Chapter 2

Conceptual Frameworks of Individual Work Performance - A Systematic Review

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2

Abstract

Objective: Individual work performance is differently conceptualized and operationalized in different disciplines. Aim of the current review was twofold: 1) identifying conceptual frameworks of individual work performance, 2) integrating these in order to reach a heuristic conceptual framework.

Methods: A systematic review was conducted in medical, psychological and management databases. Studies were selected independently by two researchers, and included when they presented a conceptual framework of individual work performance.

Results: 17 Generic frameworks (applying across occupations) and 19 job-specific frameworks (applying to specific occupations) were identified. Dimensions frequently used to describe individual work performance were task performance, contextual performance, counterproductive work behavior, and adaptive performance.

Conclusion: Based on the literature, a heuristic conceptual framework of individual work performance was proposed. This framework can serve as a theoretical basis for future research and practice

Introduction

Individual work performance is an issue that not only has grasped companies all over the world, but also has fueled a great deal of research in fields of management, occupational health and work and organizational psychology [1-4]. Numerous studies on individual work performance have been conducted. However, different approaches of studying individual work performance circulate in today's literature. Whereas the field of management has primarily occupied itself with how one can make an employee as productive as possible, the field of occupational health has focused on how to prevent productivity loss due to a certain disease or health impairment [5;6]. Work and organizational psychologists, on the other hand, have an interest in the influence of determinants, such as work engagement, satisfaction, and personality, on individual work performance [7-9].

In all of the above mentioned research fields, individual work performance is a relevant outcome measure of studies in the occupational setting. However, despite its importance, no comprehensive conceptual framework of individual work performance exists. A solid theoretical framework is a prerequisite for optimal measurement of the construct [4]. It has typically been assumed that what constitutes individual work performance differs from job to job. As a result, countless measures of work performance have been used [10]. So far, the assessment of individual work performance has primarily focused either on objective measures of work productivity (such as number of days absent, counts of specified acts, or output maintained in organizational records) or on subjective judgments of quantity and quality of work from the employee him- or herself, peers or supervisors [11;12]. While these methods may provide valuable information, it can be argued that none of them capture the complexity and full range of behaviors that constitute an employee's performance at work [4;13].

This raises the question of what exactly constitutes individual work performance. Work performance is an abstract, latent construct that cannot be pointed to or measured directly [14]. It is made up of multiple components, or *dimensions*. These dimensions, in turn, are made up of indicators that can be measured directly. In order to conceptualize and operationalize individual work performance, we should explicate the construct domain of work performance and identify its dimensions and indicators [4;14;15]. Whereas the dimensions may generalize across jobs, the exact indicators can differ between jobs [14]. In the field of psychology, the conceptualization of work performance has received relatively

much attention. A widely endorsed definition of work performance is that of Campbell: “behaviors or actions that are relevant to the goals of the organization” [4]. Three notions accompany this definition: 1) work performance should be defined in terms of behavior rather than results, 2) work performance includes only those behaviors that are relevant to the organization’s goals, and 3) work performance is multidimensional. As distinguishing between behavior and results can be difficult, others have included results in their definition of work performance. For example, Viswesvaran and Ones [11]. defined work performance as: “scalable actions, behavior and outcomes that employees engage in or bring about that are linked with and contribute to organizational goals.”

Work performance should be distinguished from work productivity, two concepts that often seem to be used interchangeably in the literature. Work productivity is defined as input divided by output [12]. Thus, work productivity is a narrower concept than work performance. It is also important to distinguish between causal variables and indicators of work performance. Causal variables determine or predict one’s level of work performance, whereas indicators are reflections of work performance [16]. For example, job satisfaction is considered a determinant of work performance [8], whereas work quality is an indicator of work performance [4]. The current review only focuses on indicators of work performance and not on its determinants.

Thus, until now, no clear consensus exists on what exactly constitutes individual work performance. Aim of the current review was twofold: 1) identifying conceptual frameworks of individual work performance, and 2) integrating the conceptual frameworks in order to reach a heuristic conceptual framework of individual work performance.

Methods

Search strategy

A systematic search was conducted to identify frameworks describing the construct of individual work performance. The primary searches were conducted April/May 2010 in two medical databases (PubMed and Embase.com), one psychological (PsycINFO) and one management (ABI Inform) database. The search was restricted to literature written in English or Dutch. No restrictions were placed on year of publication or publication type. All search strategies were developed with the aid of experienced search specialists. Search strategies are presented in Table 1. Additional

studies were identified by scanning the reference lists of suitable studies and in personal collections.

Study selection

The first reviewer determined the eligibility of studies on the basis of title and abstract. Studies that presented a framework describing the construct of individual work performance were included. Exclusion criteria were: 1) not on work performance, 2) not at the individual level, or 3) not on a framework describing the construct of individual work performance. A second reviewer independently determined the eligibility of the studies that the first reviewer found suitable or doubtful. In addition, the second reviewer determined the eligibility of 100 random studies per database, thus, a total of 400 random studies, to get an indication of whether the first reviewer had missed relevant studies. Differences in judgment were resolved through a consensus procedure. Finally, the first reviewer determined eligibility of all suitable or doubtful studies based on full text.

Table 1. Search strategies

Database	*Search strategy*
PubMed	("employee performance appraisal"[Mesh] OR "task performance and analysis"[Mesh] OR "efficiency"[Mesh] OR "absenteeism"[Mesh] OR "sick leave"[Mesh] OR "performance"[Title/Abstract] OR "productivity"[Title/Abstract] OR "absenteeism"[Title/Abstract] OR "presenteeism"[Title/Abstract]) AND ("work"[Mesh] OR "workplace"[Mesh] OR "employment"[Mesh] OR "occupations"[Mesh])AND ("Models, Nursing"[Mesh] OR "Models, Theoretical"[Mesh] OR "Models, Economic"[Mesh] OR "Models, Psychological"[Mesh] OR "Models, Organizational"[Mesh] OR "model*"[Title/Abstract] OR "theor*"[Title/Abstract]) AND (Humans[Mesh])
Embase.com	('job performance':cl,ab,ti OR 'task performance':cl,ab,ti OR 'productivity':cl,ab,ti OR 'absenteeism':cl,ab,ti OR 'medical leave':cl,ab,ti OR 'presenteeism':ab,ti) AND ('work':cl,ab,ti OR 'occupation':cl,ab,ti OR 'employee':cl,ab,ti OR 'job':cl,ab,ti) AND ('model':cl,ab,ti OR 'theory':cl,ab,ti OR 'conceptual framework':cl,ab,ti) AND [humans]/lim
PsycINFO	(("job performance" OR "employee productivity" OR "occupational success" OR "employee absenteeism" OR “presenteeism” OR "sick leave") AND ("models" OR "theories" OR "model" OR "theory")).ti,ab,id.
ABI Inform	LSU(job performance) OR LSU(performance appraisal) OR LSU(organizational behavior) OR LSU(employee attitude) OR

	LSU(performance management) OR LSU(performance evaluation) AND TI OR ABS("job performance" OR "performance appraisal" OR "employee performance" OR "work productivity" OR "absenteeism" OR "presenteeism") AND (LSU(models) OR LSU(theory) OR TI("model") OR TI("theory") OR ABS("model") OR ABS ("theory")) AND LSU(individual) OR ABS("individual") OR TI("individual")

Results

Study selection

The searches in PubMed, Embase.com, PsycINFO and ABI Inform resulted in 760, 553, 1328, and 478 hits, respectively. From this total of 3119 hits, 252 duplicates were removed, resulting in 2867 studies to be screened. Of these, 107 studies were found eligible based on title and abstract. Consensus rates between the two reviewers were 75% for PubMed, 79% for Embase.com, 84% for PsycInfo, and 68% for ABI Inform. Differences in judgment were resolved through a consensus procedure, resulting in full agreement. The full papers of the 107 eligible studies were screened. These included 65 articles, 11 book chapters and 31 dissertations. Of these 107 results, 24 dissertations could not be retrieved in full text. They could therefore not be judged on their eligibility and were excluded from the review. Out of the 83 remaining studies, 49 were included in the review, based on full text. Seven of the included studies were identified in PubMed, one in Embase.com, 33 in PsycInfo and 8 in ABI Inform. With 9 articles found in additional searches of reference lists and of TNO and VU University medical centre literature databases, a total of 58 studies were included in this review. Forty of these were articles, 12 were book chapters and 6 were dissertations. Figure 1 presents a flowchart of the study selection process. In short, 921 of the studies were excluded because they did not report on work performance, 119 because they did not report on work performance at the individual level, and 1754 because they did not present a framework describing the construct of individual work performance.

General description of the studies

Fifty-eight studies were identified that presented a conceptual framework of individual work performance. In 35 of the 58 studies an original conceptual framework was presented. The remaining 23 studies did not present a new conceptual framework, but referred to one of the other original conceptual frameworks. Seventeen generic frameworks (i.e. applying to work performance

across all occupations) and 18 job-specific frameworks (i.e. applying to work performance in a specific occupation) were identified. Table 2 presents an overview of identified conceptual frameworks. A description of some often presented frameworks follows.

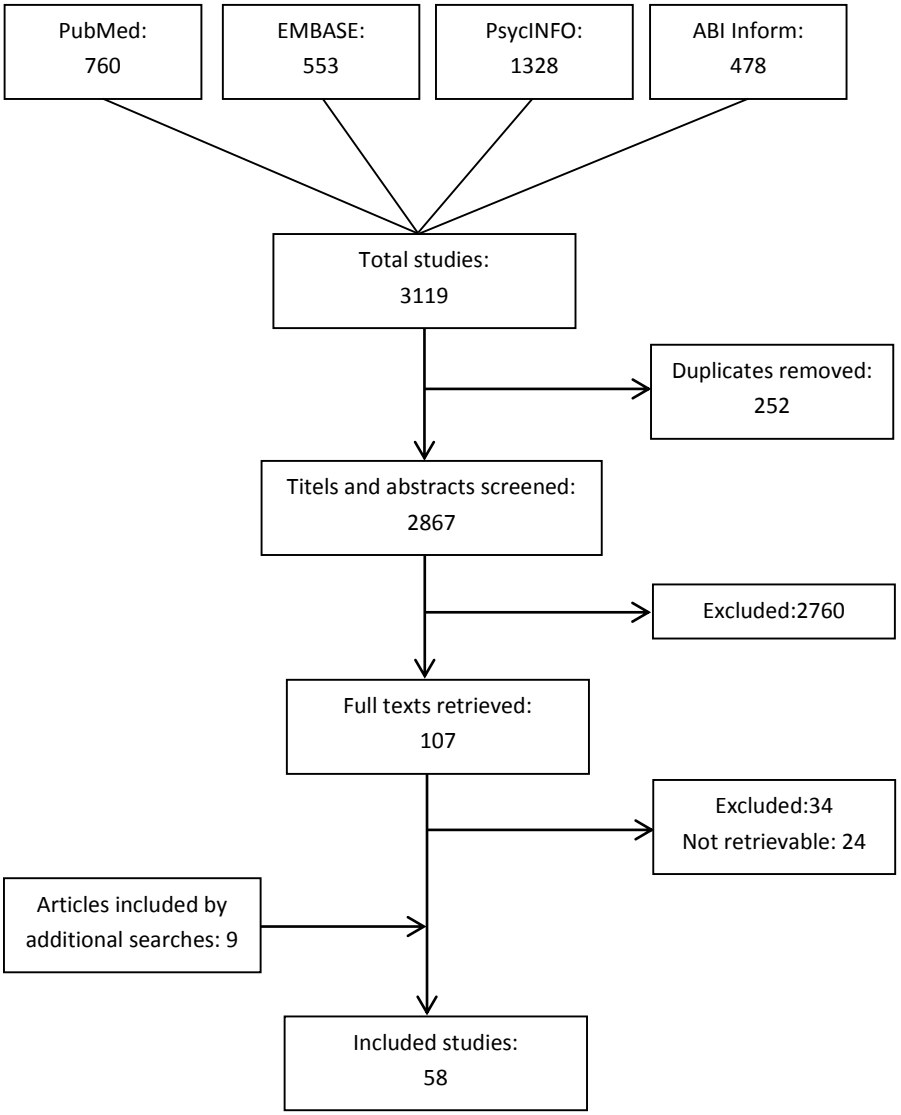

Figure 1. Flowchart of study selection process

Generic frameworks

Murphy [17] and Campbell [4] were among the first to define the domain of individual work performance by specifying the major dimensions of generic work performance. According to Murphy, the work performance domain could be modeled using the following four dimensions: 1) *task behaviors*, 2) *interpersonal behaviors* (communicating and cooperating with others), 3) *down-time behaviors* (work-avoidance behaviors) and 4) *destructive/hazardous behaviors* (behaviors that lead to a clear risk of productivity losses, damage, or other setbacks). Campbell's work performance framework proposed eight work performance dimensions: 1) *job-specific task proficiency*, 2) *non-job-specific task proficiency*, 3) *written and oral communication*, 4) *demonstrating effort*, 5) *maintaining personal discipline*, 6) *facilitating peer and team performance*, 7) *supervision*, and 8) *management and administration*. According to Campbell, these eight dimensions are sufficient to describe the latent structure of performance at a general level. However, he also noted that the eight factors can have different patterns of subdimensions, and their content and salience can vary across jobs.

On the basis of the conceptual grouping of 486 measures of work performance found in the literature, Viswesvaran developed 10 dimensions of individual work performance [18]. Besides a general factor of overall job performance, he distinguished the dimensions of *productivity, quality of work, job knowledge, communication competence, effort, leadership, administrative competence, interpersonal competence,* and *compliance with/acceptance of authority*.

Borman & Motowidlo argued that the entire work performance domain could be encompassed by the comprehensive dimensions of *task performance* and *contextual performance* [19]. They describe task performance as behaviors that directly or indirectly contribute to the organization's technical core, and contextual performance as behaviors that support the organizational, social and psychological environment in which the technical core must function. Examples of contextual activities are volunteering, persisting, helping, cooperating and following rules [19]. Task activities usually vary between different jobs, whereas contextual activities are common to many or all jobs.

In the early 2000s, Viswesvaran and Ones [11] and Rotundo and Sackett [20] conducted two narrative reviews on frameworks of individual work performance. Both reviews concluded that three broad dimensions of work performance could be distinguished: task performance, organizational citizenship behavior, and

counterproductive work behavior. The term 'organizational citizenship behavior' was first introduced by Organ [21], and is currently defined as individual behavior that contributes to the maintenance and enhancement of the social and psychological context that supports task performance [22]. Although originally there were some definitional differences between organizational citizenship behavior and contextual performance, Organ's definition of organizational citizenship behavior has evolved to greatly overlap with Borman & Motowidlo's definition of contextual performance [22]. In the current review, the term contextual performance will be used to refer to behaviors that support the organizational, social or psychological environment in which the technical core functions. The third dimension, counterproductive work behavior, was defined as behavior that harms the well-being of the organization [20]. It includes behaviors such as absenteeism, off-task behavior, theft, and substance abuse.

Job-specific frameworks

Frameworks developed for specific jobs were mainly targeted at professions in the army, managers, or sales and service industry. In 1990, Campbell, McHenry and Wise [23] developed a framework in which work performance in the army was described by five dimensions: 1) *core technical proficiency*, 2) *general soldiering proficiency*, 3) *effort and leadership*, 4) *personal discipline*, and 5) *physical fitness and military bearing*. The last referred to the degree to which individuals stay in good physical condition, maintain appropriate military appearance, and carry or conduct oneself appropriately. Campbell's more comprehensive 8-dimensional framework [4] is largely based on this framework. Borman and Brush [24] developed a framework, based on critical incidents analysis, in which managerial work performance was described by 1) *technical activities and mechanisms of management*, 2) *interpersonal dealings and communication*, 3) *leadership and supervision*, and 4) *useful personal behavior and skills* (e.g., persistence, handling crises and stress, organisational commitment). This framework was developed independent of Borman & Motowidlo's 2-dimensional framework [19]. Maxham et al. [25] described performance of retail employees as 1) *in-role performance*, 2) *extra-role performance towards customers*, and 3) *extra-role performance towards the organisation*.

Similarities between frameworks

Generic frameworks used more broad dimensions to describe work performance, whereas job-specific frameworks used more narrow dimensions to describe elements of work performance. Despite these different levels of specificity, similarities were observed between dimensions of individual work performance described in the frameworks. Based on conceptual grouping of individual work performance dimensions found in the literature, three broad dimensions could be distinguished: task performance, contextual performance, and counterproductive work behavior. Finally, some frameworks described dimensions which they did not classify in one of these three categories, such as proactive, creative and adaptive performance. Table 2 shows the classification of dimensions from each framework. The original dimensions of the frameworks were classified in the scheme of Table 2 based on the definitions of the dimensions as provided by the developers of the framework. When the original dimensions were not defined, they were classified based on the authors' own insight.

Task performance

Almost all frameworks mentioned task performance as an important dimension of individual work performance. Task performance can be defined as the proficiency (i.e. competency) with which one performs central job tasks [4]. Other labels sometimes used for task performance are *job-specific task proficiency* [13;26-28], *technical proficiency* [23;29;30], or *in-role performance* [25;31]. It includes for example work quantity, work quality, and job knowledge [4].

In Murphy's (1989) framework, the first dimension, labeled *task behaviors*, could be considered task performance. Campbell (1990) himself stated that his first two dimensions, *job-specific task proficiency* (core job tasks) and *non-job-specific task proficiency* (tasks not specific to a given job, but expected of all employees), represent task performance [11]. Viswesvaran's [18] first three dimensions, *productivity, quality* and *job knowledge*, could be considered task performance. Later developed individual work performance frameworks all included one dimension to describe task performance [11;13;19;20;31-34]. The only exception was Renn and Fedor's framework, in which task performance was split into *work quantity* and *quality* [35].

Of course, what constitutes core job tasks can differ from job to job. In contrast to generic frameworks, job-specific frameworks often used multiple, specific dimensions to describe task performance. For example, Arvey and Mussio

[36] described task performance of clerical workers using the dimensions of *working accurately*, *showing concern for time* and *detail and planning*. Jiambalvo [37] described task performance for public accountants as *understanding*, *planning* and *revising work*. Engelbrecht and Fischer [38] divided task performance for managers into *action orientation* (e.g., getting things done, decisiveness), *task structuring* (e.g., leadership, planning), and *probing, synthesis and judgment* (problem resolution). Furthermore, Tett et al. [39] divided task performance for managers into *traditional functions* (e.g., decision making, planning), and *occupational acumen and concerns* (e.g., job knowledge, concern for quantity and quality).

Contextual performance

Although task performance has been the traditional focus of research, researchers have come to believe that individual work performance is more than meeting prescribed work goals [11;19]. In both generic and job-specific frameworks, one or more dimensions of contextual performance have been included. Contextual performance can be defined as individual behaviors that support the organizational, social and psychological environment in which the technical core must function [19]. Several labels exist for this dimension, such as *non-job-specific task proficiency* [26;28], *extra-role performance* [25;31], *organizational citizenship behavior* [11;20;34] or *interpersonal relations* [17]. All concepts, however, refer to behaviors that go beyond the formally prescribed work goals, such as taking on extra tasks, showing initiative, or coaching newcomers on the job.

Seven of the generic frameworks used one broad dimension to describe contextual performance. Four generic frameworks used multiple dimensions to describe contextual performance. For example, in Campbell's framework [4], 6 of the 8 dimensions (*written and oral communication, demonstrating effort, maintaining personal discipline, facilitating peer and team performance, supervision and leadership,* and *management and administration*) could be regarded contextual performance. Also, 6 of Viswesvaran's dimensions [18] [*communication competence, effort, leadership, administrative competence, interpersonal competence,* and *compliance with/acceptance of authority*) could be regarded contextual performance.

Job-specific frameworks often used multiple, more specific dimensions to describe contextual performance. For example, Arvey and Mussio [36] described contextual performance of clerical workers using the dimensions of *cooperating and taking on extra load, showing responsibility and initiative*, *dealing with others in the*

organization, and *dealing with public*. Campbell, McHenry and Wise [23], distinguished *general soldiering proficiency, effort*, *leadership*, *personal discipline,* and *physical fitness and military bearing* as dimensions of work performance in the army. Borman and Brush [24] distinguished *leadership and supervision*, *interpersonal dealings and communication*, and *useful personal behavior and skills* as dimensions of managerial work performance. Altogether, dimensions frequently named under contextual performance are communication, effort, discipline, interpersonal behavior, and leading and developing others. Less frequently named dimensions are planning, solving problems, administration, and showing responsibility.

Counterproductive work behavior

Attention for counterproductive work behavior (CWB), defined as behavior that harms the well-being of the organization, has increased in recent years [20]. It includes behaviors such as absenteeism, being late for work, engaging in off-task behavior, theft, and substance abuse.

Almost half of the generic individual work performance frameworks incorporated one or more dimensions of counterproductive work behavior. Murphy used the dimensions of *destructive/hazardous behaviors* (behaviors leading to a clear risk of productivity losses, damage, or other setbacks) and *down-time behaviors* (work-avoidance behaviors) to describe behaviors that harm the organization [17]. Hunt's framework incorporated the four dimensions of *off-task behavior*, *unruliness*, *theft,* and *drug misuse* [40]. Viswesvaran and Ones [11] as well as Rotundo and Sackett [20], concluded in their reviews that counterproductive work behavior should be distinguished as a third broad dimension of individual work performance (in addition to task performance and organizational citizenship behavior). Finally, some individual work performance frameworks that only focus on counterproductive work behavior were identified. Burton et al. [41], Allen [42], and Escorpizo [43] approached the study of work performance from an occupational health perspective, and divided the work performance domain into *absenteeism* (not attending work) and *presenteeism* (attending work while ill). Both absenteeism and presenteeism could be regarded as counterproductive work behaviors, as they are behaviors that harm the well-being of the organization.

Sinclair and Tucker's framework was the only job-specific framework to incorporate counterproductive work behavior as a separate dimension of individual work performance [44].

Other dimensions

To examine the impact of fun at work on work performance, Fluegge divided the domain of individual work performance into task performance, organizational citizenship behavior, and creative performance [34]. Creative performance was defined as behavioral manifestations of creativity, which refer to the generation of ideas, procedures, and products that are both novel and useful.

Allworth and Hesketh [45], Pulakos et al. [33] and Griffin et al. [13] focused on the growing interdependency and uncertainty of work systems and the corresponding change in the nature of individual work performance. All three argued that adaptive performance should be a separate dimension of individual work performance. Adaptive performance is defined as the extent to which an individual adapts to changes in a work system or work roles [13]. It includes, for example, solving problems creatively, dealing with uncertain or unpredictable work situations, learning new tasks, technologies and procedures, and adapting to other individuals, cultures or physical surroundings. Griffin et al. [13] further argued for *task proactivity* as a separate dimension of work performance. Individual *task proactivity* reflected the extent to which individuals engage in self-starting, future-oriented behavior to change their work situations, their work roles, or themselves.

Sinclair and Tucker's job-specific framework [44] also regarded *adaptive performance* as a separate dimension of individual work performance, in addition to task performance, contextual performance, and counterproductive work behavior. In several other frameworks, adaptive performance was not included as a separate dimension, but rather as a part of contextual performance. For example, Hunt's dimension of *schedule flexibility* [40], Rollins and Fruge's dimension of *adaptability* [27], and Hedge et al.'s dimension of *leading change* [46] all reflected an employee's ability to adapt to new job conditions or requirements.

Table 2. Overview of identified conceptual frameworks of individual work performance and classification of their dimensions

	Dimension			
Generic framework	*Task performance*	*Contextual performance*	*Counterproductive work behavior*	*Other*
Murphy, 1989 [17] Also presented in [14;20;47;48]	Task behaviors	Interpersonal behaviors	Downtime behaviors Destructive/hazardous behaviors	
Campbell, 1990 [4] Also presented in [10;11;13;14;18;20;28;29;32;44;48-57]	Job-specific task proficiency Non-job-specific task proficiency	Written and oral communication Demonstrating effort Maintaining personal discipline Facilitating peer and team performance Supervision and leadership Management and administration		
Borman & Motowidlo, 1993 [19] Also presented in [7;10;11;13;14;18;20;25;32;44;48;50-53;55;56;58-63]	Task performance	Contextual performance		

Table 2. Continued

Generic framework	Dimension			
	Task performance	*Contextual performance*	*Counterproductive work behavior*	*Other*
Viswesvaran, 1993 [18] Also presented in [10;11;14;48;53;57;60]	Productivity Quality Job knowledge	Communication competence Effort Leadership Administrative competence Interpersonal competence Compliance with and acceptance of authority		Overall work performance
Hunt, 1996 [40] Also presented in [11;14;20;32;48;57]		Adherence to rules Industriousness Thoroughness Schedule flexibility Attendance	Off-task behavior Unruliness Theft Drug misuse	
Allworth & Hesketh, 1999 [45]	Task performance	Contextual performance		Adaptive performance

Table 2. Continued

	Dimension			
Generic framework	*Task performance*	*Contextual performance*	*Counterproductive work behavior*	*Other*
Viswesvaran & Ones, 2000 [11] Also presented in [60]	Task performance	Organizational citizenship behavior	Counterproductive behavior	
Michel, 2000 [32]	Task performance	Interpersonal performance Civic performance		
Pulakos et al., 2000 [33] Also presented in [13;48;55;64]	Task performance	Contextual performance		Adaptive performance
Renn & Fedor, 2001 [35]	Work quantity Work quality			
Rotundo & Sackett, 2002 [20] Also presented in [15;65;66]	Task performance	Organizational citizenship behavior	Counterproductive behavior	
Bakker et al., 2004 [31]	In-role performance	Extra-role performance		
Burton et al., 2004 [41]			Absenteeism Presenteeism	

Table 2. Continued

Generic framework	Dimension			
	Task performance	*Contextual performance*	*Counterproductive work behavior*	*Other*
Griffin et al., 2007 [13] Also presented in [15]	Task proficiency			Adaptability Proactivity
Allen, 2008 [42]			Absenteeism Presenteeism	
Escorpizo, 2008 [43]			Absenteeism Presenteeism	
Fluegge, 2008 [34]	Task performance	Organizational citizenship behavior		Creative performance

Table 2. Continued

Job-specific framework	Dimension			
	Task performance	*Contextual performance*	*Counterproductive work behavior*	*Other*
Arvey & Mussio, 1973 [36]	Working accurately Showing concern for time Detail and planning	Cooperating and extra time Dealing with others in organization Dealing with public Showing responsibility and initiative		
Jiambalvo, 1979 [37]	Understanding Planning Revising	Promoting Providing training Recognizing problems Suggesting solutions Reviewing work Cooperation Respect Special competence		
C. Campbell et al., 1990 [26]	Job-specific proficiency	Non-job-specific proficiency		
J. Campbell et al., 1990 [23] Also presented in [30]	Core technical proficiency	General soldiering proficiency Effort and leadership Personal discipline Physical fitness and military bearing		

Table 2. Continued

Job-specific framework	Dimension			
	Task performance	*Contextual performance*	*Counterproductive work behavior*	*Other*
Lance et al., 1992 [29]	Technical proficiency	Interpersonal proficiency		
Rollins & Fruge, 1992 [27]	Task proficiency	Action Teamwork Creativity Communication Decision making Leadership Accountability Adaptability Development		
Borman & Brush, 1993 [24] Also presented in [20;48;53]	Technical activities and mechanics of management	Interpersonal dealings and communication Leadership and supervision Useful personal behavior and skills		
Engelbrecht & Fischer, 1995 [38]	Action orientation Task structuring Probing, synthesis and judgment	Empathy Development Managing information		

Table 2. Continued

	Dimension			
Job-specific framework	*Task performance*	*Contextual performance*	*Counterproductive work behavior*	*Other*
Tett et al., 2000 [39]	Traditional functions Occupational acumen and concerns	Task orientation Person orientation Dependability Open mindedness Emotional control Communication Developing self and others		
Van Dyne et al., 2002 [54]	Sales performance	Creativity		
Hedge et al., 2004 [46]	Resource stewardship	Coaching and mentoring Professionalism and integrity Communication skills Leading change Leading people Organizational savvy Personal and professional development		

Table 2. Continued

	Dimension			
Job-specific framework	*Task performance*	*Contextual performance*	*Counterproductive work behavior*	*Other*
Chan, 2006 [67]		Communication skills Interpersonal skills Customer service Analytical skills		
Sinclair & Tucker, 2006 [44]	Task performance	Contextual performance	Counterproductive behavior	Adaptive performance
Greenslade & Jimmison, 2007 [62]	Task performance	Contextual performance		
Wisecarver et al., 2007 [28]	Job-specific task proficiency Interpersonal job-specific task proficiency	Non-job-specific task proficiency Management Peer-team interaction Discipline Effort		

Table 2. Continued

	Dimension			
Job-specific framework	*Task performance*	*Contextual performance*	*Counterproductive work behavior*	*Other*
Luo et al., 2008 [68]	Military training Task accomplishment Work capability	Helping others Love of learning Promoting organizational benefit Self-discipline		
Maxham et al., 2008 [25]	In-role performance	Extra-role performance toward customers Extra-role performance toward organization		
Mael et al., 2010 [69]	Providing clinical services Clinical support	Employee citizenship behavior Managerial behavior		

Heuristic conceptual framework of individual work performance

The second aim of the current review was to integrate existing conceptual frameworks in order to formulate a heuristic conceptual framework of individual work performance. We propose a heuristic framework, presented in Figure 2, which may serve as a guide towards understanding the construct of individual work performance. At the highest level appears the latent, general factor of individual work performance. Research has shown the existence of a general factor, which accounts for substantial variation in job performance ratings [60]. At the second level, four dimensions of individual work performance are located. At the third level, the individual measures corresponding to each dimension are located. The importance of these dimensions, and the exact indicators associated with each dimension, may differ depending on the context involved.

The first dimension, task performance, refers to the proficiency with which central job tasks are performed [4]. The second dimension, contextual performance, refers to behaviors that support the organizational, social and psychological environment in which the technical core must function [19]. As a third dimension, adaptive performance is included in the heuristic framework. Three reasons support the inclusion of adaptive performance, referring to an employee's ability to adapt to changes in a work system or work roles [13], as a separate dimension. First, because of the technological changes occurring in today's society, being able to adapt to a changing work environment is increasingly important. Second, conceptually, adaptive performance does not fit neatly under task performance, contextual performance or counterproductive work behavior. Whereas contextual performance comprises behaviors that positively influence the work environment, adaptive performance comprises behaviors in reaction to the changing work environment. Third, empirical support for adaptive performance as a separate dimension was provided by Allworth and Hesketh [45]. They found that adaptive performance had differential predictors than task or contextual performance. The fourth dimension, counterproductive work behavior, refers to behavior that harms the well-being of the organization [20].

Other dimensions that have been suggested as separate dimensions are proactive and creative performance [13;34]. Although proactive and creative performance can be a part of task performance in some jobs, we considered these part of contextual performance, as both contribute to a positive organizational, social and psychological work environment. Each of the four dimensions are latent, meaning that they cannot be measured directly [14]. Example indicators of each

dimension that were gathered from the identified frameworks are presented in the square boxes in Figure 2.

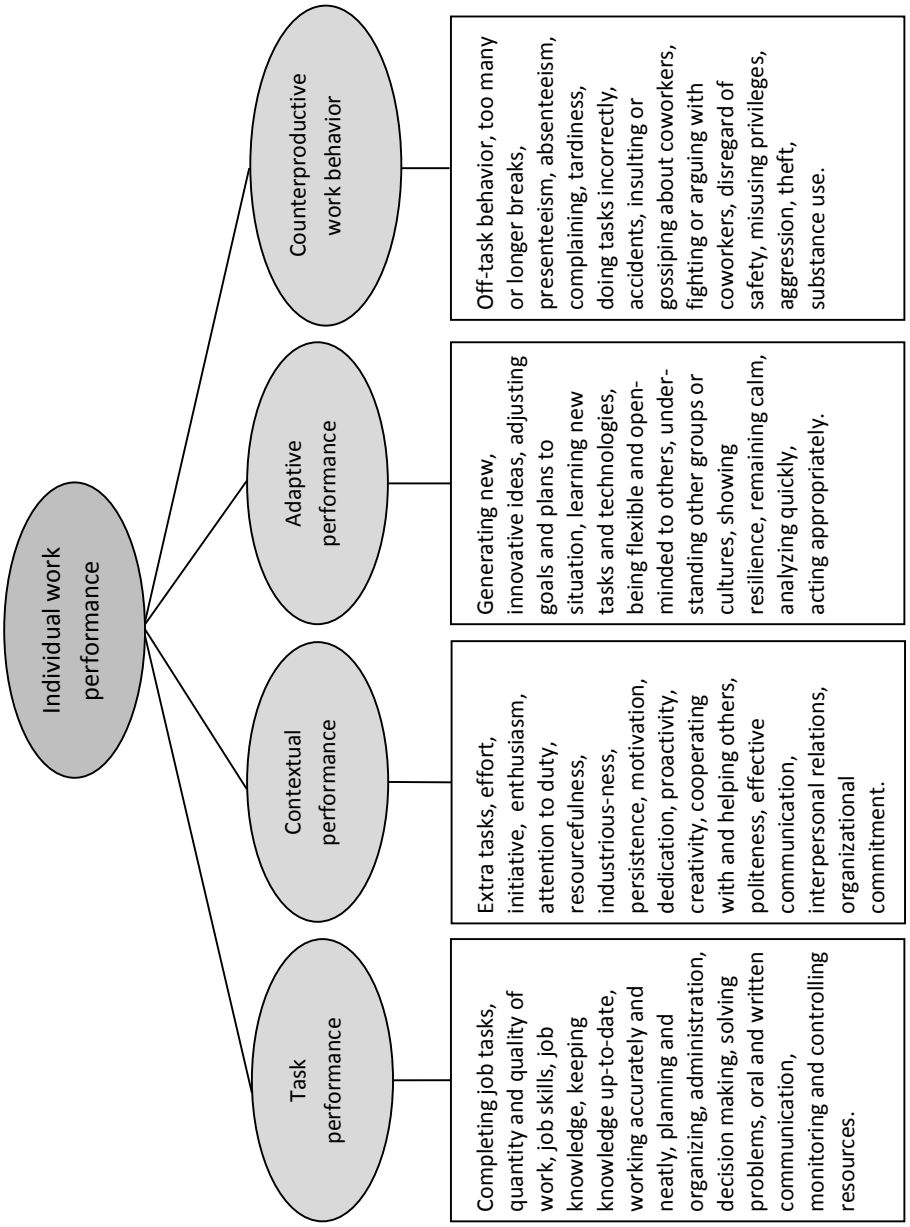

Figure 2. Heuristic framework of individual work performance

Relation between dimensions

Not only are the separate dimensions related to the general factor of work performance, they are also related to each other [60]. Interesting is the question of how the separate dimensions interrelate. Task performance is distinct, albeit strongly positively related, with contextual performance [57;70]. Both types of behavior independently contribute to overall performance, but through different means [19;52]. Due to the changing nature of today's work, the distinction between task and contextual performance may become more blurred [53]. Increasingly, contextual behaviors are implicitly or explicitly required as task behaviors. Also, some behaviors can be seen as task behaviors in some jobs, while they may be seen as contextual behaviors in other jobs. Findings on the relation between task performance and counterproductive work behavior are inconclusive and have been found to be either moderately or strongly negative [71]. The inconclusive findings could be caused by differences in definition and measurement of task performance. When task performance is defined as what a person generally 'will do,' it is more strongly related to counterproductive work behavior than when task performance is defined as what a personal maximally 'can do.' This is because typical work performance is usually assessed over a longer time period, in which counterproductive work behaviors are more likely to occur. In addition, typical task performance is often less closely monitored than maximal task performance, making counterproductive work behaviors more likely to occur [71].

Intuitively, one would expect a negative relation between contextual behavior and counterproductive work behavior. Someone who often engages in behavior that helps the organization, will not often engage in behavior that harms the organization, and vice versa. Although a strong negative correlation has been found previously [71], meta-analysis demonstrated that the true relation between contextual performance and counterproductive work behavior is modestly negative [72]. Three methodological artifacts may have caused the strong negative relation between contextual performance and counterproductive work behavior in previous research. First, the relation was found to be more strongly negative when the behaviors were rated by supervisors rather than by the employees themselves. This is because supervisors often cannot accurately observe an employee's counterproductive work behavior, and make their judgment based on general impressions of the employee. Second, the relation was more strongly negative when contextual behavior inventories included dysfunctional behaviors (e.g., "not adhering to organizational rules") or when counterproductive work behavior

inventories included functional behaviors (e.g., “adhering to organizational rules”). Dalal [72] termed these overlapping items *antithetical items*. Third, asking respondents to indicate the extent to which they agreed or disagreed with statements about their behavior resulted in a stronger negative relation between contextual performance and counterproductive work behavior than when they were asked to indicate the frequency of their behavior. In conclusion, the relation between contextual performance and counterproductive work behavior is modestly negative. Thus, employees who engage in helping behavior tend not to engage in harming behavior (or vice versa), but both types of behavior can occur together, at least to some extent [73].

Although Pulakos [74] stated that adaptive performance does not occur completely independent of task and contextual performance, to our knowledge, no research has been published that examines the relation between adaptive performance and the other individual work performance dimensions. However, as adaptive performance is regarded behavior that positively influences individual work performance, one can expect a positive relation with task and contextual performance, and a negative relation with counterproductive work behavior.

Discussion

The aim of the current review was to identify conceptual frameworks of individual work performance from different fields, in order to formulate a heuristic conceptual framework. In total, seventeen generic frameworks were identified that addressed individual work performance across occupations. Eighteen job-specific frameworks were identified that addressed work performance of either professionals in the army, managers or employees in the service and sales industry. Although job-specific frameworks often used multiple, more specific dimensions than generic frameworks to describe the construct of individual work performance, clear similarities were observed in the dimensions of these frameworks. A heuristic framework of individual work performance was proposed in which individual work performance consists of four dimensions, namely task performance, contextual performance, adaptive performance, and counterproductive work behavior. These four types of behavior can be considered to capture the full range of behaviors that constitute individual work performance in virtually any job. The importance of the four dimensions, and their exact indicators, may however differ based on the specific context.

In accordance with two previous narrative reviews [11;20], the heuristic framework incorporates task performance, contextual performance and counterproductive work behavior as important dimensions of individual work performance. However, the current review presents an updated conceptual framework in which adaptive performance is added to the domain of individual work performance. Although some frameworks have included adaptive performance as a part of contextual performance, we presented societal, conceptual, and empirical reasons for distinguishing adaptive performance as a separate dimension.

Surprisingly, none of the identified frameworks included all four dimensions proposed in the heuristic framework, except for the recent Sinclair and Tucker framework for work performance of soldiers [44]. While most of the identified individual work performance frameworks circulate in the field of management or in the field of work and organizational psychology, they have been almost absent in the field of occupational health. In this field, only three studies were identified, describing individual work performance as existing of absenteeism and presenteeism [41-43]. Hopefully, the present review will facilitate information exchange between the different areas of research.

Strengths and limitations

The present review has several strengths. First of all, this is the first study to examine the construct of individual work performance from different research fields, namely occupational health, psychology, and management. We concluded that there are considerable similarities between the different fields. Second, this is the first study to conduct a comprehensive, systematic literature search in order to identify frameworks describing the construct of individual work performance. Both earlier reviews [11;20] were narrative reviews describing a limited amount of conceptual frameworks. Third, both generic and job-specific frameworks were included in the present review. Overall, the present review provides a strong basis for the proposed heuristic framework.

The present review has some limitations as well. We aimed to describe all individual work performance frameworks as comprehensively as possible. However, it cannot be ruled out that some frameworks were missed. Although no restrictions in year or type of publication were made, only Dutch and English literature was searched. Furthermore, all literature was searched for the search terms in their title or abstract. This may have excluded studies that did present a conceptual framework of individual work performance, but did not mention this in their title or abstract.

We tried to minimize these limitations by searching four databases, using broad search terms and checking reference lists from identified studies. Unfortunately, 24 dissertations that appeared eligible based on title and abstract had to be excluded from this review, because, after thorough searches, we were unable to retrieve them in full text.

The original dimensions of the identified frameworks were classified into the heuristic framework based on the definitions of the dimensions as provided by the developers of the framework. However, depending on the specific context, the importance and the place of the original dimensions may differ. For example, in some jobs, adaptive performance may not be important at all, and could therefore be excluded from the heuristic framework. In some jobs, communication competence may be an aspect of contextual performance, while in others jobs it may be an aspect of task performance. Thus, the dimensions, and subsequently the indicators used for its measurement, may differ depending on the context. In addition, the heuristic framework, or any job performance framework for that matter, is influenced by the Zeitgeist. Contextual performance (and its variants) have gained currency in the 1960s, whereas adaptive performance has gained currency only in recent years. In one or two decades, other dimensions may become important (for example, environmental sustainability) and some existing dimensions may become oblivious.

Recommendations for future research

The heuristic framework of individual work performance that is presented in the current review can serve as a guide for future research and practice. An important next step is to identify existing measures or to develop a new measurement instrument that can adequately measure the individual work performance dimensions proposed in the heuristic framework. This will involve determining the exact indicators of each dimension more comprehensively. Empirical data gathered with the measurement instrument provides information on whether the four-dimensional structure of the proposed framework is supported, whether the indicators belong to the expected dimension, and on the exact relation between the different dimensions.

Furthermore, future research is needed to examine whether the proposed framework is generalizable across all types of jobs. Considering the similarity in dimensions observed between generic and job-specific frameworks, we believe that the broad dimensions of the proposed framework will likely generalize across all job types. The importance of the dimensions, and their exact indicators, may however

be job-specific. An important next step for future research is therefore to determine whether or not the four dimensions proposed in the heuristic framework are generic, and whether the indicators per dimensions are job-specific or generic. Future research is also needed to determine whether adding adaptive performance as a separate dimension of individual work performance is justified. In this sense, the proposed framework may be considered a theory-driven 'working' framework that can be adapted based on future empirical research.

Practical use of the framework

An important use of the heuristic framework is in shaping the design of workplace interventions and assessing the effects of that intervention on individual work performance. Think, for example, of intervention studies that target managerial style or employee lifestyle and health in order to increase an individual's work performance. Furthermore, the heuristic framework can be used in companies for employee selection, evaluation, training and development.

Future research may expand the heuristic framework to include causes and consequences of individual work performance. Individual work performance is inextricably linked to team and organizational performance, although the exact nature of this relationship is yet unknown. A final extension would be to expand the heuristic framework to the team and organizational levels, and possibly, to relate it to company costs.

Conclusion

Concluding, the dimensions of task performance, contextual performance, adaptive performance and counterproductive work behavior comprise the heuristic framework of individual work performance. Future research will have to determine empirical support for and practical relevance of this framework. Hopefully, this review provides a step towards reaching consensus on the conceptualization and operationalization of individual work performance. A better understanding of this construct will improve theory, research and practice in all fields occupied with individual work performance.

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