solutions (or interventions) are most likely to help? In other words, what's going on and what can we do about it? These questions are answered through a combination of using the best available evidence and critical thinking.

As in every field that applies evidence-based practice, we always start with gathering evidence to identify the most important problems. The effectiveness of any practitioner depends to a large extent on their ability to deploy their limited resources to tackle the most important issues.

In the case of medicine, for example, this would involve examining evidence from a number of sources including the patient's views, experiences and medical history, the practitioner's professional expertise, data from diagnostic tests and scientific evidence from medical research.

In the case of HR, this would also require first having a sound understanding of the organisation's goals in order to ascertain the importance and relevance of any problems. One long-standing criticism of HR is that it has not always focused as much as it should on the needs of the organisation and doesn't align its activities closely enough with business. EBHR can help HR functions to do this more effectively.

Once the problem (or opportunity) is well understood, we use exactly the same process to identify which actions are *most likely* to help. Focusing on the likelihood or probability that an action will help is a core feature of EBHR and for evidence-based practice more generally. This is because there are not typically single or simple answers to the complex issues HR faces. There are likely to be multiple possible solutions, each of which will have costs and benefits. One important use of the evidence we gather is to help us make judgements about the likely effectiveness of one solution relative to other possible solutions.

Another part of this definition is to make it clear that EBHR, again like evidence-based practice more generally, is not only about diagnosing and solving problems. In HR, it may be the case that there is not a problem as such but rather a very important opportunity for the business or organisation which could be exploited with the help of HR. A good example is the sudden opening up of new markets presenting an opportunity to grow the size or diversity of products. There is no immediate problem that needs to be fixed, but an opportunity for the organisation which HR could help realise.

Last, this definition emphasises the importance of using only the *best available* evidence and, for reasons discussed earlier, not all the available evidence. Using evidence, answering questions and making decisions also requires *critical thinking*. This is a feature of evidencebased practice that is not emphasised enough, partly because the name 'evidence-based' can imply it's just about the evidence. But gathering and using evidence requires critical thinking which includes elements of imagination and creativity.



2.3 The EBHR PROCESS

Put simply, the purpose of the EBHR process is to help us be as effective as possible when gathering evidence and data to help us make decisions about what is happening and what we can do about it. It's easy to become distracted, for our biases to kick in and to forget to properly explore the available evidence. Following a process can help deal with this. "Legal analyses and opinions are an important source of evidence alongside scientific findings and companyspecific data. Our work largely involves assessing risk, and we draw on a wide range of sources to address this, including anonymised data across multiple clients as well as legal decisions. Increasingly, employment lawyers are becoming a source of evidence for clients as well as using evidence in our day-to-day work."

ROB BRIGGS, SENIOR ASSOCIATE (EMPLOYMENT), BIRD & BIRD



1 DESIGN AND ASK ANSWERABLE QUESTIONS TO HELP IDENTIFY THE PROBLEM/OPPORTUNITY (OR SOLUTION/INTERVENTION)

The importance of asking good questions is sometimes underrated. Spending time designing good questions that are answerable in principle is a vital starting point, as is checking that the answers will be useful.

2 COLLECT EVIDENCE OF DIFFERENT TYPES FROM MULTIPLE SOURCES WHICH WILL HELP ANSWER THE QUESTION

At least four sources should be considered to check if they contain evidence that will help answer the question – stakeholders' views, perspectives and judgements; professional expertise of practitioners; data and evidence from the context or setting; and scientific findings.

(3) RATE THE TRUSTWORTHINESS AND RELEVANCE OF THE EVIDENCE

Both the quality and relevance of evidence can vary enormously. Explicitly making judgements about both of these features means we are able to avoid including evidence which is likely to be misleading and/or not applicable to our context.

(4) AGGREGATE THE MOST TRUSTWORTHY AND RELEVANT EVIDENCE

Rather than examining all the available evidence – much of which may be unreliable – we should use only the best available evidence.

5 APPLY THIS EVIDENCE TO ANSWER THE QUESTIONS WHICH HELP IDENTIFY THE PROBLEM/OPPORTUNITY (OR SOLUTION/INTERVENTION)

What is the evidence suggesting? What is the answer (or what are the answers) to your question? How clear or confident are you in the answer?

6) ASSESS THE PROCESS AND OUTCOME

Was there enough? Was it accessible and usable? How was the evidence used? What decisions were taken? How did these relate to the evidence obtained?



Answering and asking questions is central to EBHR. We therefore provide below some examples of the questions an HR team might ask to identify a presenting problem of 'high' employee turnover and, should one be found, the questions that could be asked to choose actions that are likely to help tackle this.

EXAMPLE QUESTIONS: GATHERING EVIDENCE TO HELP UNDERSTAND POSSIBLE HIGH EMPLOYEE TURNOVER

STAKEHOLDERS' VIEWS AND PERSPECTIVES

- What do senior managers think about the levels of turnover? Do they see it as a problem?
- Do line managers see any issues with turnover levels?
- Do employees report any problems with the levels of turnover?
- What do customers or clients think?

How trustworthy and relevant is this evidence?

PROFESSIONAL EXPERTISE OF PRACTITIONERS

- What professional experience do we have as a team about how turnover can be a problem?
- Do we have expertise in how to establish the costs of high turnover?
- Drawing on our experience, what do we believe to be the likely causes?
- What about external professional expertise?

How trustworthy and relevant is this evidence?

EVIDENCE FROM INSIDE THE ORGANISATION

- What exactly are the turnover levels?
- What types of turnover?
- Where and when is it happening?
- Trends over time?
- Does turnover relate to any other internal data? (e.g. employee or unit performance or quality data)
- Comparisons with similar organisations?

How trustworthy and relevant is this evidence?

SCIENTIFIC EVIDENCE

- What is known in the scientific literature about the potential problems with turnover?
- Are there scientific findings that show the points at which turnover levels can become harmful?
- What is the evidence about 'healthy' turnover levels?

How trustworthy and relevant is this evidence?

EXAMPLE QUESTIONS: GATHERING EVIDENCE TO HELP UNDERSTAND THE SOLUTION TO HIGH EMPLOYEE TURNOVER

(IF THE EVIDENCE GATHERED AT DIAGNOSIS STAGE SHOWS IT IS A PROBLEM)

STAKEHOLDERS' VIEWS AND PERSPECTIVES

- Do senior managers have ideas or theories about tackling the issue?
- Do line managers have views about how turnover can be reduced?
- What do employees think might help?
- What do stakeholders feel is an acceptable level of turnover?

How trustworthy and relevant is this evidence?

PROFESSIONAL EXPERTISE OF PRACTITIONERS

- Do people in the team have expertise in ways of reducing turnover?
- What seems to have worked in the past and would it work here and now?
- Are there sources of external expertise and what do they suggest?

low trustworthy and relevant is this evidence?

EVIDENCE FROM INSIDE THE ORGANISATION

- Can predictors of turnover be identified?
- If predictors can be identified, are they amenable to change?
- Have any interventions aimed at reducing turnover already been put in place? Were they effective?

How trustworthy and relevant is this evidence?

SCIENTIFIC EVIDENCE

- What is known in the scientific literature about the most important causes of turnover?
- Which of these can be manipulated?
- What is the scientific evidence about the effectiveness of interventions or practices aimed at reducing turnover?

How trustworthy and relevant is this evidence?





2.4 SOME REFLECTIONS ON THE HISTORY AND FUTURE OF EBHR

The final section of this report considers how we can start to strengthen our practice of EBHR. A second EBHR report next year will consider in much more detail how we can start to embed it in the everyday work of HR functions by providing detailed cases, structured guidance and other resources. Here we reflect more broadly on how EBHR has developed and is likely to change.

The idea of using evidence is of course not new to HR. The idea of EBHR is, however, relatively new and is slowly shaping HR thinking and activity. By starting with gathering evidence for important business problems and then considering evidence for how HR can most effectively help, EBHR resonates with the historical but ongoing challenge of ensuring that HR really makes a difference to organisational outcomes.

People analytics is one of the clearest indications of the changing evidence orientation of HR. As will be discussed in a later chapter of this report, people analytics is a key part of EBHR. People analytics has also been through its own evolution. While much progress has been made, it is also clear that there is much to do to help people analytics reach its potential. One way of doing this is through incorporating other sources of evidence as described in the EBHR framework. "What EBHR is there for is to support solving problems. So HR people need to be in the role of solving problems in order for evidence-based practice to be relevant to them, and that is what is increasingly happening."

DIANE HARPHAM, ORGANISATION DEVELOPMENT SPECIALIST, EDF

At the current time, it seems that HR professionals typically have one of two types of reactions to EBHR. The first response is that they feel they are doing it already because they always use evidence. But, as discussed, simply using evidence is not the same as EBHR. Rather, EBHR is a structured and explicit way of making the most effective use of the best available evidence from multiple sources. It seems unlikely that EBHR has been widely adopted by more than just a very few HR functions. However, what is more certain is that most HR functions are taking elements of EBHR and applying them even if they are not aware of exactly what EBHR means, or are choosing to call what they do EBHR. This will be discussed in more detail in the next section when we discuss the findings from our interviews and survey.

A second reaction from HR professionals is that the EBHR process just seems too difficult and out of reach. Such a reaction is understandable when we contrast how HR decisions are often made with the more rigorous EBHR process. It is certainly true that many HR functions may not have the resources, including skills and capacity, to engage much with EBHR.

So is EBHR it worth it? One way of answering that question is to remember that evidencebased practice in general is about making *more-informed*, not perfect, decisions. Even if we don't have all the resources to do it completely or we are left with unanswered questions, we are still more *likely* to identify important business problems and effective HR solutions to those problems by following the EBHR process. This also means we are more likely as an HR function to make a difference to the business.



3.0 WHERE ARE WE NOW? KEY THEMES FROM OUR RESEARCH

RESEARCH METHOD

STRONG FOUNDATIONS: EVIDENCE-BASED HF

In order to better understand HR practitioners' views on EBHR we interviewed 24 senior HR professionals and others with important perspectives on EBHR. In addition we ran an online survey of CRF members, completed by 118 respondents. Respondents were predominantly HR Directors, HR Business Partners and HR functional experts, covering a wide range of industry sectors, including retail/ consumer businesses (13%), energy/resources (13%), financial services (12%), and technology, media and telecommunications (11%). 53% worked for organisations with 10,000 employees or more. 84% were UK based, with the remainder predominantly from Europe and North America.

- Our questions covered topics such as:
- Familiarity with the process of EBHR
- The use of data sources in HR decision-making
- The extent to which HR is already evidence based
- Gaps between what is already done and EBHR
- Resources that could help HR become more evidence based
- How the profession has changed in relation to EBHR over the past decade

Here we report some of the illustrative findings from the interviews and surveys organised, around nine themes.



THEME 1

HR AS A FUNCTION NOW HAS ACCESS TO MORE DATA THAN EVER AND IS USING IT MORE, BUT THIS IS NOT NECESSARILY LEADING TO GREATER INSIGHT AND TO MAKING BETTER-INFORMED DECISIONS

One of the most fundamental changes in HR over the past 10 years in relation to EBHR is the increasing availability of internal data about employees. A widely held observation, and one shared by many participants, was that although HR has increasingly had access to such data, it wasn't always being used in an optimal way.

"In almost any organisation, there's too much data and not enough insight." GUY ECCLES, HR CONSULTANT AND FORMER HR DIRECTOR B&Q

"I'm not sure that what most organisations need is more people analytics. I think what they need is more people insights. And I think insight is a human game. It requires taking analytics, experience and expertise, all of the other evidence base that HR practitioners can bring, and having a really strong collaborative conversation with the business to surface the things that will be genuinely insightful for that organisation."

SIOBHÁN SHERIDAN, CHIEF PEOPLE OFFICER, FINANCIAL CONDUCT AUTHORITY

"I don't think organisations are suffering from a lack of data, but a majority of organisations that we are working with are data overwhelmed. They've got data in so many places they're not able to bring it together to even interpret what the data is saying."

SARAH HORNE, EXECUTIVE DIRECTOR, HR TRANSFORMATION, ORACLE EMEA

"The data capabilities of HR, and therefore the ability to use data, have come a long way. However, on the continuum of where they can get to we still often see a low level of maturity."

PAUL HABGOOD, PARTNER - WORKFORCE TRANSFORMATION, MERCER

"Improving our ability to collect data is one thing. Improving our ability to analyse the data is another. Improving our ability to actually take that analysis and do something with it is another entirely." IAIN MCLAUGHLIN, VICE PRESIDENT, TALENT, DUBAI HOLDING

Collecting data is only a starting point. Such data must, for example, also be meaningful and reliable. Also, the systems and tools used to analyse and make sense of the data need to be well-designed and utilised appropriately.

"A problem with data is getting access to it. Even though we've got a lot of systems which come together to use our data and insights and an analytics team, it's still not easy to pull the data together and look at cause and effect."

KEVIN GREEN, CHIEF PEOPLE OFFICER, FIRST BUS

"A lot of HR teams and organisations don't have good data or good tools, and they don't always have people in the function who are, or think they are, good at reading data, creating data, analysing data, or drawing insights from it. There is a lack of organisational hunger for this in most organisations, because they can't see the value in what they already have access to."

PHILIPPA BONAY, DIRECTOR, PEOPLE AND BUSINESS SERVICES, OFFICE FOR NATIONAL STATISTICS

"I do think there's more awareness, and an acknowledgement, of the need to be more evidence and data-driven in HR. But I think it's still a struggle. I get the sense that some organisations are not yet quite getting the value from people analytics. Many have invested a lot of resources in people analytics, but is it actually delivering value for the organisation? I see some great examples of people analytics making a real difference for some, but they're actually few and far between."

TIM HAYNES, VP ORGANISATION DEVELOPMENT & PEOPLE ANALYTICS, JAZZ PHARMACEUTICALS

The availability and analysis of data within HR can be compared with the use of data in other functions within the organisation. Such comparisons may reveal that other functions are some way ahead of HR in their use of data and analytics.





THEME 2

MULTIPLE SOURCES OF EVIDENCE ARE USED TO SOME EXTENT BUT NOT ALL ARE USED AS MUCH AS THEY COULD BE (E.G., MORE USE OF SCIENTIFIC EVIDENCE, QUANTITATIVE, AND QUALITATIVE DATA IS IMPORTANT)

Survey participants were asked about the sources of evidence they typically use. Around 38% of respondents said they always use internal quantitative data in their HR practices and processes, though only 25% said they always use internal qualitative data or 17% said they used stakeholder interviews.

Interview participants also reported that while evidence was always used, it was perhaps just one or two sources rather than the four sources specified in the EBHR model (see box). Perhaps, in part, because of a belief that 'evidence' is mostly about quantitative internal data.



"I think there is a kind of misconception... across the profession that being more evidence-based just means using a few more numbers."

JACKIE WESTERMAN, HEAD OF LEADERSHIP DEVELOPMENT, BBC

At the same time, participants also saw the logic and value of, where possible, drawing on multiple sources of evidence, in the words of one interviewee: *"erring* on the side of being inclusive." "You've got data points that you are capturing through your HR information system, you've got data points that you're capturing from focus group conversations and engagement surveys. There is benchmarking data that you can have on external organisations, and there's research that's been done by other companies that might show you what is important. So data and intelligence can come from many sources as long as the sources that you're using are reliable."

GABRIELLA PLANOJEVIC, GROUP HEAD OF TALENT MANAGEMENT, AL-FUTTAIM

Some participants pointed out there are barriers to using sources of evidence.

"I think there are two problems on the academic side. One is that often we as academics do research on stuff that's not really relevant to an organisation. It's interesting to us, and may be interesting to people doing research on that topic, but it has absolutely no impact on the way organisations work. We may be doing research on the wrong things. A second is the journals that we publish in require a jargon that is unintelligible to normal human beings."

PROFESSOR PATRICK WRIGHT, DIRECTOR, CENTER FOR EXECUTIVE SUCCESSION, UNIVERSITY OF SOUTH CAROLINA

"We are continuing to have to work really hard on multiple sources, specifically in relation to academic evidence. I think it's both the access to academic evidence – there's some brilliant academic work but it can be really difficult to find. But also developing the confidence and the ability in the team to read, digest and understand whether they've got a piece of high quality academic research or not, and to be able to read it with a critical eye."

SIOBHÁN SHERIDAN, CHIEF PEOPLE OFFICER, FINANCIAL CONDUCT AUTHORITY

"Academic outputs aren't written for people to pick them up. In a peer-reviewed environment that makes a lot of sense. However, if that information is to be rolled out more widely, that has to change."

OLIVER JACKSON, GLOBAL PEOPLE INSIGHTS MANAGER, EON



THEME 3 UNDERSTANDING AND USE OF EBHR AS A DEFINED PROCESS AND PARTICULAR APPROACH IS LIMITED

Fewer than 20% of survey respondents strongly agreed with the statement "I am confident that I understand what 'evidence-based HR' means in general use and could easily give a definition and/or examples". 72% of respondents said they did not have a clear definition of "evidence-based practice" for internal use. One participant admitted "I'd never heard of it ever in my life so I had to Google it."

"HR is using some of the evidence-based principles and some of the four sources. I wouldn't say that it's using it in a systematic way or going through a defined process. So gathering more data is great, but we are only making steps towards following that whole process." JACKIE WESTERMAN, HEAD OF LEADERSHIP DEVELOPMENT, BBC

"I do think HR has been evidence-based for a long time, but maybe not in as comprehensive a way as the four-step model would suggest." TIM HAYNES, VP ORGANISATION DEVELOPMENT & PEOPLE ANALYTICS, JAZZ PHARMACEUTICALS

"I would say your average HR function is probably early in their maturity in this journey, and even when the company is mature, HR functions have often been under-invested in when it comes to data and analytics." WILLIAM SELF, WORKFORCE STRATEGY & ANALYTICS LEADER, MERCER Although there was not always an explicit understanding of EBHR, some participants understood what it entails in a more implicit way.

"Broadly speaking, to me it means how we as an HR profession are using data, insight and evidence to help inform the decisions that we make in organisations around our people practices and processes. So sometimes I probably do use the term interchangeably with 'data-driven HR', but I suspect it probably means something a bit broader than just the use of data. Data is not just the hardcore, quantitative stuff. It's the qualitative subjective opinion and insight and things we use every day to inform our decision-making, and also includes things like academic research or best practice from other organisations. That whole collection of evidence / data helps us understand what to recommend and the decisions we make."

TIM HAYNES, VP ORGANISATION DEVELOPMENT & PEOPLE ANALYTICS, JAZZ PHARMACEUTICALS

"Some people are more comfortable with the idea of evidence-based decisions than others. And when I say comfortable, I mean that it comes more naturally to some people. If you say, 'well, what's the evidence here?', I don't think anybody would push back. But sometimes, I think there are occasions when people would say, 'well, I just know, I've just got a feeling', and sometimes you just have to go with your gut, but I think that happens a bit less than it would have been going back five or ten years." CHLOE GARDONYI, LEARNING PARTNER, KANTAR

"It's an integration of academic research, organisational data, stakeholder input and practitioner expertise. The more experience I have, the more I realise how influential context is on what will and will not work, and the way you have to approach things." DIANE HARPHAM, ORGANISATION DEVELOPMENT SPECIALIST, EDF



THEME 4 SOME ORGANISATIONS ARE DOING SOMETHING VERY CLOSE TO EBHR

Participants provided some examples of projects where they had collected multiple sources of evidence, considered its relevance and trustworthiness and to some extent, followed an explicit process. There is no doubt that some HR functions are sometimes working in ways that are very close to EBHR.

"Evidence-based HR is being able to say to my team, or indeed across the wider organisation, here is something that we see that is manifesting in the organisation, and we know this because we've got X, Y and Z data points. Therefore we are going to take this action because we think this is the action that will address that. And then we use the evidence from the outcomes of that to judge whether that was a good intervention, or a good approach or, not."

PHILIPPA BONAY, DIRECTOR, PEOPLE AND BUSINESS SERVICES, OFFICE FOR NATIONAL STATISTICS

"We've tried to take an evidence-based approach to hybrid working, although we wouldn't actually call it that. There was multi-data, including a lot of listening to employees, talking to other organisations, looking at best practices and case studies and reading research papers. As a result of all that, the model we are adopting is a little different to other organisations who are simply reverting to 'come into the office two or three days a week', which based on the evidence I've explored leads me to believe that is not the right model for our organisation at this time."

TIM HAYNES, VP ORGANISATION DEVELOPMENT & PEOPLE ANALYTICS, JAZZ PHARMACEUTICALS

"The big thing with evidence-based practice for me is if you try to do it you'll get a better outcome than you would have done otherwise. It may not be perfect, but it will be better and more thoughtful than it would have been without it. That means really focusing on the definition of what the problems and opportunities are, selecting which solutions to try to solve those problems and seizing those opportunities."

SIOBHÁN SHERIDAN, CHIEF PEOPLE OFFICER, FINANCIAL CONDUCT AUTHORITY

CASE NOTES **FIRST BUS**

Kevin Green, Chief People Officer at First Bus, provided an example of how the careful use of evidence and data in HR can have important benefits for the business.

First Bus is a large UK public transport group with around 14k employees. Bus drivers make up two-thirds of the workforce. Post-Covid, the attrition rate for bus drivers went up from 23% to 43% which had significant implications for the business given the £7,500 cost of hiring and training new drivers. In addition it was not possible to run enough buses leading, to lost revenue and profit.

An analysis of internal evidence suggested a causal relationship between engagement scores and absence and attrition. Recent surveys revealed two main issues for bus drivers: feeling unappreciated and also feeling stressed about workload. To identify possible solutions, experiments testing various interventions were conducted in different depots.

These interventions included:

- Removing an onerous, low value-add and compliance-driven performance management process and instead implementing a 20-minute catch-up conversation process which meant retraining managers.
- Taking some responsibilities away from line managers such as aspects of disciplinary processes in relation to safety and customer complaints activities – to make the relationship more supportive.
- Implementing a 'bottom up' change program to demonstrate appreciation of drivers including painting depots, installing new toilets, changing the uniform and providing free tea and coffee.

Over 20 indicators were used to examine the impact of these interventions including grievance and discipline rates, industrial relations data, applicant conversion, engagement scores and performance data. Some of these indicators were also benchmarked against competitors to get a sense of industry norms.

Results indicate a positive effect of these interventions, such as a 9% overall increase in engagement (13% for drivers), around a 10% reduction in drivers feeling negative about their jobs and an increase of around 8% in drivers feeling positive about their jobs. In addition, a weekly net loss of drivers had turned into 18 weeks of driver growth, leading to fewer cancelled buses and increased bus mileage.



THEME 5 EVIDENCE AND DATA SHOULD BE USED TO HELP HR SUPPORT THE BUSINESS IN ACHIEVING ITS GOALS, NOT TO JUSTIFY HR'S EXISTENCE

The core purpose of EBHR is to help HR be more effective in helping the business. However, there is a sense that sometimes evidence is used to justify HR's activities rather than to examine whether or not HR's activities are making a difference to broader organisational goals. For example, evidence might be used to demonstrate that a management development program 'works' in terms of increasing managers' skills or abilities. However, the key question is whether there is evidence that increasing the skills and abilities of this group of employees impacts desired business outcomes in any meaningful way.

"When we talk about evidence that can be either compliance data, or some evidence that it's having an effect in the business. A business may have a 95% completion rate for performance reviews. That might be evidence that you've got compliance, which is good, but it's not enough. We could also ask if the actions in the performance reviews have been completed. Now you've got a metric that tells you that actions are completed, and a metric that there's been high compliance with the request to conduct performance reviews but none of that tells you whether the performance review process has moved the business."

QUINTIN HEATH, PEOPLE & PERFORMANCE DIRECTOR, AB MAURI

"Evidence-based HR is not just about using data. It's about being clear what we are trying to achieve through our interventions so there's a very clear line of sight between what we're doing on the ground in HR, our people strategy, the impacts and results we're looking to deliver and their impact on organisational performance." KEVIN GREEN, CHIEF PEOPLE OFFICER, FIRST BUS

"The only thing that I need to do is show them, through evidence, why it is important that we're going to focus on this area. That this is the reason we've made changes in these areas. And why that is important to the outcomes of the organisation."

PHILIPPA BONAY, DIRECTOR, PEOPLE AND BUSINESS SERVICES, OFFICE FOR NATIONAL STATISTICS





THEME 6

THINKING ABOUT THE QUALITY OF DATA AND EVIDENCE IS RECOGNISED AS SOMETHING THAT IS IMPORTANT, BUT COULD BE DONE MUCH BETTER

EBHR is not about using all the available evidence but the best available – or most relevant and trustworthy evidence. Using poor quality data leads to the 'garbage in, garbage out' problem: basing a decision-making process on unreliable evidence leads to unreliable decision-making outcomes.

Participants did not report that they used any explicit process to evaluate the quality of data, but many saw this as something that was essential and could be done more effectively.

"I think we're challenged by the different types of evidence, whether it's data or the collation of opinions and ideas, and sifting through what's valid and invalid."

MELVIN FRASER, ACTING GCHRO, FIRST ABU DHABI BANK

"By and large, I look at it from the other side. I can't think of anything we're doing that isn't based around some form of evidence, but the quality, validity or triangulation of that evidence would be open for discussion. That seems to me to be a more obvious area where we might go wrong."

GUY ECCLES, HR CONSULTANT AND FORMER HR DIRECTOR, B&Q



THEME 7

EBHR IS NOT COMPLICATED BUT IT IS DIFFICULT – THERE ARE MANY BARRIERS AND MORE CAPABILITY (BOTH COMPETENCE AND CONFIDENCE) IS REQUIRED

It was widely agreed that the logic of EBHR was clear. At the same time actually doing it effectively is challenging. Participants were asked what resources would help their functions to meet those challenges.

One was having a model or structure to follow.

"How do you stop organisations from short circuiting that stage of really understanding what the definition of the problem is and what it is that you're actually trying to solve? All too quickly we start talking about the importance of flexible working, for example, rather than what problem flexible working is trying to solve."

SIOBHÁN SHERIDAN, CHIEF PEOPLE OFFICER, FINANCIAL CONDUCT AUTHORITY

"Something like a short checklist. Sometimes it's just having something to remind you, before you jump, to stop and check if you have everything in place."

GABRIELLA PLANOJEVIC, GROUP HEAD OF TALENT MANAGEMENT, AL-FUTTAIM

"We need resources that can help practitioners develop confidence in that diagnostic phase, because so much of this is about practitioners having confidence to know what questions to ask, and to know what they could and should be inquiring about."

SIOBHÁN SHERIDAN, CHIEF PEOPLE OFFICER, FINANCIAL CONDUCT AUTHORITY

"The structured approach [to EBHR] is where it lives or dies. If you've got a structured approach you'll probably do it again. And you'll probably therefore embed it into an organisational infrastructure and culture. Without a structured approach, things that HR sometimes gets involved with are a flash in the pan and disappear before they embed themselves into the organisational fabric." "There's evidence that HR is more evidence-based, it has come a long way in the last decade. But I'm not sure that the value-add is proportionate to the activity and the investment. [An EBHR framework] would help a thoughtful HR director who wants their function to be more evidencebased, but we don't want to cause their people to run off like their hair's on fire, and end up doing things that are either bad and/or wasteful for the company in terms of data acquisition and usage."

NICK STARRITT, EMPLOYEE EXPERIENCE REGION LEAD FOR UK/EUROPE, MERCER

A second resource which would help facilitate EBHR is recruiting people with the right skills, such as analysis and diagnosis skills, commercial acumen and solid data, analytics and artificial intelligence skills.

Participants identified a third resource which could help; training and upskilling HR professionals to make them better equipped to carry out EBHR.

"We may be getting used to using evidence, but are we yet sufficiently confident and competent? Of course not. We can definitely improve. One way we might do that is how we judge the value of different sources of evidence and how we bring different sources of evidence together." IAIN MCKENDRICK, VP HR STRATEGY PLANNING & ANALYTICS, VOLVO GROUP

"My advice would be to think more critically. What is the problem that we're trying to solve here? Therefore, what is the information that best helps us understand that problem properly?"

SARAH HORNE, EXECUTIVE DIRECTOR, HR TRANSFORMATION, ORACLE EMEA

"And I think that opens up opportunities in the future, as you build those capabilities to not just run a structured decision-making process, but actually embed ideas of experimentation and knowledge discovery, to test and learn your way into insights, and to generate knowledge within an HR function. And that is a different mindset, it's a different set of skills that need to be taught, and it's a different set of cultural values."

WILLIAM SELF, WORKFORCE STRATEGY & ANALYTICS LEADER, MERCER

IAIN MCLAUGHLIN, VICE PRESIDENT, TALENT, DUBAI HOLDING



THEME 8

EVIDENCE FROM EXTERNAL BENCHMARKING OR WHAT WORKS FOR OTHERS NEEDS TO BE TREATED CAUTIOUSLY – JUST BECAUSE IT'S USED OR WORKS ELSEWHERE DOESN'T MEAN IT WILL WORK HERE AND POPULAR ACTIVITIES MAY BE FADS

Almost all participants reported using benchmarking data as a source of evidence. While benchmarking data can be useful, we need to know, as we do with any source or type of evidence, whether that evidence is meaningful and relevant to our context. Some benchmarking data provides information about which HR practices other companies are using, which may be misleading and unhelpful. For example, knowing that most businesses of a similar size are using a particular HR practice tells us nothing about whether that HR practice is helping those businesses, and therefore nothing about whether it makes sense for our business to adopt that practice.

"I find external validations [benchmarking] of what other companies do to be the least compelling bit of evidence in how I'm judging what's right or wrong, or where we should go with this. Consultants will tell you superficially that 27% of companies do this, that or the other, but when you dig below the surface as to what really is going on, they don't know."

GUY ECCLES, HR CONSULTANT AND FORMER HR DIRECTOR, B&Q

"There's a point where benchmarking can get you and there's a point where it can't get you further. We often joke, you can't benchmark your way to greatness. And so you have to figure out where can a benchmark get you, versus where do you need to set your own internal goals and understand what great looks like for you." WILLIAM SELF, WORKFORCE STRATEGY & ANALYTICS LEADER, MERCER





THEME 9

EBHR IS POLITICAL AND THEREFORE STAKEHOLDERS NEED TO BE INCLUDED IN THE DIALOGUE ABOUT EVIDENCE

EBHR needs to take account of the politics and power dynamics of organisations and the influence of key stakeholders. There's no point in taking an evidence-based approach unless there is appetite in the organisation to do something with it. It's essential to get early buy-in from senior management and internal customers that the right questions are being tackled – are they the highest priority issues for the business? This is not just about stakeholders being in agreement about the problem and giving permission to proceed. They need to have a real desire to make it happen and show commitment to taking the necessary steps. HR also needs to engage key stakeholders in the analysis and keep them informed at all stages of the process.

"There's also something about contextualisation. You might have external thought leadership, research and evidence but what's still missing is the intuitive knowledge of the culture of the organisation environment you're operating in and the views of stakeholders. Are they ready for this intervention? Is it appropriate? Is it going to work? You need to bear in mind the human and cultural context of the situation as well."

SARAH HORNE, EXECUTIVE DIRECTOR, HR TRANSFORMATION, ORACLE EMEA

9	8	9	9	9	9	8	9	9	8	8	7
	STRONG	FOUNDA	TIONS: E	VIDENCE	-BASED H	R					
9	8		8	5	8	8	9	9	6	9	8
8	۲	9	۲		9	9	9	9	9	9	9
9	3		9	s	8	9	8	9	٦	٦	5
6	s	9	5	6	9	2	9	9	¥	٦	٦
1	9	8	8	8	9	9	9	9	8	9	5
9	1	9	8	9	9	8	3	9	٦	9	9
9	9	9	8	8	9	9	9	8	6	8	9
9	9	9	8	9	9	8	9	9	8	9	9
6	•		9	8	8	3	9	9	9	9	9

4.0 The impact of hr Analytics on EBHR

CO-AUTHOR



NIGEL GUENOLE is an expert in measurement and analytics. He has worked to enhance the quality of psychological measurement in industry and to promote analytical approaches to HRM. His work has appeared in Harvard Business Review, Forbes, European CEO Magazine, and European Business Review. He co-authored The Power of People: Learn how Successful Organizations Use Workforce Analytics to Improve Business Performance, and recently co-edited a special issue of the Human Resource Management Journal on HR Analytics.

One of the biggest developments in HR since our 2011 research has been the rise of HR analytics. It has become a significant and fast-growing discipline within HR, with companies making substantial investments in systems, tools and people. In this chapter, we explore what HR analytics is, the problems HR analytics can solve, and the impact of HR analytics on EBHR. Has analytics helped us become more evidence-driven in HR?

4.1 What is hr analytics?

HR analytics uses statistical methods in the discovery, interpretation, and communication of meaningful patterns in workforce-related data to inform decision-making and improve performance (Guenole, Ferrar, & Feinzig, 2017). Today, being able to perform HR analytics effectively is an important capability of any HR function.

The grouping of analytical activities into a function in human resources and calling the subfunction HR analytics or a related title, is relatively new. For example, a 2016 review by Marler and Boudreau identified just 14 articles in peer-reviewed journals that focused on HR analytics.

But analytical approaches have been used in making decisions about people at work for a long time. Industrial Organisational Psychologists, for example, were analysing data about soldier performance from standardised testing during the First World War, when millions of soldiers were tested.



Other common names for HR analytics include workforce analytics, human capital analytics, and people analytics. Sometimes, HR analytics functions specialise in an area that can be considered a sub-focus of HR analytics, for instance, strategic workforce planning. These areas apply essentially the same analytical methods, they are just applied with a specific focus.

WHAT ARE SOME OF THE PROBLEMS HR ANALYTICS IS USED TO SOLVE?

HR analytics can be applied to guide decision-making in any area of HR with: an outcome to improve, some idea of the causes of that outcome, and data to analyse. For example, analytics is commonly used to identify the predictors of outcomes like employee turnover and employee engagement.

When HR analytics is performed effectively, HR interventions follow analyses, and the interventions are evaluated to see their impact on targeted outcomes. This approach can be used in most areas of HR. For example, it can enhance recruitment, improve learning outcomes, and identify the strongest candidates for succession plans.

While HR analytics has broad applications, teams need to focus on important business problems to be impactful. High impact projects can be identified by engaging with senior stakeholders to understand how businesses operate, and the people related outcomes that, if enhanced, would improve business effectiveness. This step is important to ensure your justification for running an HR analytics project will not only satisfy business stakeholders, but also ensure their commitment to taking action based on the recommendations of the analysis.

WHAT IS BEHIND THE RISE OF HR ANALYTICS?

The popularity of HR analytics comes after analytics has changed approaches to decisionmaking about people in many other areas. The movie Moneyball (2011) highlighted how these approaches are being used in sports. The Great Hack (2019) documentary described the use of analytics in political campaigning. Analytics is also widespread in other areas of business, like marketing.

Today, the popularity of HR analytics is driven by a vibrant community that has created a wide array of resources that support development. Books such as *Predictive HR Metrics: Mastering the HR Metric* (Edwards & Edwards, 2019), conferences such as the Wharton People Analytics Conference, university courses, professional associations like the Chartered Institute of Personnel Development (CIPD), and providers like Coursera are examples of the resources available to support capability building.

One significant advance in analytics in recent times has been the application of large language models (LLMs) in generative artificial intelligence (AI) applications such as ChatGPT from OpenAI. We are already seeing examples of LLMs being applied to develop content for competency models, write interview questions, and even produce psychometric test items for testing. As soon as a new technology emerges it seems HR finds a use for it. However, the true value of generative AI for HR analytics is yet to be determined.

"So many people functions have gone down the pathway of people analytics being a solution that you buy, as opposed to a way of working and a cultural shift towards evidence-based decision-making."

OLIVER JACKSON, GLOBAL PEOPLE INSIGHTS MANAGER, EON

CASE NOTES TOPIC MODELING AT A GLOBAL TECHNOLOGY FIRM

In this firm, the CEO regularly records video messages to staff as a way of communicating important information about business priorities. These videos are posted on the corporate intranet for viewing by the staff of over 100,000 employees. Within a few days, hundreds, sometimes thousands, of comments have been left by employees. This information needs summarising so that it can be fed back to the CEO to take any required action. There are too many comments to read one-by-one; an analytical approach is required. Using web-scraping technology and text analytics, these comments are analysed quickly by the HR analytics team. A report is provided back to the CEO in a matter of days.

The report contains not only the results of a sentiment analysis – whether the tone of the comments was positive or negative on balance, right down to the counts of different emojis – but also a summary of the core themes based on a method called topic analysis. This information is used by the CEO to identify pockets of the organisation where focus is required to persuade and convince about relevant issues. Such analyses were difficult as few as 10 years ago. Primarily because the approach to communicating with employees via video technology was less common, but the analytics methods were also less well known outside of advanced technology firms. Now such capabilities are within reach of most HR analytics teams.

DISTINGUISHING REPORTING AND PREDICTIVE ANALYTICS

We can differentiate two forms of analytics: reporting analytics and predictive analytics. Reporting presents historical information with summaries and dashboards, while predictive analytics tends to focus on predicting the probability of defined outcomes through model building. Predictive analytics is considered more strategic in nature.

However, in some respects, this distinction is too inwardly focused. One of the limitations of all forms of HR analytics is they often start in the wrong place. While investigating employee turnover or engagement may be interesting, it is only useful to the extent that improving that particular metric positively impacts business outcomes such as sales or profitability.

As we emphasise throughout this report, it's essential to begin by asking the right questions and focusing on pressing business problems that can be better addressed by taking an analytical approach. This means clarifying the business issue at hand, and focusing the data and analysis on identifying causes and potential solutions.

SKILLS REQUIRED FOR HR ANALYTICS

Guenole, Ferrar, and Feinzig (2017) identified six skills for success that represent the skills and expertise needed to effectively execute analytics work. These are business acumen, consulting, Human Resources, work psychology, data science, and communications. Most HR analytics projects take some blend of these skills. Sometimes these skills are borrowed from other areas of organisations.

While data analysis itself is a fundamental building block of HR analytics, in practice an effective function has many more requirements and a particular focus is usually placed on the leader and their reporting role. Ideally, HR analytics will report into the chief human resource officer and be someone with a strong awareness of what makes the business successful and the important stakeholder relationships.

GETTING STARTED: QUICK-WINS AND CAPABILITY BUILDING

For organisations new to HR analytics, it is important to secure a quick win that demonstrates capability and intent. One way is to prioritise projects according to their complexity and impact. A quick win is a project that has relatively low complexity and relatively high impact. This might involve, for example, solving a problem such as high turnover that is well understood.

Once organisations have a project completed successfully, they tend to be in a position to secure more resources. This might involve securing headcount to build the analytics team or technology to enable addressing more ambitious analytics projects, either via building technology internally or partnering with external firms.



4.2 HOW THE FIELD HAS DEVELOPED IN THE LAST TEN YEARS

In this section we outline some of the significant advances in HR analytics in the last decade. Excel spreadsheets have not disappeared, but their days as the go-to technology for reporting and analysis are over. We are a long way from a time when people would say they didn't even know how many employees work for their businesses.

Many of the advances in HR analytics have been driven by developments in technology and availability of data, but it is also important to recognise developments that have occurred in areas like skills and privacy awareness. Here are some of the areas where notable developments have occurred:

ANALYTICAL METHODS

Approaches to analysing unstructured data (e.g., video, text) as well as structured data (anything that comes natively in rows and columns) have been incorporated into HR analytics from statistics and machine learning.

CLOUD PLATFORMS

Methods for handling large data sets mean analysts can manipulate thousands of variables and millions of cases with relative ease. Such analysis could not previously and cannot now be run easily on local machines.

DATA SOURCES

The data sources that are used in people analytics have also expanded. Examples include network data (for instance who emails whom and with what frequency), text data (such as comments scraped from surveys of the web), and business performance data.

DELIVERY

The way analytics is consumed has evolved substantially. Tools that present information via intuitive and attractive dashboards are now commonplace and the ability to view data immediately and dynamically is routine.

NEW TALENT

There has been an influx of highly talented analytics professionals into the HR profession. Some have transferred from other disciplines while others emerged from HR programmes that have improved their analytics education.

PRIVACY

There have been significant developments in legislation relating to privacy. HR analytics leaders are now unlikely to initiate a project of any significance without a privacy review.

SLICE AND DICE

Business intelligence tools now allow aggregation and disaggregation by level, geography, etc, on any variable, such as absenteeism, compensation, diversity, hiring, leave, performance, training, and turnover.

SECURITY

Developments have occurred both in technologies such as encryption and in HR practices. There is widespread acknowledgement today that data must be protected, and breaches have serious consequences.

TRENDS AND PREDICTIONS

Trends can be examined by comparing data across time periods. Early efforts at automated predictions exist, though a trained analyst can almost always improve the results over an automated tool.

"The latest developments in technology and data capture offer the potential to be a major game-changer for HR in delivering an evidence-based approach."

SARAH HORNE, EXECUTIVE DIRECTOR, HR TRANSFORMATION, ORACLE EMEA

CASE NOTES EZRA DEMONSTRATES COACHING EFFECTIVENESS AT SCALE

Ezra provides professional coaching for the digital age. One way they evaluate the effectiveness of coaching interventions is by examining change on Ezra Measure, a comprehensive 360-degree feedback assessment, at multiple points throughout a coaching programme.

Because the data on these coachees is so extensive (there are thousands of variables on nearly fifty thousand coachees) these data cannot easily be examined on a local PC; it is best to manipulate and analyse data in a cloud-based environment.

Analyses also need to be conducted to show that assessment is interpreted in the same way before, during, and after the coaching. Capabilities to run such complex analyses on such large data sets have only recently become easily accessible.

Analyses show consistent improvements across competencies as well as in increases in self-other agreement. Ezra can straightforwardly answer questions about the most and least commonly selected competencies, the easiest and hardest competencies to change, and how answers to these questions change across industries and geographies.

Using a thoughtful research design, Ezra can also show when change occured due to coaching. Coaching delegates are measured on competencies that they selected themselves to work on, but also competencies that they did not work on. If improvements on selected competencies and improvements in self-other agreement are greater for selected than non-selected competencies, then the coaching works.



4.3 IS HR ANALYTICS CONTRIBUTING TO EBHR?

Despite the clear advances outlined in the previous section, and strong examples of analytics in HR appearing in the research literature, there is still a way to go before HR analytics can be considered to have fully incorporated EBHR principles. It is possible to see two broad schools of HR analytics in applied practice, which we could call the creative school and the technical school. It is the technical school that comports to the requirements of EBHR in the style of Briner and Hirsh, i.e. an approach to decision-making in which the clear definition of issues, application of logic, systematic search for the best available evidence, and critical appraisal of the evidence, feed into decision-making and action, followed by monitoring and evaluation.

CREATIVE SCHOOL OF ANALYTICS

In the creative school, analytics is used in what we might charitably call a creative way to identify courses of action that could be taken to address problems. The defining characteristics of this approach are an emphasis on speed and action over careful planning, evaluation and rigour, often with a passion for storytelling. It is in this school where we often see a bias towards experimenting with the latest fashion as opposed to starting with a well-defined business issue to be resolved. The challenge faced by this school is not that analytics is not occurring, it's that the quality of analytics is not monitored and evaluated, and the action is disconnected from the strategic priorities of the business. For example, it might prioritise the analysis of data whereas sometimes expert opinion has greater value than a poor analysis of mediocre data. On the other hand, opinions rooted in experience and expertise may often override strong analytics. In summary, the creative school of analytics tends to be characterised by demands for easy, immediate answers, often driven by organisational politics, a lack of senior staff with analytical expertise, little evaluation of outcomes, and a lack of clear line of sight between analytics effort and business priorities.

TECHNICAL SCHOOL OF ANALYTICS

The technical school is deliberate in its approach to analytics. Projects are strategic in nature and start by narrowing in on issues that drive business performance. They engage business stakeholders at every stage, making sure that business leaders are prepared not just to endorse the findings, but to commit effort and resource to implement the required actions. In that sense they work with organisational politics, balancing a purist approach with what is achievable in practice. Experimental designs are chosen carefully to rule out threats to valid conclusions. Organisational science research is judiciously incorporated into decision-making. The success of interventions based on analytic insights is carefully evaluated. Practitioners in this school know when it is better to rely on the scientific literature than conduct a new study in their own organisations. For instance, when a finding is so well established that even if you find a contrary result, it would be more likely that there was an error or weakness with your local research.

Looking across the HR analytics landscape, we tend to encounter examples of the first school more commonly than the second. It is not clear, therefore, that the advances in the technical capabilities of analytics highlighted in this chapter are yet being used in a way that would conform to the standards of EBHR. Dynamic presentation of people-related data on dashboards in the cloud, even with the ability to aggregate and disaggregate and smart visualisations, do not account for factors like reliability or validity and are not rigorous enough to identify appropriate interventions that change outcomes.

For this, we need conceptual models that are supported by data. Models need to move beyond intuition and beyond distributions of single variables and plots of two variable relationships. At this point, there is nothing to suggest this capability has been automated to the same extent that HR technology vendors have managed to automate the task of viewing and exploring HR data.

Some might be surprised to hear that HR analytics as a field is not contributing to EBHR as much as we might expect. Conference networking reveals no shortage of anecdotes of exciting projects. Social media is awash with reports of exotic analyses delivering novel insights. Yet there is little publicly available, well-documented evidence that withstands close scrutiny as genuinely having improved a business outcome, differs from the sort of HR analytics work being produced a decade ago, and could be considered an example of analytics that fits within the scope of EBHR.

It might be that this work is widespread, but we are not aware of it. This seems unlikely, mostly because genuine breakthroughs in understanding and practice, like water, seep everywhere.

CASE NOTES PODIUM IMPROVES SELECTION IN PROFESSIONAL SERVICES

Podium Assessment Systems advised a professional services firm looking to increase the accuracy of its selection system, enhance the candidate experience by shortening assessments that were too long, and increase diversity. Available data included demographic data, source of the candidate, scores on the situational judgment test, and job performance data on the people that were hired. There was a large amount of data available on candidates; several thousand participants in total.

To address diversity, Podium looked at the applicant sources and identified those that showed the highest diversity. Applications that came from one recruiter had a greater proportion of minority applicants. A recommendation was made to use this firm more frequently as it had greater access to universities with diverse demographic populations.

Podium also looked at the relationship between the situational judgment test scores and job performance. It compared two methods for predictive accuracy, one using simple correlations and a second that used a machine learning method called gradient boosting. The advanced gradient boosting converged on the conclusions of the simpler correlational analysis in this case.

Podium was able to identify and retain the most predictive questions and drop the least predictive, shortening the assessment. Once the system was operational, higher performing candidates with a stronger representation of minority candidates began to be selected.

Outstanding examples of HR analytics that have appeared in recent years, particularly in talent acquisition, are outlined below. Full references can be found in the <u>Appendix</u>.

HICKMAN AND COLLEAGUES (2022) have shown that virtual interviews can be automatically scored to get an indication of personality in terms of the big five model of personality.

SAJJADIANI AND COLLEAGUES (2023) showed how information about job applicant work history can be scored to predict employee performance and turnover.

ROTTMAN AND COLLEAGUES (2019) reported that new machine learning algorithms can be used to maintain predictive accuracy while minimising discrimination against minority groups.

LANDERS AND COLLEAGUES (2022) showed how careful design can produce gamebased assessments that accurately measure cognitive ability. STRONG FOUNDATIONS: EVIDENCE-BASED HR

4.4 **FUTURE OPPORTUNITIES:** CAUSAL REASONING WILL MOVE HR ANALYTICS IN THE DIRECTION OF EBHR

A basic and meaningful step toward a higher standard of HR analytics, which will also advance the EBHR agenda, is to incorporate causal thinking into HR analytics. Causality is important in HR analytics because it enables the true determinants of HR and business outcomes to be identified, rather than spurious associations between variables. Focusing on causes ensures resources are appropriately used to bring about desired change.

Other fields, such as epidemiology and computer science now have a strong focus on research designs that enable cause and effect reasoning. Economists Joshua Angrist and Guido Imbens shared the Nobel Prize for economics with David Card in 2021 for their contributions to causal inference, a part of the 'credibility revolution' in the 1990s that saw a move toward designs for inferring causality with observational data (i.e. data not collected with experiments using treatment and control groups with randomisation). HR is yet to adopt these practices and needs to start.

THREE REQUIREMENTS TO SHOW CAUSALITY

To show that one variable causes another variable, there are three key assumptions that need to be satisfied:

- Firstly, that there is an association between the two variables.
- Second, we need to show that the cause happened before the effect.
- Finally, we need to be able to rule out other causes.

INFERRING CAUSAL EFFECTS FROM OBSERVATIONAL DATA

While the gold standard for showing causal effects has usually been randomised experiments, in HR we rarely have the luxury of running such studies. However, under certain conditions, it is possible to infer causes from the correlations amongst observational data. This idea may be new to readers, but is already well established in other fields.

The approaches are technical, so here we simply name two key approaches. One is the Potential Outcomes framework associated with the work of statistician Donald Rubin, while the second is Directed Acyclic Graphs pioneered by the computer scientist Judea Pearl.

Each combines prior knowledge with data analysis to satisfy the three requirements. The three other sources of evidence in EBHR outside internal organisational data (stakeholder views and perspectives, professional expertise and scientific evidence) are of great value in developing causal models which can be tested, using these methods.

For HR analytics professionals interested in causal inference in HR analytics, we highly recommend taking the Coursera course 'A crash course in causality: inferring causal effects from observational data'. This course is delivered by Professor Jason Roy at Rutgers University and it won the 2021 American Statistical Association award for Causality in Statistics Education.

BARRIERS TO OVERCOME

The barriers to causal inference in HR analytics can be illustrated by browsing a recent discussion on LinkedIn where several members posted thoughts about the value of pursuing causal thinking in HR. A haphazard exploration of your social media feed is no basis for generalising about the HR profession, but it's an excellent strategy for finding hot buttons that animate the community.

The first comment was about whether we should try to make causal claims in HR. The poster, a senior HR professional, was confident we should not. Too much effort, he claimed. Instead, effort in people analytics ought to be focused on getting better at storytelling and influencing. The second comment queried whether any analyses more sophisticated than correlations were ever required. According to the poster, no they are not. Correlations are sufficient to base HR interventions, based on a 'if there's smoke there's fire' line of reasoning. These attitudes need reorienting if HR analytics is to contribute to the EBHR movement.



5.0 Strengthening our practice of Ebhr

CO-AUTHOR



WENDY HIRSH works as a researcher and consultant, specialising in the future-oriented aspects of people management: workforce planning, sustainable organisational performance, succession, talent management and career development. She is a Principal Associate of the Institute for Employment Studies and Visiting Professor at both Derby and Kingston Universities. Wendy works across private, public and third sectors. She is the author with Rob Briner of CRF's 2011 study, *Evidence-Based HR: From Fads to Facts*.

"There's a good opportunity for HR which will ultimately make us much more credible and impactful in the organisation than we've ever been."

MELVIN FRASER, ACTING GCHRO, FIRST ABU DHABI BANK

This review of the status of evidence-based HR has shown that since our 2011 research, HR professionals have become more aware of the concept of EBHR and aspire to be more evidence based. However, practice may not be developing as quickly, as widely or as systematically as those who have taken part in this research might hope.

In this final chapter, we consider some practical actions HR professionals can take to enhance the practice of evidence-based HR and identify barriers to overcome. This section of the report:

- Summarises some of the challenges and gaps we have identified in adopting EBHR
- Suggests some possible 'quick wins' for strengthening evidence-based practice, using tools and resources we already have
- Highlights some areas of practice that will require more sustained effort over longer timeframes to bear fruit. These will be examined in more depth in the second part of this research, which will be published in 2024.

5.1 Challenges and gaps In EBHR practice

If evidence-based HR was easy, we would all be doing it by now. It is helpful to be aware of the gaps in practice and the challenges we face so we can be more focused on where we put our efforts.

There are many challenges, and the list below highlights just a few of the common and important ones.

1 Inherent features of people management are challenging for evidence-based practice

- Quantifying the costs and benefits of a decision or intervention is an obvious way of showing that something is likely to be, or has been, effective. But costs and benefits of people-related decisions are often difficult to estimate in advance or even to track. The impact of some activities can play out over many years. Aiming for a fully quantified 'business case' or Return on Investment analysis is often inappropriate. Worse, it can put us off doing a useful rough and ready assessment of costs and benefits because we cannot do a perfect one.
- It is easy to find correlations between actions and metrics in HR, but a correlation does not show a causal relationship. HR often does not collect good quality and consistent data over time to establish causal links.

- People management issues and their impacts are affected by many contextual factors including the nature of the business, the type of workforce, organisational leadership, culture and history, and the economic and labour market environment. There is still debate on how best to balance scientific evidence across organisations on what might be 'best practice HR', with 'best fit' approaches taking contextual factors into account. HR needs at the very least a more nuanced understanding of 'best practice' to avoid just lifting a practice or a product from elsewhere and assuming it should be implemented the same way in a different context. It is CRF's view that there is no such thing as 'best practice' and instead we should focus on applying 'good practices' adapted to the specific context of the organisation where they are implemented.
- Technology can seem like a silver bullet. It does indeed offer many new and shiny opportunities and rapidly advancing methods for analysing large volumes of relatively unstructured data have huge potential for EBHR. But this promise will only be realised if such tools are used with focus and rigour, and in line with both business needs and organisational values.

Accessing relevant and robust evidence is a central challenge



of survey respondents agree or strongly agree that the inaccessibility of internal data is a barrier to adopting evidence-based HR practice

- Commercial HR and business IT systems have taken on much of HR administration in areas such as pay and reward, recruitment, training course bookings etc. These systems are not, however, designed primarily for data analysis. HR people tend not to think early enough about how they will want to use such systems analytically. The result is often that systems do not produce the analyses we need and cannot easily or affordably be customised in the way they hold data, or facilitate analysis beyond a limited range of standard reports. Over three-quarters of those surveyed in this project saw the inaccessibility of internal data as a barrier to adopting evidence-based HR practice.
- Access to external 'scientific' evidence has long been recognised as one of the biggest intrinsic challenges for EBHR (CRF, 2011). Relevant journals are scattered across many business and social science disciplines (e.g. management, psychology, sociology, labour economics, occupational health) as well as publications of the different tribes within HR (e.g. reward, learning and development, OD, leadership, coaching and

counselling, recruitment and selection, workforce planning and analytics). This means knowing where to look for evidence is often difficult. Even when external 'scientific' evidence exists, HR people may not always know about it (Rynes et al, 2002).

- Academic publishing has drifted away from practitioners. In the UK, this gap has widened as performance metrics for academics and their institutions have focused on publishing in academically prestigious journals, which are largely inaccessible and incomprehensible to practitioners.
- There is a huge so-called 'grey' literature in HR, including case studies of organisations, surveys or thought pieces by consultants, contributions by companies and service providers to conferences, and reports in professional magazines, news or social media. This information is often the best or only easily accessible external evidence we can get, but it takes care and skill to use it critically and appropriately in organisational decision-making.

The politics and power dynamics of organisations and the position and influence of HR have a huge effect on organisational decision-making

- The views and values of stakeholders must be built into the principles of EBHR (Barends et al., 2014). Senior managers, both inside and outside HR, often have strong personal views of what they want to be done about people issues. These views can be based on relevant experience but also on anecdotes, what they have done before (often in other businesses), what their friends say, what they see in the news etc. Handling powerful people with strong views is a continuous challenge.
- HR navigates between different stakeholder groups, including managers and leaders at different levels, but also non-execs, shareholders, professional and regulatory bodies and staff both in the business and in the HR function. People management decisions often raise tensions between different groups, especially if their priorities or values define organisational effectiveness differently. If we see 'business needs' only in terms of what senior executives are currently prioritising, that may not align with achieving longer-term, sustainable organisational effectiveness.
- Organisational politics often push HR to go for short-term activity when we know that improvement will take several years. Fields such as talent management, employment brand and employee engagement all suffer from a lack of sustained longer-term action because leaders want to see metrics improving in a few weeks or months. Turnover in HRDs and CEOs, sometimes with interims in between, can also lead to a lack of sustained strategies and activities.

4) The skills and culture of the HR profession are not yet fully supportive of EBHR





evaluate sometimes or occasionally

- Many HR people lack training in scientific methods and do not have well-developed analytical or IT skills. The task of extracting and analysing data is often given to junior staff and senior professionals who may not think through and explain what data they want and what they want to use it for. They may also engage only superficially with the data once it is produced. The result is that HR often fails to access relevant data that is already held, or fails to analyse it to generate insights.
- Evaluation is well accepted in HR but is not always practised. Even among the CRF survey sample, whom one might expect to be interested in EBHR, only a third evaluated HR projects often or always, and half only sometimes or occasionally.
- Two thirds of the survey respondents always or often use their personal experience in decision-making. But it is not clear that reflective practice (learning continuously from experience and relating theory to practice to keep challenging assumptions) is deployed in organisational HR teams as a systematic collective approach.
- Senior HR people do not always role model an evidence-based approach by asking the right questions and using evidence in their own professional judgements, in their discussions with senior leaders, and in their wider internal and external communications.

Overall, these gaps and challenges are leading to an uneven and unsystematic adoption of elements of EBHR.

5.2 QUICK WINS FOR EBHR PRACTICE IMPROVEMENT

The challenges are significant, but there are things we could all be doing right now to make our work in HR more evidence based. In this section, we suggest just a few areas for action which we hope will help you to generate your own ideas about quick wins and practical tips to use with colleagues and in your wider networks. This is not about making huge leaps, but rather about using evidence a bit more and a bit better. That is how expertise grows and cultures shift.

SENSE CHECKING YOUR ARGUMENTS AND EVIDENCE

Perhaps the best quick win is to stop and do a sense check before recommending a particular course of action. It can help to have a checklist of questions to run through yourself and perhaps also with your colleagues and stakeholders. These questions may help to strengthen the habit of using your critical thinking skills to consider evidence in a more systematic way en route to making a decision.

Questions to use in approaching a decision

- Are we clear about the issue? Have we properly investigated what the problem is? Is it significant for the business in terms of strategic priorities? What is the risk if we don't act?
- Do we know what we are trying to achieve? Can we articulate what improvement would look like? What is the envelope of possible changes that leaders might consider? How and when do we intend to measure or assess our starting point and future change?
- Is our proposed decision likely to have business benefits? What evidence do we have that our proposed decision will provide better value than all the other things we would like to do in HR? How long is it likely to take to get the benefits? What might it cost?
- Have we used an appropriate range of sources of evidence, both qualitative and quantitative, internal and external? Have we analysed this data systematically and used these insights?
- In our own professional judgement, based on our experience and knowledge of the organisation as well as talking to colleagues, do we really think this is going to work?

- Have we considered alternative approaches? Have we looked at some alternative ways of addressing the issue? Why have we not chosen these alternatives?
- Have we done something like this before? If so, how did it work out? If it was effective, why was it not sustained? If it didn't work, why would it work better this time?
- What is the logic behind our proposed decision? How do we expect the proposed action to have the effect we want? Through what steps of cause and effect do we expect the impacts and outcomes to be brought about?
- Are key stakeholders bought into the proposed solution and committed to action? Are their issues addressed?
- Do we have the organisational capability and resources to implement our decision? Do managers and employees have the appetite, skills, time and supporting resources (including from HR) to act on the proposed decision well enough and long enough to achieve the outcomes we are seeking?

(2.) USING EXISTING DATA BETTER AND MORE FREQUENTLY

This study has shown that even when data is available, HR does not necessarily use it often enough or with appropriate analysis to generate useful insights and bring those into decision-making.

- Bring data to bear throughout the <u>decision cycle</u>: at the start of the process (in asking clearer questions), in analysis and the search for solutions (i.e. in acquiring, appraising and aggregating evidence), and in implementing and evaluating action (i.e. in applying and assessing evidence). Using data more continuously means looking at previous trends and baseline data before you make the decision as well as tracking change after the decision.
- Consider the trustworthiness of both internal and external data you are using. Is internal data reliable enough for your purpose? Is external evidence relevant to the issue and your context? Do the authors of evidence tell you properly about their sources, samples and methods? Does their evidence seem to be objective, especially if they hope to sell you related products or services?
- Bring existing data together in a systematic way, including factual information, opinion, labour market data and business trends. For example, if a staff survey shows an area of dissatisfaction in part of the business or in a specific workforce group, does this show up in factual data on leavers or productivity? Can you establish which change happened first? Are your trends in line with labour market trends more widely? Bringing different kinds of data together is a key feature of the evolving field of HR analytics.
- Dig a little deeper into your existing organisational data. Don't just look at standard scorecards or routine tables and then jump to react when an aggregate figure goes up or down. Be curious. Find out what's actually going on.





Questions to ask when investigating organisational data and changes

- How has data been changing over a period of time? For most purposes, two or three years is helpful. Before and after major events can be relevant e.g. the pandemic, Brexit, sharp economic rises or downturns, company mergers etc.
- Where is change occurring in the organisation or in the workforce? Always cut through a potentially important trend, such as an increase or decrease in labour turnover, by workforce group (occupation, function or job family) and skill or grade level, not just division or department. Do groups doing the same kind of work but with different demography (age, gender, ethnicity etc) think or behave differently?
- How might a change or trend be affecting the business, positively or negatively? Adding even crude cost estimates of what is happening is better than having no financial data at all.

BENCHMARK JUDICIOUSLY AND WITH CAUTION

- Don't just find out what other organisations are doing in terms of policies, processes and interventions. Find out what's working and not working and in what contexts. For example, collecting benchmark data on rates of pay tells you nothing about the relative effectiveness of different pay systems.
- Before you buy any product or implement an external idea, talk to someone who has tried using it. Some of the most widely adopted fashions in HR, like the 9 box performance-potential grid may have been used by admired companies and seem very appealing, but have been problematic in practice (Yarnall and Lucy, 2015).

Questions to ask when benchmarking HR policies and practices

- What is important about the context? Which employees has the practice been used for, how many and over what length of time?
- What exactly has been done (not just design but implementation)? Are there other processes in place that are important for this one to work well?
- Why was the approach chosen? What diagnostic information or external research evidence informed it?
- What have been the effects of this practice positive and negative or unclear? What evidence is there for these impacts?
- How does this intervention seem to have its effect? What would I need in my organisation for this effect to happen?
- What would be done differently if the practice were being introduced again?

FOCUS ON IMPLEMENTATION, NOT JUST DESIGN

- Before leaping to policy or process re-design or a new intervention, find out if the perceived problem is more to do with implementation than design. Research on high-performance work practices shows that it is bundles of practices, implemented with good quality and widely across the workforce, that are most likely to have a positive impact on organisational performance (Guest et al., 2001). Do you really need to start all over again or can you just do the same thing better?
- To understand implementation, you usually need to investigate how things are working with employees at all levels and with their managers or supervisors, not just how issues are perceived by senior leaders and HR professionals.
- Investigating implementation issues helps with diagnosis of problems and understanding the consequences of process design, but it can also inform our understanding of how to improve the way we implement HR practices in future.

EVALUATING TO IMPROVE

- The survey showed that evaluation is already familiar as part of evidencebased practice, but only a third of respondents say they do so often or always, with a further half only evaluating sometimes or occasionally. More say they use evidence before an HR project than after it.
- Like ROI, evaluation can feel impossibly big and technical; a punishment HR people inflict on themselves or get beaten with. Evaluation does not have to be elaborate to be useful. It can simply involve asking key stakeholders if they think the intervention was worth the effort and investment. Focusing on how evaluation data will be used makes it feel much more practical and natural.
- If you get in the habit of designing evaluation into any initiative from the start, you will know what evidence you will be collecting and when. There is no point having lots of project KPIs if you do not know how you will track them. Design evaluation with the aim of evolving the policy, process or activity in the light of what you find.

Questions to use when approaching evaluation

- Who are the key customers for this evaluation, i.e. who is asking for it and who will decide what to do with our findings?
- What are the purposes of this evaluation in our own professional judgement and in the eyes of our decision makers? Are we trying to prove that something has worked and/or to generate suggestions for how it could be improved?
- Do we want feedback on the process we have implemented (e.g. whether it was easy to access a training course) and/or the impact this HR activity has had (e.g. what employees have learned and how they are using it)?
- Is it worth trying to link impact with business outcomes (e.g. how has the learning from a training intervention affected work output, quality or costs)?
- At what time points do we need to collect evaluation evidence, including baseline data?
- Are there a small number of informative metrics we can reliably collect that would best track the change we are evaluating?
- Which stakeholder groups are well placed to know how well something is working in practice, and therefore should be involved in collecting evidence?
- Can we build the professional reflection of HR into our evaluation? Will HR business partners, for example, be able to observe how managers and employees are responding?
- When and with whom should we share the results of this evaluation? Can we feed it back to those who helped generate the evidence (often employees and managers) as well as to our internal clients (often senior leaders)?
- If this is something we want to track for some time, should we build some more focused questions about it into our regular data collection of, for example, staff attitude data or workforce metrics?



5.3 Building Capability for Ebhr

Not all the challenges of EBHR can be addressed by the 'quick wins' suggested above. This final section summarises some of the longer-term improvements in infrastructure and changes in behaviour required by organisations seeking to go further with EBHR.

The list below only sketches these areas, some of which will be examined more fully in further CRF research.

1 COLLABORATING WITHIN HR AND ACROSS THE BUSINESS

- In the past, HR has often been expected to go off into a corner with a difficult issue and come back with the answer. More collaborative ways of working throughout the cycle of a project or a change are likely to be more effective. Collaboration often needs to be within the HR function (across its silos), with managers (especially those who will take or implement the relevant decisions) and with other functions that can make relevant evidence available (especially finance, strategy/planning, marketing and IT). In some businesses, commercial functions can help link changes in people management with sales and customer behaviour. Collaboration is often welcomed, but relationships take time to develop and embed.
- Collaboration starts naturally in the way an issue is investigated. It can continue through information appraisal and into design. Collaboration brings more evidence into the process. It can also bring useful innovation at the design stage, especially through the practice of co-designing with those who will be users of the policy or process. Collaborators can help pilot solutions and become well-informed champions in wider implementation.

2) REACHING FOR TRUSTWORTHY EXTERNAL EVIDENCE

This study has shown that we could make more systematic use of a wider range of sources of evidence to gain insight. In the survey nearly 60% of respondents saw this as a challenge. There are no quick fixes but some of the things we can work on over time to help ourselves include:

- Critical use of 'grey' literature (genuinely informative if not rigorously scientific) checking who is trustworthy and using those providers more often.
- Looking out for meta-analyses of research in an area studies that have pulled together the findings of a range of existing robust evidence. Academics are often commissioned to do this kind of work by government or employer bodies. The CIPD's (2016) review of evidence on performance management is an example of this approach.
- Using reliable sources of labour market information and commentary. In the UK, we have high quality labour market information, for example from the Office for National Statistics (ONS), especially the Labour Force Survey, and regular commentaries by independent organisations including the Institute for Employment Studies (IES), the Learning and Work Institute and the Institute of Fiscal Studies (IFS).
- Extending and using our professional networks, especially to support more in-depth benchmarking with other employers and more practical and personal links with academics and applied researchers.

3 IMPROVING INTERNAL DATA SYSTEMS

OVER

of those surveyed in this project are hampered by poor quality internal data

• HR people find a lack of access to relevant internal data a major barrier to EBHR. In the survey, over 80% of respondents were hampered by the inaccessibility of internal data and a similar proportion by the poor quality of internal data. To improve this situation, senior players in HR need to engage earlier and more deeply in specifying what data needs to be held and the requirement for flexible and user-friendly analysis software. Specifying only fixed reports is useless for analytical investigation. Analytical needs must influence purchasing and design decisions for information systems.

- In terms of workforce data, check the following in particular: linking people and job data; coding by types of work (including occupation, function or job family); recording workforce flows (into, out of and inside the organisation). Examine trend data over several years. Do not focus only on permanent employees and forget volumes, costs and types of contingency workers.
- Employee surveys and other attitudinal data are an important part of the evidence mix. Review the usefulness of survey questions and qualitative data collection to ensure appropriate and specific enough questions are included on issues of concern. Structured surveys can usefully be complemented by more open-ended methods of capturing employees' and managers' views if organisations also invest in the tools to analyse such data.
- Core HR data needs to be better linked with business output data (so we can look at the crucial issues of productivity and the drivers of performance), financial data on the real costs of employment (including the costs of recruitment, wastage, absence etc) and more specialised HR data systems (e.g. for learning and development, talent management etc.).

4 EVIDENCE-BASED INNOVATION

- Evidence can be used in designing innovative solutions, not just copying something good from elsewhere. Innovation is not just about 'having a good idea' or diving into an experiment. Evidence, including good theory, tells us what is not working well now and what kinds of things might work better. Evaluation of such innovation then tells us whether our ideas are indeed working better. We see evidence-based innovation in fields like medicine (Gawande, 2007) and could hope to see more of it in HR.
- Piloting change does not seem to be a frequent habit in HR. Sometimes it may be difficult or would be seen as divisive, but often it is relatively easy to pilot an approach, or several different approaches, with different parts of the business or workforce. Piloting a solution allows us to modify it before it is 'rolled out' and to learn lessons about how to implement it well.

5 STRENGTHENING HR'S EVIDENCE-BASED SKILLS AND BEHAVIOUR

ONLY of those have a response

of those surveyed in this project have a dedicated team or individual responsible for HR evidence

There are several sets of activities that, over time, may strengthen the capability and confidence of HR to be more evidence-based:

- EBHR requires a strong business focus. In earlier CRF research (2011), this was identified as being both 'business-minded' (aligning solutions with business needs) and 'business-like' (in the use of evidence). Over time, the 'quick wins' earlier in this chapter will help to hold business needs and desired outcomes more firmly in the front of HR's thinking and reduce the temptation to go for the latest HR fad.
- Over three-quarters of those responding to the survey in this project identified a lack of HR capability for data analysis and its use. A third felt this strongly as a barrier to EBHR practice. As with many skills gaps, improvement in analytical capability requires both better skills across HR and a small number of people with advanced and specialised skills who can support them. Many recent and future entrants to HR will have taken courses in statistics or research methods. The CIPD Professional Map includes EBHR as the Insights Focused core behaviour. Some organisations have specialist posts in workforce planning and/or HR analytics, although the survey showed only a third of respondents have a dedicated team or even an individual responsible for HR evidence. But over time, HR can narrow its analytical skills gap if it chooses to do so.
- Reflective practice is an important component of EBHR, but often seems neglected as a capability. It is more than just using our own experience in a general way or anecdotally. It should be more embedded as a collective practice, not just an individual one. For example, this could happen through wash ups and reviews, professional supervision, links to continuing professional development, etc. We need good examples of effective reflective practice in HR and to learn from how this concept is practised in other professions.
- As always, role modelling by senior leaders has a key part to play in changing habits of thought and behaviour. Over three quarters of survey respondents saw the lack of an evidence-based mindset as a barrier to practice. Senior HR people, especially HRDs, need to ask for and discuss relevant evidence with their colleagues and use it themselves in proposing strategies, policies, processes or interventions. They should expect their staff to keep up to date in relevant fields, share this knowledge internally and encourage the active use of external networks.

In this chapter, we have examined some of the challenges in EBHR and gaps in practice. We have outlined, as shown on the table below, some quick wins to improve practice and also some longer-term areas in which EBHR capability might usefully be developed.

QUICK WINS TO STRENGTHEN EBHR PRACTICE	BUILDING CAPABILITY FOR EBHR				
Sense checking your arguments and evidence	Collaborating within HR and across the business				
Using existing data better and more frequently	Reaching out for trustworthy external evidence				
Benchmarking on what works	Improving internal data systems				
Focusing on implementation, not just design	Evidence-based innovation				
Evaluating to improve	Strengthening HR's EB skills and behaviour				

Evidence-based HR is not a threat or a destination, but an exciting way of enriching how we think about and do our work. If we adopt more evidence-based habits and share these with our colleagues, we will find our ways of thinking and behaving will shift over time. We will become more open-minded, more curious, more willing to say we don't know and more interested in finding solutions that are better than what we do now.

In the second part of this research, to be published in spring 2024, we will explore how HR can build strong foundations through evidence-based HR in practice. This will include a model, methodology and key principles, as well as practical case studies setting out how organisations are applying EBHR to strategic people challenges.

STRONG FOUNDATIONS: EVIDENCE-BAS

6.0 APPENDIX

6.1 REFERENCES AND READING LIST

Barends E., Rousseau, D.M. and Briner, R. (2014). **Evidence-based Management: The Basic Principles.** Center for Evidence-Based Management. Netherlands. www.cebma.org

Bird & Bird. (2023). **Criminal Liability Arising from Workplace Obligations.** International Guide. <u>https://www.twobirds.com/en/insights/2023/global/criminal-liability-arising-from-</u>workplace-obligations-international-guide

Bird & Bird. (2023). Managing Compliance: The People Risk Agenda. <u>https://www.twobirds.</u> com/en/trending-topics/managing-compliance-the-people-risk-agenda

Bird & Bird. (2023). Managing Sexual Harassment Risks – Challenges for In-house Legal and HR Teams. <u>https://www.twobirds.com/en/twobirds-tv/Global/Managing-Sexual-</u>Harassment-Risks-Challenges-for-in-house-legal-and-HR-teams

Bird & Bird. (2023). **Risk and Compliance: Global Employee Headcount Thresholds and Employment Law Obligations Guide.** <u>https://www.twobirds.com/en/insights/2023/global/global-employee-headcount-thresholds-and-employment-law-obligations-guide</u>

CIPD. (2016). Could Do Better? Assessing What Works in Performance Management. CIPD.

CIPD. **The Professional Map.** <u>https://www.cipd.org/uk/the-people-profession/the-profession-map</u>

Gawande, A. (2007). Better. Henry Holt and Company.

Guenole, N., Ferrar, J., and Feinzig, S. (2017). **The Power of People: Learn How Successful Organizations Use Workforce Analytics to Improve Business Performance.** FT Press.

Guest, D., King, Z., Conway, N., Michie, J. and Sheehan-Quinn, M. (2001). Voices from the **Boardroom.** CIPD Research Report. London. CIPD.

Hickman, L., Bosch, N., Ng, V., Saef, R., Tay, L., and Woo, S. E. (2022). Automated Video Interview Personality Assessments: Reliability, Validity, and Generalizability Investigations. *Journal of Applied Psychology*, 107(8), 1323.

Hirsh, W. with Briner, R. (2011). **Evidence-based HR: From Fads to Facts?** CRF Research. <u>https://www.crforum.co.uk/research-and-resources/evidence-based-hr-from-fads-to-facts-2</u>

Landers, R. N., Armstrong, M. B., Collmus, A. B., Mujcic, S., and Blaik, J. (2022). **Theory-driven Game-based Assessment of General Cognitive Ability: Design Theory, Measurement, Prediction of Performance, and Test Fairness.** *Journal of Applied Psychology*, 107(10), 1655.

Mercer. (2023). Chief People Officer's Quick Guide to Generative Artificial Intelligence. <u>https://www.mercer.com/insights/people-strategy/future-of-work/chief-people-officers-</u> <u>quick-guide-to-generative-artificial-intelligence</u>

Mercer. (2023). **Global HR Tech Market to Reach \$76.5 billion by 2031.** <u>https://www.thehrobserver.com/technology/global-hr-tech-market-expected-to-reach-76-5-billion-by-2031</u>

Mercer. (2023). Global Talent Trends Report 2022-2023. <u>https://www.mercer.com/insights/people-strategy/future-of-work/global-talent-trends</u>

Mercer. (2023). **Unlock Future Growth Through Transformation.** <u>https://www.mercer.com/</u> <u>solutions/transformation/workforce-and-organization-transformation</u>

Oracle Fusion Analytics. <u>https://www.oracle.com/a/ocom/docs/fusion-analytics-</u> warehouse-infographic.pdf

Oracle Fusion HCM Analytics. Oracle e-book. <u>https://www.oracle.com/uk/a/ocom/docs/</u> oracle-hcm-fusion-analytics-ebook.pdf

Pearl, J. (2009). Causality. Cambridge University Press.

Rottman, C., Gardner, C., Liff, J., Mondragon, N., and Zuloaga, L. (2023). **New Strategies For Addressing the Diversity–validity Dilemma with Big Data.** *Journal of Applied Psychology.*

Rubin, D. B. (2005). Causal Inference Using Potential Outcomes: Design, Modeling, Decisions. *Journal of the American Statistical Association*, 100(469), 322-331.

Rynes, S.L., Brown, K.G. and Colbert, A.E. (2002). **Seven Common Misconceptions About Human Resource Practices: Research Findings Versus Practitioner Beliefs.** *Academy of Management Executive*. 16(3).

Sajjadiani, S., Sojourner, A. J., Kammeyer-Mueller, J. D., and Mykerezi, E. (2019). Using Machine Learning to Translate Applicant Work History Into Predictors of Performance and Turnover. *Journal of Applied Psychology*, 104(10), 1207.

Yarnall, J. and Lucy, D. (2015). Is the Nine-Box Grid All About Being in the Top Right? Horsham: Roffey Park Institute.