

Introduction

Evidence-based practice is about making decisions through the conscientious, explicit and judicious use of the best available evidence from multiple sources. This evidence may come from scientific research, but data, facts and figures from local organizations and even professional experience also constitutes evidence. Over the past few decades the volume of management research in health care has increased dramatically, with topics ranging from the impact of leadership training programs on physicians (Straus, Soobiah, & Levinson, 2013) to strategies for improving patient safety culture (Morello et al., 2013). From the start of the evidence-based medicine movement in the early 1990s, however, it was recognized that not every practitioner would be able to search in research databases and critically appraise the scientific evidence found (Daly, 2005). After all, searching in research databases can be a laborious and time-consuming task, and critically appraising a study's trustworthiness requires specialized skills that not all practitioners possess. For this reason, the movement promoted the development of so-called pre-appraised evidence in the form of evidence-summaries that enable practitioners to quickly consult the best available scientific evidence on issues of concern. As a result, pre-appraised evidence summaries are regularly used to answer questions about the effectiveness of healthcare interventions and have now become a cornerstone of evidence-based practice.

Evidence Summaries

Pre-appraised evidence summaries come in many forms. One of the best-known types is the conventional literature review, which provides an overview of the relevant scientific literature published on a topic. However, a conventional literature review's trustworthiness is often low: clear criteria for inclusion are often lacking, studies are selected based on the researcher's individual preferences, and the research results are generally not subjected to a critical appraisal (Antman, 1992; Bushman & Wells, 2001; Chalmers, Enkin, & Keirse, 1993; Fink, 1998). As a result most conventional literature reviews are prone to severe bias and are therefore considered to be unsuitable for answering questions about the effectiveness of interventions. This is why in many evidence-based disciplines so-called 'systematic reviews' are being used. This type of review is a specific methodology that aims to identify all the relevant studies on a specific topic as comprehensively as possible, and to select appropriate studies based on explicit criteria. In addition, the methodological quality of the studies included is assessed by two researchers independently of each other on the basis of explicit criteria, such as the presence of a pre-test or a control group.(Higgins & Green, 2006; Petticrew & Roberts, 2006). In contrast to a conventional literature review, a systematic

review is transparent, verifiable, and reproducible, and, as a result, the likelihood of bias is considerably smaller. Most systematic reviews also include a meta-analysis, in which statistical analysis techniques are used to combine the results of individual studies to arrive at a more accurate estimate of the effect.

Although the systematic review methodology was originally developed in the field of medicine, it has also shown its added value in disciplines such as nursing, education, policing, criminology, public policy, and management (Petticrew, 2001). In disciplines where evidence-based practice is well established, systematic reviews are provided by global communities such as the Cochrane and Campbell collaborative, and by organizations such as the EPPI Centre. In healthcare management, however, the systematic review methodology is not yet widely adopted and systematic reviews are consequently scarce.

Rapid Evidence Assessments (REAs) and Critically Appraised Topics (CATs) are two other types of evidence summaries that are used to inform practice. Both of these apply the same systematic approach to selecting the studies – the methodological quality and practical relevance of the studies is assessed on the basis of explicit criteria, and the summaries are therefore transparent, verifiable, and reproducible. The main way in which these three types of summaries vary is in relation to the time and resources used to produce them and the length and depth of the results produced. CATs are the quickest to produce and may take one skilled person a few days to produce. REAs might take several people a few weeks. A Systematic Review or Meta-Analysis usually takes a team many months to produce, as it aims to identify all (published and unpublished) relevant studies (see table 1).

In general, a healthcare organization will not have the time or the financial means to assign a team of social researchers to conduct a systematic review on a managerial topic of interest. A CAT, on the other hand, may be a good way to get a quick impression of the available scientific evidence regarding the effect of a specific intervention (such as 'Does conducting hourly ward rounds decrease the number of patient falls?'), but it may be lacking the rigor needed to address a question that might have an impact on the organization as a whole (such as 'What strategies for improving patient safety culture in hospitals are most widely studied and what is known about their effect?'). Because of these practical limitations, some organizations choose to conduct a Rapid Evidence Assessment instead.

Table 1

Quality criteria	SR/MA	REA	CAT	LR
The search for studies is systematic and reproducible	✓	✓	✓	X
All relevant research databases are searched	✓	✓	X	X
Attempts are made to locate unpublished research	✓	X	X	X
Studies are selected based on explicit inclusion and exclusion criteria	✓	✓	✓	X
The selection process is clearly documented, for example, in the form of a flow chart that shows how many studies are excluded and why	✓	✓	X	X
The process to extract data are clearly defined and is presented in a table	✓	✓	X	X
The methodological appropriateness (does the study's research design match the research question)	✓	✓	✓	X
The methodological quality of each study included is appraised using predetermined quality criteria	✓	✓	✓	X
The study selection, the data-extraction and the appraisal of the methodological quality was conducted by at least two reviewers, independently of each other	✓	✓/X	X	X

Rapid Evidence Assessments

A Rapid Evidence Assessment (REA) provides a balanced assessment of what is known in the scientific literature about an intervention or practical issue by using the systematic review method to search and critically appraise primary studies. However, in order to be 'rapid', a REA makes concessions in relation to the breadth and depth of the search process. Aspects of the process that may be limited to reduce the timescale are:

- The question: even more than in a systematic review, a REA calls for the question to be focused and specified (population, intervention, comparison, outcome, context).
- Searching: a limited number of databases may be consulted, and unpublished research can be excluded. Sometimes a REA may be limited to only meta-analyses or systematic reviews.

- Data extraction: only a limited amount of key data may be extracted, such as year, population, sector, sample size, moderators/mediators, main findings, and effect size.
- Critical appraisal: quality appraisal may be limited to methodological appropriateness (does the study's research design match the research question, for example) and methodological flaws.

Due to these limitations, a REA may be more prone to selection bias than a systematic review. The need for obtaining evidence rapidly and at relatively limited costs should hence always be greater than the risk related to lacking a completely comprehensive review of all the evidence on the topic.

To illustrate how a REA can be conducted and how the outcome can inform management practice, this chapter features a REA on knowledge worker performance. The REA concerned was assigned by a group of eight large UK- and US-based companies wishing to understand what academic research had discovered about the determinants of knowledge worker performance. Although none of the eight organizations was a healthcare organization, the topic investigated is of great importance to the practice of healthcare management. In the past three decades, the number of workers in healthcare engaged in knowledge work has substantially increased. Whether nurses, physicians, managers, or staff members, nowadays most workers in healthcare organizations are highly dependent on information and communication technology and are involved in work that involves a high level of cognitive activity. In fact, for most healthcare organizations, processing existing knowledge in order to create new knowledge that can be used to develop new diagnostic tools and treatments is an important part of core business. It is clear that healthcare managers have a responsibility to optimize work processes and enhance performance, yet many struggle to empower knowledge workers. In fact, when healthcare managers are asked what factors contribute to improving knowledge-worker performance, most of them remain silent (Davenport, Thomas, & Cantrell, 2002). The REA presented in the rest of this chapter will provide an evidence-based answer.

A Rapid Evidence Assessment of the research literature on the factors associated with knowledge worker performance.

BACKGROUND

In the summer of 2013, a group of eight companies wished to understand what academic research has discovered about the determinants of knowledge worker performance. For each company the pay off for enhancing knowledge worker performance would be huge, not only in terms of finance, but also in terms of innovation, which for some participants is a key success factor for long term profitability and growth. Although all organizations used various measures and controls to monitor and enhance performance, they lacked a basic understanding of what really drives knowledge worker performance. For this reason the organizations commissioned the Center for Evidence-Based Management (CEBMA)¹ and Advanced Workplace Associates (AWA)² to answer the following key questions:

1. *What is "knowledge work"?*
2. *Which of the factors that have an impact on the performance of knowledge workers are most widely studied and what is known of their effect?*
3. *How do these factors enhance the performance of knowledge workers and how can they be measured? In addition, what are the implications of the findings for management practice?*

Reviewers from CEBMA³ conducted a Rapid Evidence Assessment (REA) of the available scientific literature and AWA used its knowledge and experience to translate the academic findings into practical guidelines. Consequently the results of this work can be relied upon as the 'best available evidence' on this subject at this time.

SEARCH STRATEGY: How was the research evidence sought?

The following three databases were used to identify studies: ABI/INFORM Global from ProQuest, Business Source Premier from EBSCO and PsycINFO from Ovid. The following generic search filters were applied to all databases during the search:

1. Scholarly journals, peer-reviewed
2. Published in the period 1980 to 2013
3. Articles in English

¹ CEBMA is a non-profit member organization dedicated to promoting evidence-based practice in the field of management.

² AWA is a UK based workplace management consultancy

³ The REA in this example was conducted by Eric Barends, Cedric Velghe, and Lien Vossaert

A search was conducted using combinations of different search terms, such as 'productivity', 'performance', 'knowledge work' and 'knowledge based business'. We conducted 5 different search queries, which yielded a total of 570 studies (see table 1).

Table 1

ABI/Inform Global, Business Source Elite, PsycINFO, peer reviewed, scholarly journals, Oct 2013			
Search terms Set A	ABI	BSP	PSY
S1: ab(productivity) AND su(meta-analysis)	33	42	18
S2: ab(performance) AND su(meta-analysis)	299	262	264
S3: ab(employee*) OR ab(worker*) OR ab(team*)	87,517	139,500	135,288
S4: S2 AND S3	81	49	17
S5: S1 OR S4, combined, duplicates removed	175		
Relevant	52		
Search terms Set B	ABI	BSP	PSY
S1: ab(performance) OR ab(productivity)	137,058	227,727	192,997
S2: ab("knowledge work*") OR ab("knowledge org*") OR ab("knowledge based org*") OR ab("knowledge based bus*") OR ab("knowledge intensive")	1903	2,007	617
S3: S1 AND S2, Narrowed by date range: 1990 - 2013	396	430	120
S4: ab(stud*) OR ab(research)	483,410	705,559	1,079,859
S5: S3 AND S4	259	280	86
Combined, duplicates removed	395		
Relevant	109		

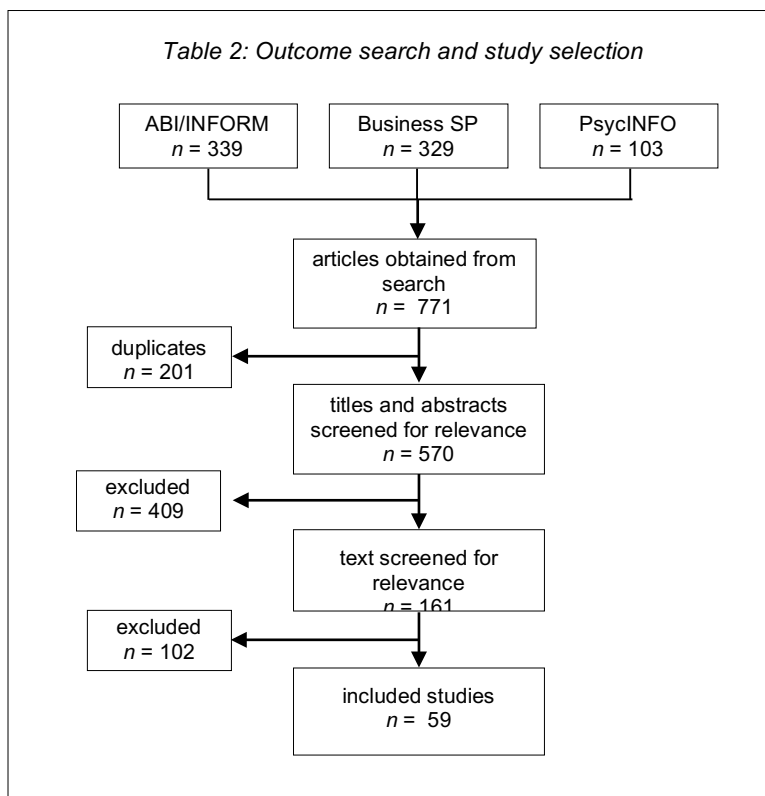
SELECTION: How were the included studies selected?

The following two inclusion criteria were applied to the selection of studies:

1. Type of study: only quantitative studies were included
2. Outcome measurement: the only studies included were those in which the effect of an independent variable on the productivity, performance or innovation of individual employees, teams or organizations was measured.

Study selection took place in two phases. First, the titles and abstracts of the 570 studies were screened for their relevance to this REA. In case of doubt, lack of information, or disagreement, the study was included. Duplicate publications were removed. This first phase yielded 52 meta-analyses and 109 single studies. Second,

studies were selected for inclusion based on the full text of the article. This second phase yielded 24 single studies and 35 meta-analyses (see table 2). A meta-analysis is a study that uses statistical techniques to combine the results of a number of studies published on the same topic to obtain a pooled quantitative estimate of the overall effect of a particular variable on a specific outcome.



CRITICAL APPRAISAL AND CLASSIFICATION: How was the quality of the evidence found judged?

From each study we extracted and interpreted information relevant for the REA question, such as sample size, population, research design, independent variable, outcome measures, effect size and findings. The research design of the included studies was systematically assessed and categorized according to Campbell's and Petticrew's classification system (Petticrew & Roberts, 2006; Shadish, Cook, & Campbell, 2002) to ensure a good understanding of the robustness of each study. When looking to identify cause and effect (If I do A will it result in B occurring?), a

study that uses both a control group and random assignment is regarded as the ‘gold standard’. Next most valuable are non-randomized studies and before-after studies. Cross-sectional studies (surveys) are regarded as having the greatest chance of bias in their outcome and thus come lower down in the ranking in terms of robustness. Meta-analyses in which statistical analysis techniques are used to pool the results of controlled studies are therefore regarded as the highest quality evidence.

LIMITATIONS OF THE EVIDENCE-BASE

Most of the studies reviewed in the 35 meta-analyses employed cross-sectional studies and controlled studies. The overall quality of the evidence was therefore moderate to high. Finally, because concessions were made in relation to the breadth and depth of the search process, such as the exclusion of unpublished research, this REA may be prone to selection bias in that it is not a completely comprehensive assessment of all the published and all the unpublished evidence on the topic.

RESULTS: What was found?

Question 1: What is knowledge work?

The term ‘knowledge work’ was coined in 1959 by Peter Drucker to describe work that occurs primarily because of mental processes rather than physical labor (Drucker, 1959). In the past century, the proportion of the workforce engaged in knowledge work has increased dramatically, as organizations have moved from manual production to more knowledge-driven production as these estimates suggest:

- 1920: 30% (Davenport et al., 2002)
- 1956: 50% (Naisbitt, 1982)
- 1980: 70% (Thomas & Baron, 1994)

Since then many definitions have been put forward and there are nearly as many definitions of both ‘knowledge work’ and ‘knowledge workers’ as there are publications on the topic. When examined closely most definitions seem to have the following common elements:

- Distribution or application of knowledge
- Highly educated, autonomous professionals
- Use of information technology as an integral part of the work process
- A work process that is difficult to standardize
- Complex and intangible outcomes

Most studies acknowledge that the difference between manual work and knowledge work is a continuum. In addition, even the highest level of knowledge work includes mundane tasks such as storing information, returning telephone calls, and composing and responding to emails (Heerwagen, Kampschroer, Powell, & Loftness, 2004). To assess the level of knowledge work different aspects of the job should be examined such as ⁴:

- Autonomy (the degree of worker control over how a task is done)
- Structure (the degree of established rules, policies, or procedures about how a task is done)
- Knowledge (the degree to which having previous knowledge and executing cognitive processes are part of the task).
- Complexity (the degree to which a task offers difficulty in understanding or has confusing interrelated sub-tasks)
- Routine and repetitiveness (the degree to which a task is part of a regular or established procedure characterized by habitual or mechanical performance of tasks)
- Physical effort (the degree to which a task requires body strength, coordination, and skill in order to be performed)

Question 2: Which of the factors that have an impact on the performance of knowledge workers are most widely studied and what is known of their effect?

Table 3

Variable	Performance measure	Nr of studies	Mean correlation weighted by sample size
1. Social cohesion	team performance, hard outcome	40+	.49
	team performance, behavioral		.70
2. Supervisory support	employee performance	50+	.53
3. Information sharing	team performance	60+	.51
4. Vision / goal clarity	team innovation	80+	.49
5. External communication	team performance, innovation	30+	.48
6. Trust	team performance	200+	.32 to .62

⁴ Adapted from: Ramirez, Y.W. (2006), Defining Measures for the Intensity of Knowledge Work in Tasks and Workers, Department of Industrial Engineering, University of Wisconsin-Madison, Madison, WI.

A total of 76 factors were identified, accounting for more than 145 effect sizes. Based on the analysis of the 59 included studies we can assume that, with regard to the performance of knowledge workers, the 6 factors presented in table 3 are the factors with the highest association.

Question 3: How do these factors enhance the performance of knowledge workers and how can they be measured? In addition, what are the implications for management practice?

Factor 1. Social Cohesion

Social cohesion refers to a shared liking or attraction to the group, emotional bonds of friendship, caring and closeness among group members, and enjoyment of each other's company (Chicchio, 2009). Social cohesion is not a stable trait; it can (and most likely does) change over time in both its form and intensity throughout the processes of group formation, group development, group maintenance, and group dissolution (Carron & Chelladurai, 1981). Although social cohesion is dynamic it is unlikely to change dramatically on a moment-to-moment basis.

How does social cohesion enhance performance?

A high level of social cohesion among team members creates a psychologically safe environment in which team members feel free to explore new ways of doing things (Hulsheger, Anderson, & Salgado, 2009). The notion that a person is more willing to take risk in a situation in which he/she has a reliable bond with an important other has been confirmed in other areas of psychology, such as developmental psychology (e.g. child development theories suggests that children who are well bonded with their parents engage in more exploratory and learning behavior). Furthermore, knowledge workers who have strong feelings of belongingness and attachment to their colleagues are more likely to cooperate and interact with each other, and thus more likely to exchange ideas and share information (Hulsheger et al., 2009). For example, operating room nurses are more likely to share innovative ideas to improve patient safety with surgeons when there is a high level of social cohesion between these two professional groups.

How can social cohesion be measured?

The level of social cohesion can be measured with the five questions adapted from the Group Cohesion Questionnaire (GCQ, Carless & De Paola 2000) that are listed in Annex I.

Factor 2. Perceived Supervisory Support

When knowledge workers interact with and receive feedback from their manager (supervisor), they form perceptions of how the manager supports them. This perception is based on how the workers feel the manager helps in times of need, praises the workers or the team for a task well done or recognizes them for extra effort. This is known as perceived supervisory support (PSS).

Why does strong supervisory support enhance performance?

The construct of perceived supervisory support stems from the norm of reciprocity, which states that people treat others as they would like to be treated, repaying kindness with kindness and retaliating against those who inflict harm (Brunell et al., 2013; Gouldner, 1960). Put differently, when a manager helps his or her employees well in times of need or recognizes them for extra effort, the employees will feel inclined to act in a way that is of value to the manager (such as meeting goals and objectives) and thus the organization as a whole (Edmondson & Boyer, 2013; Eisenberger, Huntington, Hutchison, & Sowa, 1986). Not surprisingly, physicians experiencing inadequate supervisory support tend to describe their commitment to the hospital and its patients in negative terms, which negatively affects their performance (Tayfur & Arslan, 2013)

How can perceived supervisory support be measured?

The level of perceived supervisory and organizational support can be measured with the six questions adapted from the validated Survey of Perceived Organizational Support (SPOS) by Eisenberger et al (1986) that are listed Annex I.

Factor 3. Information Sharing

Information sharing (IS) refers to the extent to which teams are utilizing the individual members' distinctive knowledge for the team's benefit. Especially if complex problems have to be addressed, IS is indispensable in that it allows team members to share their knowledge and past experiences and exchange and discuss ideas, which is particularly important for the generation of new ideas (Hulsheger et al., 2009).

Transactive Memory System

An important concept related to IS is that of Transactive Memory System (TMS). The concept was originally developed through the observation of dating couples.

Researchers noticed that dating couples in a close relationship treat their partners as an external memory device. TMS within a team refers to a form of knowledge that is embedded in a team's collective memory. This collective memory works like an indexing system that tells members who knows what.

How does information sharing enhance performance?

It is believed that the more team members share information, the better the group decisions will be, and as a result the better overall group performance (Hackman, 1990). In addition IS is believed to increase the awareness of who knows what in the group (TMS). A well-developed TMS is thought to improve team performance because it gives members quick and coordinated access to one another's specialized expertise, enabling them to effectively combine knowledge to solve complex problems (Hsu, Shih, Chiang, & Liu, 2012).

How can Information Sharing and Transactive Memory System be measured?

The level of IS and TMS can be measured with the five questions adapted from questionnaires by Bock et al (2005), Yeung Choi (2010), Lewis (2003) and Bunderson and Sutcliffe (2002) that are listed in Annex I.

Factor 4. Vision and Goal Clarity

The notion of vision refers to an idea of a valued outcome which represents a higher order goal and motivating force at work (Kouzes & Pozner, 1987; West, 1990). Several studies have demonstrated that a clear vision at the team level tends to have a positive effect on the performance of individual teams as well. In this sense the notion of 'vision' refers to the extent to which knowledge workers have a common understanding of objectives and display high commitment to those team goals. For this reason 'vision' at the team level is also referred to as 'goal clarity'.

Why does a clear vision and goal clarity enhance performance?

Several researchers have pointed out that for a team to be effective, team members need to be committed to team objectives and should share a sense of purpose and responsibility (Hulsheger et al., 2009). Such commitment can help to point a team of knowledge workers in the same direction, which enhances cooperative and goal-directed behavior. In addition, clear goals help knowledge workers see connections between their personal values and the values of the team, which increases the degree to which they find meaning in their work (Wright & Pandey, 2011). As such, a clear

vision and commitment to long- term objectives plays an important role in allowing ‘freedom to act’, while at the same time making sure knowledge workers are responsible for producing results (Simon, Staschel, & Covin, 2011).

How can Vision and Goal Clarity be measured?

The level of vision and (perceived) goal clarity can be measured with the five questions adapted from validated questionnaires by Rainey (1983), Locke (1984), Lee (1991) and Simon (2011) that are listed in Annex I.

Factor 5. External Communication

External refers to the ability of teams to span boundaries (team and organizational) to seek information and resources from others. Research has demonstrated that the more external communication knowledge workers experience with colleagues outside their team or organization, the more likely they are to be innovative (Hulsheger et al., 2009). For example, a study of over 400 California hospitals over ten years found considerable support for the relationship between inter-organizational links and innovation in hospital services and technology (Goes & Park, 1997)

How does External Communication enhance performance?

External communication enhances the likelihood of obtaining new knowledge and discloses new perspectives. These in turn spark the development of new ideas (creativity) or the adoption of new ways of doing things (innovation). Knowledge worker teams whose tasks require creativity and innovation tend to experience enhanced performance when they undertake external communication.(Ancona & Caldwell, 1992).

How can External Communication be measured?

The level of external communication can be measured with the three questions adapted from validated questionnaires by Teigland and Wasko (2003) and Ancona and Caldwell (1992) that are listed in Annex I.

Factor 6. Trust

Trust refers to a feeling one can have regarding another person or group of persons. It is created by the expectation that the actions of the other person(s) will be at one’s benefit or at least not detrimental to him or her (Gambetta, 1988). When

focusing on knowledge workers there are two groups of people within the organization to which they can direct the feeling of trust, this is their colleagues and their manager. Trust in colleagues and teammate is called horizontal trust. In organizations with a high level of horizontal trust knowledge workers expect their colleagues to take collective interests into account when making decisions and not only act out of self-interest. Vertical trust refers to the trust knowledge workers have in management.

How does trust enhance the level of performance?

Trust is particularly crucial for the performance of knowledge workers because it influences whether individual group members are willing to share and exchange information and knowledge with each other (Robertson, Gockel, & Brauner, 2012). As such, the performance of knowledge workers is indirectly dependent on the level of horizontal trust. In addition, vertical trust helps in aligning the team goals with the goals of the management. If the team lacks trust in management, it is possible that there is no alignment between these goals.

What determines the level of trust in a group or team?

Positive exchange experiences are seen as important antecedents of trust. When a team has experienced several positive exchanges, sharing of knowledge and ideas is facilitated. In addition, when teams are composed of individuals with similar characteristics trust is more likely to develop. An important rule is that trust begets trust, while distrust begets distrust (March & Olsen, 1975). When a manager trusts his/her employees, employees are more likely to reciprocate this feeling of trust, and the other way around. Empowered nurses, for example, report higher levels of vertical trust (Laschinger, Spence, Finegan, Shamian, & Casier, 2000). The same holds for trust in colleagues.

Another important factor that determines the level of trust is that of procedural justice. Procedural justice describes the fairness of the procedures used to determine organizational outcomes (Connell, Ferres, & Travaglione, 2003). For instance, the perception of the fairness of organizational systems and processes such as performance appraisal, professional development opportunities and job security seem to be very important elements of trust towards management (Korsgaard, Schweiger, & Sapienza, 1995)

How can Trust be measured?

Both the level of horizontal and vertical trust can be measured with the 7 questions adapted from the COPSOQII that are listed in Annex I. Both types of trust need to be measured separately as they are different constructs, which are not necessarily positively related.

SOME FINAL THOUGHTS ON IMPLICATIONS FOR PRACTICE

The 6 factors as outlined here have been derived through a scientifically robust review of over 500 research studies. The studies were undertaken in leading academic institutions across the world and were published in international peer-reviewed journals. We believe that the findings of this REA therefore represent 'the best available scientific evidence' in relation to knowledge worker performance at this time.

During our discussions of the findings with the eight companies who commissioned this REA the power of these findings became clear. Imagine if a management team was to apply the 6 factors across all aspects of their organization so that every function was focused on creating the conditions to give knowledge workers their best chance of being effective? What if senior managers and leaders were brave enough to start again with a blank sheet of paper? What would it mean for leadership, communication, recruitment, and the way objectives and goals are set?

But the 6 factors are not simply for leaders prepared to take a blank sheet. They also provide guidance for managers wanting to improve the performance of their teams and business leaders seeking to take a more evolutionary approach to knowledge worker performance. Some of the managers and business leaders that participated in this REA pointed out that the outcome provides an evidence-based framework relating to "what to differently or stop doing in my job to enhance performance".

Implications for healthcare organizations

All healthcare organizations use indicators to monitor and enhance performance. The outcome of this REA, however, demonstrates that most of the indicators healthcare organizations use, such as job satisfaction and employee engagement, correlate poorly with knowledge worker performance and are therefore of limited value (Bowling, 2007). Thus, most healthcare organizations are doing a poor job at creating the conditions for their doctors and nurses to be effective because their managers focus on the wrong indicators. We therefore hope that the outcome of this REA will not only contribute to a better understanding of the factors that affect

knowledge worker performance, but will also serve as a convincing example of how a REA can help healthcare organizations stop spending money on management practices that are ineffective or even harmful to their members and their patients.

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ANNEX I

Measuring the 6 factors

Social Cohesion

1. Members of our team like to spend time together outside of work hours
2. Members of our team get along with each other
3. Members of our team would rather get together as a team than go out on their own
4. Members of our team defend each other from criticism by outsiders
5. Members of our team help each other on the job

Perceived supervisory support

1. My supervisor is willing to extend him- or herself in order to help me perform my job the best of my ability
2. My supervisor takes pride in my accomplishments at work
3. My supervisor tries to make my job as interesting as possible
4. The organization values my contribution to its well-being
5. The organization strongly considers my goals and values
6. The organization really cares about my well-being

Information sharing and TMS

1. Our team members share their work reports and official documents with other team members.
2. Our team members share their experience or know-how with other team members.
3. Information to make key decisions is freely shared among the members of the team
4. Our team members trust that other members' knowledge is credible.
5. Our team members are confident of relying on the information that other team members bring to the discussion.

Vision and goal clarity

1. This team has clearly defined goals
2. Our team goals are clear to everyone who works here
3. It is easy to explain the goals of this team to outsiders
4. I have specific, clear goals to aim for in my job
5. If I have more than one goal to accomplish, I know which ones are most important and which are least important.

External communication

1. Our team members use information obtained from external teams everyday
2. Our team is contacted by outside teams for knowledge and information
3. Our team scans the external environment for ideas and solutions

Trust

Horizontal trust

1. Our team members withhold information from each other
2. Our team members withhold information from the management
3. Our team members in general trust each other

Vertical trust

1. The management trusts the team to do their work well
2. The team members can trust the information that comes from the management
3. The management withholds important information from the team members
4. The team members are able to express their views and feelings towards management

The level of each factor can be scored as follows: Strongly agree = 5; Somewhat agree = 4; Neither agree or disagree = 3; Somewhat disagree = 2; Strongly disagree = 1. When the aggregate team score is low (e.g. below 3.5), this is a strong indication for low team performance.

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